Skill Assessment Test Practice Work

1) • Place Value
2) • Comparing Fractions/Decimals (>, <, =)
3) • Rounding
4) • Prime/Composite #s ; Factors and Multiples
5) • Ordering Decimals/Fractions (least to greatest)
6) • Improper Fractions/Mixed Numbers
7) • Converting Fractions, Decimals, and Percent
8) • Order of Operations
9) • Decimals (+, −, ×, ÷)
10) • Fractions (+, −, ×, ÷)
11) • Percent (write equation and solve)
12) Integers (+, −, ×, ÷); ordering integers
13) Combining Like Terms
14) Equations
15) Exponents
16) Graphing
17) Probability
18) Geometry (perimeter, area, surface area, volume, degrees

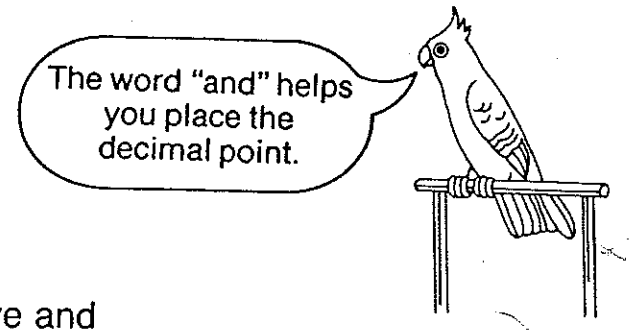
Name Skill #1

What does the 9 mean in 35.6092?

millions	hundred-thousands	ten-thousands	thousands	hundreds	tens	ones	tenths	hundredths	thousandths	ten-thousandths	hundred-thousandths	millionths
					3	5	6	0	9	2		

9 is in the thousandths place.

The 9 means 9 thousandths.



The decimal 35.6092 is read, thirty-five and six thousand ninety-two ten-thousandths.

Tell what the 6 means in each number.

1. 3.56 _____
2. 14.63 _____
3. 27.046 _____
4. 6.418 _____
5. 75.23164 _____
6. 0.00186 _____

Write each number as a decimal.

7. Sixty-two thousandths _____
8. Seven tenths _____
9. Two and four tenths _____
10. Three thousandths _____
11. Six and twelve hundredths _____
12. Eighty-three hundredths _____
13. Five and thirty-four thousandths _____
14. Seven and four ten-thousandths _____
15. Ninety-nine and ninety-nine thousandths _____

pg. #2

Name Skill #1

P28

Write each number as a decimal.

1. $\frac{3}{10}$ _____ 2. $\frac{47}{100}$ _____ 3. $\frac{935}{10,000}$ _____

4. Thirty-five hundredths _____

5. Two hundred sixty-eight and nine tenths _____

6. Four and six hundred thousandths _____

7. Two thousand forty and seventy-two hundredths _____

8. Fifty and three hundred forty-two thousandths _____

Write what the 3 means in each number.

9. 54.347 _____ 10. 436.11 _____

11. 84.136 _____ 12. 7.043 _____

Write each decimal in words.

13. 72.7 _____

14. 32.9 _____

15. 56.936 _____

_____

16. 67.8379 _____

_____

17. 407.06 _____

_____

18. 48.5 _____

Pg #1

Name Skill #1

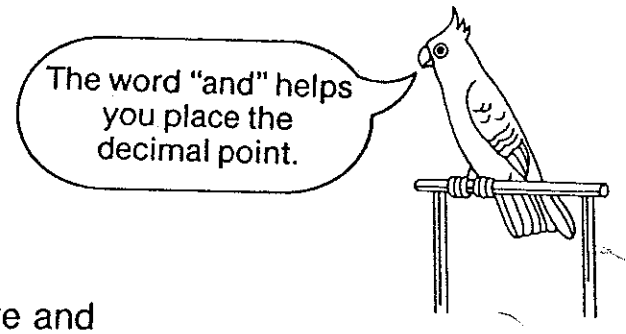
R28

What does the 9 mean in 35.6092?

millions	hundred-thousands	ten-thousands	thousands	hundreds	tens	ones	tenths	hundredths	thousandths	ten-thousandths	hundred-thousandths	millionths
					3	5	6	0	9	2		

9 is in the thousandths place.

The 9 means 9 thousandths.



The decimal 35.6092 is read, thirty-five and six thousand ninety-two ten-thousandths.

Tell what the 6 means in each number.

1. 3.56 _____
2. 14.63 _____
3. 27.046 _____
4. 6.418 _____
5. 75.23164 _____
6. 0.00186 _____

Write each number as a decimal.

7. Sixty-two thousandths _____
8. Seven tenths _____
9. Two and four tenths _____
10. Three thousandths _____
11. Six and twelve hundredths _____
12. Eighty-three hundredths _____
13. Five and thirty-four thousandths _____
14. Seven and four ten-thousandths _____
15. Ninety-nine and ninety-nine thousandths _____

Pg. #2

Name Skills #2 and #5 Additional Resource

Maintenance

Use <, >, or = to compare the numbers.

1. 0.28 ◯ 0.43
2. 0.5 ◯ 0.7
3. 0.49 ◯ 0.71
4. 0.85 ◯ 0.9
5. 0.1 ◯ 0.10
6. 0.89 ◯ 0.90
7. 0.2 ◯ 0.124
8. 1.40 ◯ 2.0
9. 2.4 ◯ 2.39
10. 0.53 ◯ 0.5300
11. 0.732 ◯ 0.81
12. 0.12 ◯ 0.085
13. 0.962 ◯ 1.0
14. 0.543 ◯ 0.542
15. 0.777 ◯ 0.8
16. 0.40 ◯ 0.4
17. 0.075 ◯ 0.1

Write the numbers in order from least to greatest.

18. 0.5 0.62 0.457 _____

19. 0.4 0.222 0.39 _____

20. 0.542 0.499 0.5419 _____

21. 1.2 0.99 0.887 _____

22. 0.8 0.276 0.35 0.801 0.2755 0.1 _____

Pg. #3

Name Skills #2 and #5

P29

Write an equal decimal in hundredths.

1. 6.3 _____ 2. 38 _____ 3. 72.9 _____

4. 8.600 _____ 5. 15 _____ 6. 9.980 _____

Write an equal decimal in thousandths.

7. 4.62 _____ 8. 2.48 _____ 9. 6.8310 _____

10. 2.63 _____ 11. 0.27 _____ 12. 35 _____

Use <, >, or = to compare the numbers.

13. 0.35 ◯ 0.22

14. 3.0411 ◯ 1.040

15. 8.48 ◯ 5.493

16. 0.5462 ◯ 0.54621

17. 69.480 ◯ 69.48

18. 11.483 ◯ 11.485

19. 14.602 ◯ 14.620

20. 7.638 ◯ 7.6371

Write the numbers in order from least to greatest.

21. 9.13 9.31 9.00 9.312 _____

22. 3.623 3.832 3.660 _____

23. 6.24 7.12 6.42 5.90 _____

24. 5.613 5.512 5.891 _____

25. 8.313 8.333 8.036 8.3 _____

26. 0.7 0.8 0.77 0.08 _____

27. 4.86 4.759 14.96 _____

Pg #4

Name Skills #2 and #5 Additional Resource

52

Maintenance

Use <, >, or = to compare the numbers.

1. 0.28 ◯ 0.43
2. 0.5 ◯ 0.7
3. 0.49 ◯ 0.71
4. 0.85 ◯ 0.9
5. 0.1 ◯ 0.10
6. 0.89 ◯ 0.90
7. 0.2 ◯ 0.124
8. 1.40 ◯ 2.0
9. 2.4 ◯ 2.39
10. 0.53 ◯ 0.5300
11. 0.732 ◯ 0.81
12. 0.12 ◯ 0.085
13. 0.962 ◯ 1.0
14. 0.543 ◯ 0.542
15. 0.777 ◯ 0.8
16. 0.40 ◯ 0.4
17. 0.075 ◯ 0.1

Write the numbers in order from least to greatest.

18. 0.5 0.62 0.457 _____

19. 0.4 0.222 0.39 _____

20. 0.542 0.499 0.5419 _____

21. 1.2 0.99 0.887 _____

22. 0.8 0.276 0.35 0.801 0.2755 0.1 _____

Pg. #3

Name Skills #2 and #5

P29

Write an equal decimal in hundredths.

1. 6.3 _____ 2. 38 _____ 3. 72.9 _____

4. 8.600 _____ 5. 15 _____ 6. 9.980 _____

Write an equal decimal in thousandths.

7. 4.62 _____ 8. 2.48 _____ 9. 6.8310 _____

10. 2.63 _____ 11. 0.27 _____ 12. 35 _____

Use <, >, or = to compare the numbers.

13. 0.35 ◯ 0.22

14. 3.0411 ◯ 1.040

15. 8.48 ◯ 5.493

16. 0.5462 ◯ 0.54621

17. 69.480 ◯ 69.48

18. 11.483 ◯ 11.485

19. 14.602 ◯ 14.620

20. 7.638 ◯ 7.6371

Write the numbers in order from least to greatest.

21. 9.13 9.31 9.00 9.312 _____

22. 3.623 3.832 3.660 _____

23. 6.24 7.12 6.42 5.90 _____

24. 5.613 5.512 5.891 _____

25. 8.313 8.333 8.036 8.3 _____

26. 0.7 0.8 0.77 0.08 _____

27. 4.86 4.759 14.96 _____

Pg #4

Maintenance

Compare these fractions. Use <, >, or =.

1. $\frac{2}{3}$ ◯ $\frac{1}{3}$
2. $\frac{5}{7}$ ◯ $\frac{6}{7}$
3. $\frac{8}{9}$ ◯ $\frac{1}{9}$
4. $\frac{3}{4}$ ◯ $\frac{2}{3}$
5. $\frac{8}{12}$ ◯ $\frac{2}{3}$
6. $\frac{2}{5}$ ◯ $\frac{3}{7}$
7. $\frac{4}{5}$ ◯ $\frac{8}{10}$
8. $\frac{9}{11}$ ◯ $\frac{7}{10}$
9. $\frac{5}{16}$ ◯ $\frac{1}{3}$
10. $\frac{6}{25}$ ◯ $\frac{1}{5}$
11. $\frac{3}{30}$ ◯ $\frac{1}{10}$
12. $\frac{4}{17}$ ◯ $\frac{2}{5}$
13. $\frac{7}{50}$ ◯ $\frac{2}{9}$
14. $\frac{7}{8}$ ◯ $\frac{9}{11}$
15. $\frac{8}{11}$ ◯ $\frac{7}{9}$

List the fractions in order from least to greatest.

16. $\frac{1}{5}, \frac{1}{3}, \frac{1}{4}$ _____
17. $\frac{2}{3}, \frac{5}{6}, \frac{3}{4}$ _____
18. $\frac{4}{5}, \frac{1}{2}, \frac{8}{9}$ _____
19. $\frac{4}{7}, \frac{1}{2}, \frac{8}{11}$ _____

Pg. #5

Use after pages 140–141.

Name Skill #2

Comparing Real Numbers

4.66 _____ 4.78	$4\frac{1}{2}$ _____ 4.78
4.66 < 4.78	4.50 < 4.78

Use <, >, or = to make each a true sentence.

1. 2.5 _____ $2\frac{1}{2}$
2. 1.078 _____ 1.78
3. 13.26 _____ 132.6
4. 983.21 _____ 7551.7
5. 232.33 _____ 23.233
6. -.3 _____ $\overline{-.3}$
7. $-9\frac{36}{48}$ _____ -9.77
8. $12\frac{5}{8}$ _____ 12.6
9. 1.5 _____ $1\frac{2}{3}$
10. 3.2 _____ $3\frac{1}{5}$

Write in ascending order.

$2\frac{1}{2}$, $2\frac{3}{5}$, 2.4	2.4, 2.5, 2.6	2.4, $2\frac{1}{2}$, $2\frac{3}{5}$

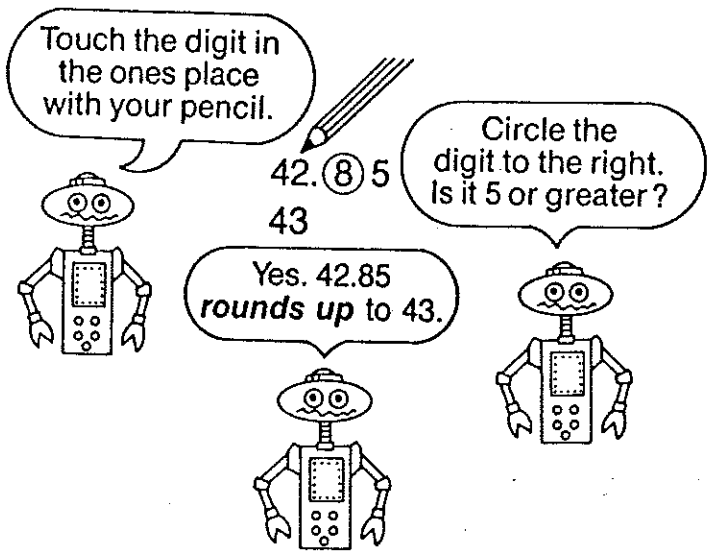
Rewrite the fractions as decimals.

1. 2.51, 2.511, 2.5111
2. $-3\frac{1}{5}$, $-3\frac{2}{3}$, $-3\frac{5}{7}$
3. $-2\frac{1}{4}$, $2\frac{7}{8}$, $2\frac{3}{9}$
4. $4\frac{2}{3}$, $-4\frac{6}{9}$, 4..34
5. $-6\frac{1}{5}$, -6.66, $-6\frac{4}{5}$
6. 10.78, 10.781, 10.710
7. $5\frac{1}{2}$, $5\frac{1}{3}$, $5\frac{3}{4}$
8. $-1\frac{4}{5}$, $-1\frac{9}{10}$, $-1\frac{7}{8}$
9. $7\frac{2}{3}$, 7.45 , $7\frac{3}{5}$
10. 3.15 , 3.8 , $3\frac{2}{5}$

Pg# 6

Name Skill #3

A. Round 42.85 to the nearest one.



B. Round 3.674 to the nearest hundredth.

3.674 Touch the digit in the hundredths place.

3.67④ Circle the digit to the right. Is it 5 or greater?

3.67 No. 3.674 ***rounds down*** to 3.67.

Round to the nearest one.

1. 1.7 _____ 2. 2.3 _____ 3. 0.872 _____

Round to the nearest tenth.

4. 43.62 _____ 5. 7.48 _____ 6. 6.75 _____

7. 0.077 _____ 8. 2.815 _____ 9. 0.8021 _____

Round to the nearest hundredth.

10. 8.251 _____ 11. 3.542 _____ 12. 0.0078 _____

13. 2.845 _____ 14. 5.4564 _____ 15. 0.099 _____

Round to the nearest thousandth.

16. 5.2816 _____ 17. 2.1855 _____ 18. 0.0034 _____

Pg. #7

Name Skill #3

P2

Round to the nearest hundred.

1. 307 _____ 2. 422 _____ 3. 2,650 _____

4. 8,849 _____ 5. 2,659 _____ 6. 18,098 _____

Round to the nearest ten-thousand.

7. 6,013 _____ 8. 29,605 _____ 9. 13,099 _____

10. 261,278 _____ 11. 984,372 _____

Round to the nearest million.

12. 14,683,019 _____ 13. 83,426,999 _____

14. 1,623,014 _____ 15. 8,438,996 _____

Write each number in expanded form.

16. 113,807 _____

17. 67,415 _____

18. 2,564,291 _____

_____

Complete the table.

Number	Round to the nearest		
	Hundred-Thousand	Ten-Thousand	Thousand
4,328,116			
1,623,094			

Pg #8

Name Skill #3

Maintenance

Round to the nearest hundred.

1. 859 _____
2. 4,839 _____
3. 52,087 _____
4. 26,439 _____
5. 123,000 _____
6. 495,398 _____

Round to the nearest thousand.

7. 859 _____
8. 4,339 _____
9. 52,087 _____
10. 26,439 _____
11. 123,000 _____
12. 495,398 _____

Round to the nearest million.

13. 2,459,999 _____
14. 53,800,000 _____
15. 6,594,287 _____
16. 1,499,999 _____
17. 4,000,000 _____
18. 9,695,000 _____

Estimate by rounding the numbers to the same place.

19. 489 + 677 _____
20. 8,888 + 6,953 _____
21. 395 + 578 + 979 _____
22. 8,869 − 2,985 _____
23. 45,234 − 4,931 _____
24. 52,147 − 1,953 _____

Pg. #9

Use after pages 46–47.

Name Skill #3

P30

Round to the nearest one.

1. 5.439 _____ 2. 63.83 _____ 3. 8.435 _____

Round to the nearest tenth.

4. 0.234 _____ 5. 6.057 _____ 6. 73.943 _____

Round to the nearest hundredth.

7. 2.256 _____ 8. 0.992 _____ 9. 1.008 _____

Round to the nearest thousandth.

10. 9.0085 _____ 11. 0.69312 _____ 12. 8.3847 _____

Round so that only one digit is not zero.

13. 2.007 _____ 14. 0.065 _____ 15. 35.06 _____

Who will win the race? Round the numbers in Exercises 16 to 21 to the nearest thousandth. Shade each answer on the track. The winner will be the first to have all answers shaded.

16. 2.6048 2.605 17. 38.0021 _____ 18. 17.3333 _____

19. 0.6666 _____ 20. 8.6946 _____ 21. 2.6056 _____

Sinking Sub	2.605	2.999	17.344 Finish
Slippery Slime	17.333	0.667	0.666 Finish
Sizzle Shoes	38.002	8.695	2.606 Finish

Name Skill #3 *Decimals*

Rounding Decimals

Round 10.943 to the nearest tenth.
10.9(4)3 / 4 < 5 therefore 10.943=10.9

Round 32.78 to the nearest whole number
32.78 / 32.(7)8 / 7 ≥ 5 therefore 32.78=33

Round to the nearest whole number.

1. 42.675	2. 29.78	3. 34.87	4. 21.098
5. 15.91	6. 78.412	7. 7.8346	8. 54.927
9. 2.72	10. 54.909	11. 1.19	12. 4.98

Round to the nearest tenth.

1. 33.897	2. 121.343	3. 32.777	4. 5.345
5. 1.908	6. 341.08	7. 1.23	8. 1.6578
9. 3.869	10. 41.564	11. 654.34	12. 111.111

Round to the nearest hundredth.

1. 212.658	2. 21.569	3. 2.6354	4. 241.560
5. 7.34587	6. 218.453	7. 12.1212	8. 430.234
9. 12.7689	10. 129.404	11. 6.435	12. 9.9999

Circle the prime numbers.

(3) 8 16 (19) 22

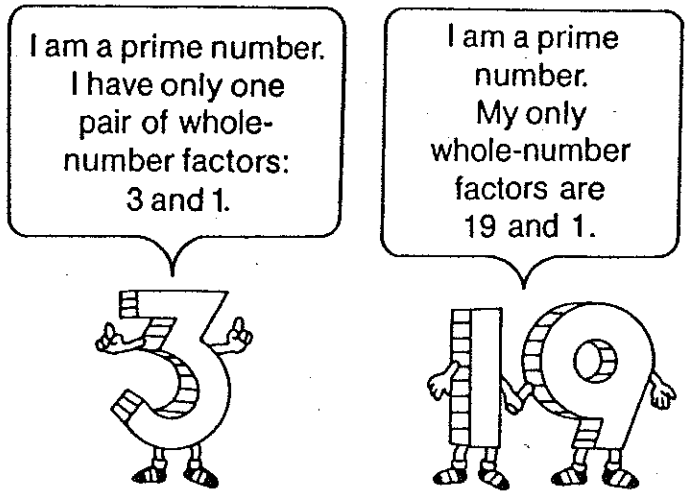
3 → 3 × 1

8 → 8 × 1 and 4 × 2

16 → 16 × 1, 8 × 2, and 4 × 4

19 → 19 × 1

22 → 22 × 1 and 11 × 2



Circle the prime numbers in each row.
All answers are in the box.

1.	1	4	7	10	13	16	19
2.	2	5	8	11	14	17	20
3.	4	11	18	25	32	39	46
4.	3	14	25	36	47	58	69
5.	1	8	15	22	29	36	43
6.	11	21	31	41	51	61	71
7.	3	7	11	15	19	23	27
8.	5	7	9	11	13	15	17

41 23 37 43 61 7 5 19 2 13 47 71 31 11 29 17 3

Pg #12

Name Skill #4

List the common factors of each pair of numbers.

1. 8 and 24 _____
2. 10 and 16 _____
3. 5 and 15 _____
4. 2 and 7 _____
5. 15 and 24 _____
6. 17 and 34 _____
7. 36 and 42 _____
8. 12 and 28 _____
9. 25 and 50 _____
10. 99 and 9 _____

Find the GCF of each pair of numbers.

11. 10 and 15 ____
12. 14 and 28 ____
13. 15 and 18 ____
14. 81 and 27 ____
15. 63 and 42 ____
16. 28 and 70 ____
17. 28 and 42 ____
18. 42 and 44 ____
19. 21 and 24 ____
20. 56 and 16 ____
21. 14 and 70 ____
22. 56 and 168 ____
23. 108 and 144 ____
24. 15 and 60 ____
25. 45 and 180 ____
26. 153 and 270 ____
27. 162 and 36 ____
28. 36 and 54 ____

Circle the GCF.

29. 18 and 24 2 3 6
30. 60 and 72 4 6 12
31. 28 and 42 4 7 14
32. 90 and 36 9 12 18
33. 20 and 40 10 20 40
34. 51 and 87 3 6 9
35. 36 and 56 4 9 12
36. 72 and 144 12 36 72

Pg #13

Use after pages 26–27.

Name Skill #4

P13

List the first four multiples of each number.

1. 4 _____ 2. 7 _____

3. 14 _____ 4. 24 _____

5. 15 _____ 6. 21 _____

7. 40 _____ 8. 35 _____

9. 22 _____ 10. 19 _____

For each pair of numbers, list the first three common multiples.

11. 5 and 10 _____ 12. 8 and 12 _____

13. 4 and 5 _____ 14. 7 and 14 _____

15. 10 and 11 _____

16. 32 and 5 _____

17. 27 and 10 _____

18. 16 and 3 _____

Use prime factorization to find the LCM of each pair of numbers.

19. 48 and 100 _____ 20. 52 and 40 _____

21. 48 and 52 _____ 22. 25 and 15 _____

23. 21 and 8 _____ 24. 33 and 55 _____

25. 35 and 14 _____ 26. 19 and 24 _____

Pg #14

Name Skill #4

R13

List the first six multiples for each number.

1. 2 2, 4, 6, 8, 10, 12

2. 3 3, 6, 9, 12, 15, 18

3. 4 _____

4. 5 _____

5. 6 _____

6. 7 _____

7. 8 _____

8. 9 _____

9. 10 _____

10. 11 _____

11. 12 _____

12. 15 _____

Use the lists above to find the common multiples for each pair of numbers below. Then give the least common multiple (LCM).

13. 2, 3 6, 12

LCM 6

14. 2, 6 _____

LCM _____

15. 4, 5 _____

LCM _____

16. 4, 12 _____

LCM _____

17. 5, 10 _____

LCM _____

18. 8, 12 _____

LCM _____

19. 6, 15 _____

LCM _____

20. 10, 15 _____

LCM _____

Pg. #15

Name Skill #4 Additional Resource 24

Maintenance

Circle the common factors of each pair of numbers:

1. 12 and 8	1	2	3	4	8	12		
2. 20 and 15	1	2	3	4	5	10	15	20
3. 18 and 9	1	2	3	6	9	18		
4. 36 and 24	1	2	3	4	6	8	9	12
5. 9 and 16	1	2	3	4	9			
6. 40 and 25	1	2	4	5	8	25		
7. 75 and 100	1	2	3	4	5	15	25	75
8. 22 and 33	1	2	3	11	22			

What is the greatest common factor of

9. 12 and 8? _____

10. 20 and 15? _____

11. 18 and 9? _____

12. 36 and 24? _____

13. 9 and 16? _____

14. 40 and 25? _____

15. 75 and 100? _____

16. 22 and 33? _____

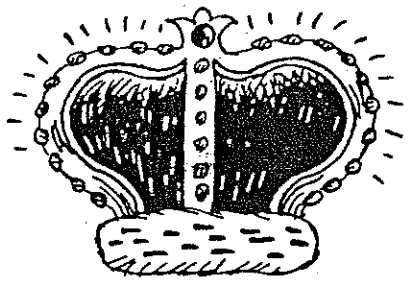
Pg. #16

Use after pages 56–57.

Name Skill #4

P10

When is a piece of wood like a king?



1. To find out, cross out each box that contains a prime number. The remaining letters will spell the answer.

4 W	5 D	20 H	10 E	18 N	2 B	16 I	12 T	19 R	20 I	14 S
17 K	1 A	13 L	6 R	9 U	0 L	37 A	8 E	18 R	3 E	7 E

If the number below is a prime number, write *prime.* If it is composite, write it as the product of two whole numbers that are less than itself.

2. 21 _____ 3. 59 _____ 4. 91 _____

5. 72 _____ 6. 107 _____ 7. 54 _____

8. 121 _____ 9. 630 _____ 10. 103 _____

List all the factors of each number.

11. 15 _____ 12. 63 _____

13. 17 _____ 14. 45 _____

15. In the Number Find on the right, find six prime numbers that are greater than 10 but less than 100.

Number Find
(horizontal and vertical)

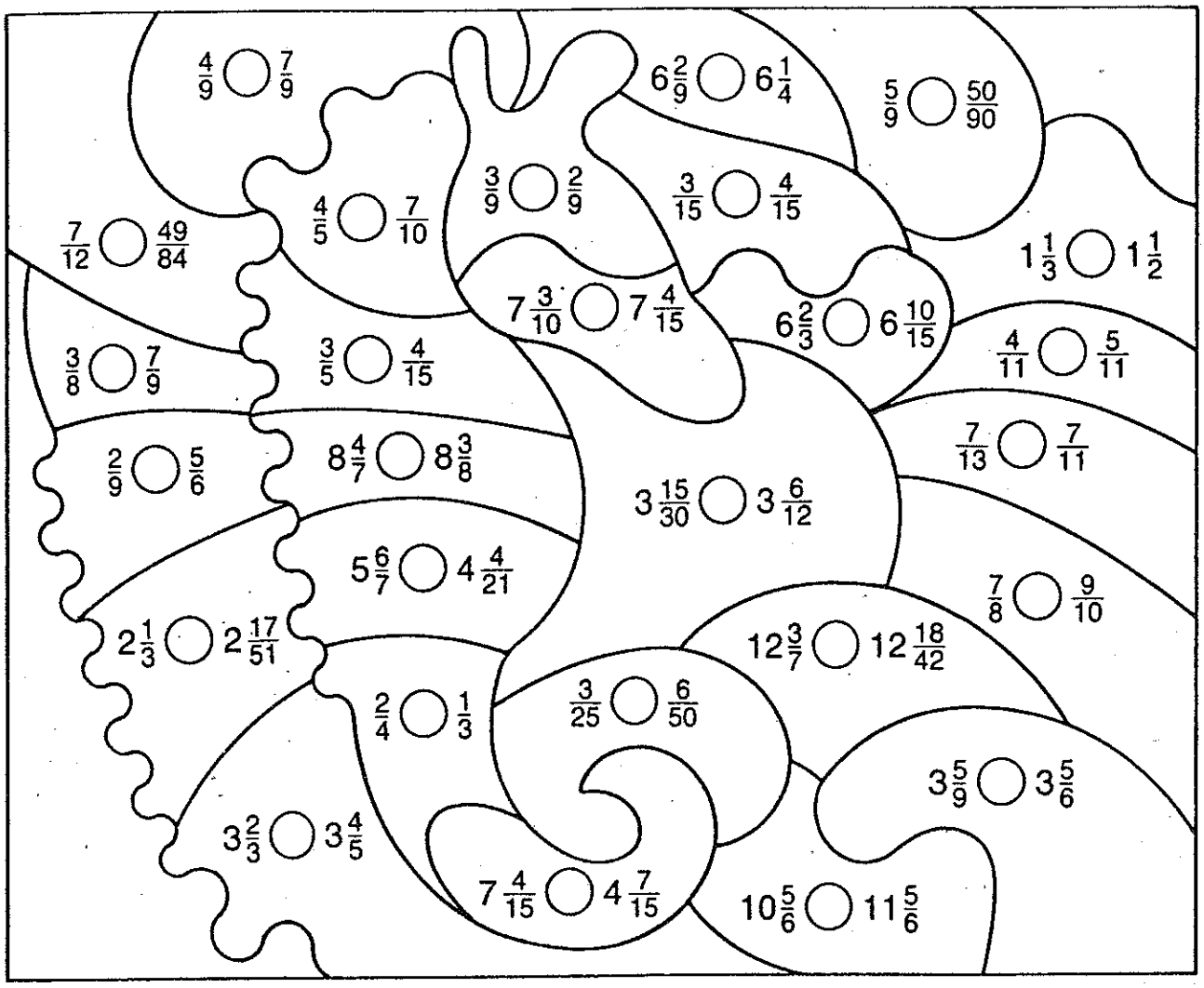
3	2	9	9	0	6	1
3	3	4	5	3	4	5
7	4	5	5	4	6	9

Pg #17

Name Skill #5

P42

Compare. Use >, <, or =. Shade each section that has a > answer. You will see a type of animal that was hatched by its father.



List in order from the least to the greatest.

1. $\frac{1}{6}$ $\frac{2}{8}$ $\frac{1}{12}$ ____ ____ ____

2. $\frac{5}{8}$ $\frac{2}{3}$ $\frac{3}{4}$ ____ ____ ____

3. $\frac{1}{2}$ $\frac{3}{4}$ $\frac{2}{5}$ ____ ____ ____

4. $\frac{7}{12}$ $\frac{3}{5}$ $\frac{8}{15}$ ____ ____ ____

5. $3\frac{2}{3}$ $3\frac{4}{7}$ $3\frac{17}{21}$ ____ ____ ____

6. $9\frac{1}{5}$ $9\frac{2}{9}$ $9\frac{4}{15}$ ____ ____ ____

7. $8\frac{1}{3}$ $8\frac{2}{9}$ $8\frac{5}{12}$ ____ ____ ____

8. $5\frac{3}{8}$ $4\frac{7}{9}$ $5\frac{2}{3}$ ____ ____ ____

Name Skills #5 & 2

Write an equal decimal in hundredths.

1. 6.3 _____ 2. 38 _____ 3. 72.9 _____

4. 8.600 _____ 5. 15 _____ 6. 9.980 _____

Write an equal decimal in thousandths.

7. 4.62 _____ 8. 2.48 _____ 9. 6.8310 _____

10. 2.63 _____ 11. 0.27 _____ 12. 35 _____

Use <, >, or = to compare the numbers.

13. 0.35 ◯ 0.22

14. 3.0411 ◯ 1.040

15. 8.48 ◯ 5.493

16. 0.5462 ◯ 0.54621

17. 69.480 ◯ 69.48

18. 11.483 ◯ 11.485

19. 14.602 ◯ 14.620

20. 7.638 ◯ 7.6371

Write the numbers in order from least to greatest.

21. 9.13 9.31 9.00 9.312 _____

22. 3.623 3.832 3.660 _____

23. 6.24 7.12 6.42 5.90 _____

24. 5.613 5.512 5.891 _____

25. 8.313 8.333 8.036 8.3 _____

26. 0.7 0.8 0.77 0.08 _____

27. 4.86 4.759 14.96 _____

Pg #19

Name Skill #6

P44

Write each number as an improper fraction.

1. $7\frac{4}{5} =$ _____ 2. $3\frac{7}{9} =$ _____ 3. $6\frac{3}{8} =$ _____

4. $9\frac{7}{9} =$ _____ 5. $1\frac{4}{7} =$ _____ 6. $5\frac{1}{5} =$ _____

7. $5\frac{7}{8} =$ _____ 8. $4\frac{1}{3} =$ _____ 9. $8\frac{3}{5} =$ _____

Write each improper fraction as a whole number or a mixed number.

10. $\frac{17}{4} =$ _____ 11. $\frac{35}{8} =$ _____ 12. $\frac{96}{6} =$ _____

13. $\frac{43}{1} =$ _____ 14. $\frac{61}{12} =$ _____ 15. $\frac{240}{10} =$ _____

16. $\frac{19}{3} =$ _____ 17. $\frac{47}{7} =$ _____ 18. $\frac{71}{8} =$ _____

Compare these numbers. Use <, >, or =.

19. $8\frac{1}{2} \bigcirc 8\frac{5}{8}$ 20. $\frac{11}{12} \bigcirc \frac{6}{7}$ 21. $1\frac{1}{3} \bigcirc \frac{8}{9}$

22. $3\frac{7}{24} \bigcirc 2\frac{23}{24}$ 23. $2\frac{9}{13} \bigcirc 2\frac{18}{26}$ 24. $6\frac{5}{6} \bigcirc 6\frac{3}{4}$

List the numbers in order from least to greatest.

25. $3\frac{1}{2}$ $3\frac{9}{13}$ $3\frac{7}{26}$ _____

26. $7\frac{5}{6}$ $7\frac{2}{3}$ $7\frac{11}{12}$ _____

Pg #20

Maintenance

Write each improper fraction as a whole or mixed number. Reduce to lowest terms.

1. $\frac{6}{4}$ _____
2. $\frac{81}{9}$ _____
3. $\frac{18}{17}$ _____
4. $\frac{58}{14}$ _____
5. $\frac{36}{9}$ _____
6. $\frac{83}{7}$ _____
7. $\frac{37}{5}$ _____
8. $\frac{79}{8}$ _____
9. $\frac{51}{7}$ _____
10. $\frac{15}{3}$ _____
11. $\frac{29}{8}$ _____
12. $\frac{122}{68}$ _____

Write each mixed number as an improper fraction.

13. $7\frac{1}{12}$ _____
14. $9\frac{1}{5}$ _____
15. $5\frac{7}{8}$ _____
16. $9\frac{3}{10}$ _____
17. $3\frac{1}{2}$ _____
18. $5\frac{2}{5}$ _____
19. $15\frac{2}{5}$ _____
20. $4\frac{2}{9}$ _____

Solve each problem.

21. Marty stacked 45 tiles on his workbench. Each tile was $\frac{1}{4}$ inch thick. How high was the stack of tiles?

_____

22. Jan used $2\frac{4}{5}$ bags of paste to wallpaper a room. The room had 4 walls. What was the average amount of paste she used per wall?

_____

Pg. #21

Name Skill #7

P43

Write each decimal as a fraction in lowest terms.

1. 0.7 = _____ 2. 0.42 = _____ 3. 0.035 = _____

4. 0.210 = _____ 5. 0.54 = _____ 6. 0.75 = _____

Write each fraction as a decimal.

7. $\frac{11}{50}$ = _____ 8. $\frac{3}{50}$ = _____ 9. $\frac{33}{500}$ = _____

10. $\frac{9}{10}$ = _____ 11. $\frac{12}{25}$ = _____ 12. $\frac{9}{40}$ = _____

13. $\frac{29}{250}$ = _____ 14. $\frac{4}{5}$ = _____ 15. $\frac{1}{50}$ = _____

16. $\frac{7}{8}$ = _____ 17. $\frac{2}{5}$ = _____ 18. $\frac{3}{4}$ = _____

19. $\frac{7}{25}$ = _____ 20. $\frac{11}{12}$ = _____ 21. $\frac{1}{6}$ = _____

22. $\frac{3}{40}$ = _____ 23. $\frac{7}{200}$ = _____ 24. $\frac{8}{9}$ = _____

Solve the problem.

25. The diameter of a certain drill bit is 0.375 inch. Write 0.375 as a fraction in lowest terms.

_____

Pg #22

Name Skill #7

P59

Write each decimal as a percent.

1. 0.48 = _____ 2. 0.02 = _____ 3. 0.6 = _____

4. 0.83 = _____ 5. 0.306 = _____ 6. 0.88 = _____

7. 0.009 = _____ 8. 0.53 = _____ 9. 0.453 = _____

10. 4.2 = _____ 11. 5.07 = _____ 12. 3 = _____

13. 0.29 = _____ 14. 5 = _____ 15. 0.013 = _____

16. $0.82\frac{1}{2}$ = _____ 17. $0.02\frac{1}{3}$ = _____ 18. $1.92\frac{3}{4}$ = _____

Write each percent as a decimal.

19. 12% = _____ 20. 75% = _____ 21. 9% = _____

22. 17% = _____ 23. 6.4% = _____ 24. 11.5% = _____

25. 368% = _____ 26. 156% = _____ 27. 250% = _____

28. 0.9% = _____ 29. $18\frac{1}{3}\%$ = _____ 30. $8\frac{3}{4}\%$ = _____

31. 23.25% = _____ 32. 0.03% = _____

33. 0.08% = _____ 34. 0.75% = _____

35. 112.3% = _____ 36. $106\frac{1}{4}\%$ = _____

Pg #23

Name Skill #7

A. Write a decimal for each percent.

28% = 0.28

3% = 0.03

$4\frac{1}{3}\% = 0.04\frac{1}{3}$

27.6% = 0.276

0.25% = 0.0025

132% = 1.32

B. Write a percent for each decimal.

0.62 = 62%

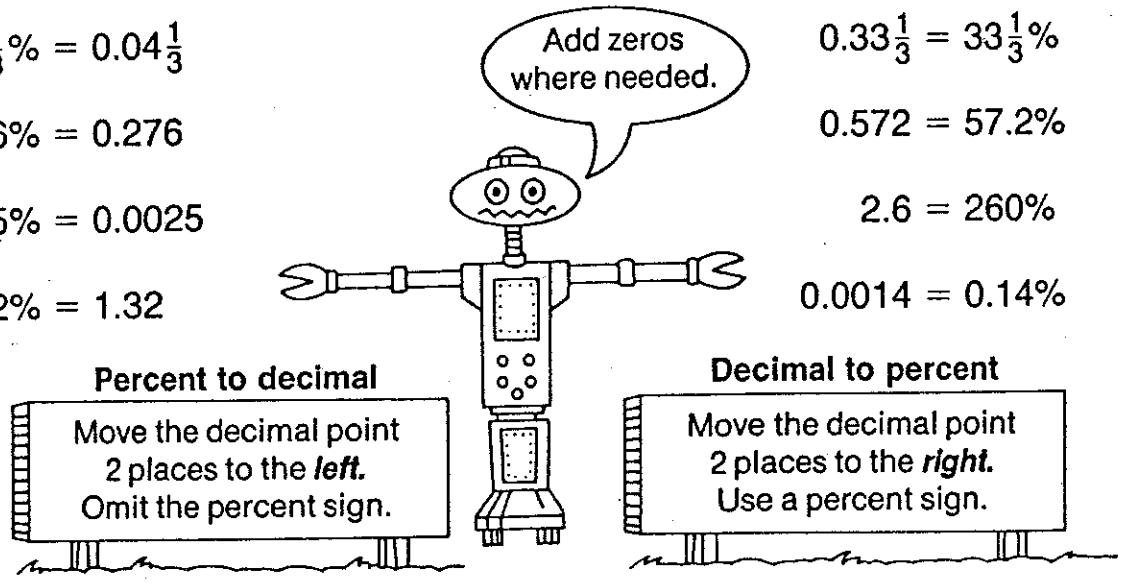
0.8 = 80%

$0.33\frac{1}{3} = 33\frac{1}{3}\%$

0.572 = 57.2%

2.6 = 260%

0.0014 = 0.14%



Write a decimal for each percent.

1. 32% = 0.32
2. 86% = _____
3. 15% = _____
4. 70% = _____
5. 9% = _____
6. 5% = _____
7. 100% = _____
8. 210% = _____
9. 16.4% = _____
10. 2.6% = _____
11. $6\frac{1}{2}\%$ = _____
12. $7\frac{2}{3}\%$ = _____

Write a percent for each decimal.

13. 0.48 = _____
14. 0.27 = _____
15. 0.85 = _____
16. 0.06 = _____
17. 0.09 = _____
18. 0.7 = _____
19. 2 = _____
20. 1 = _____
21. 0.185 = _____

Pg. # 24

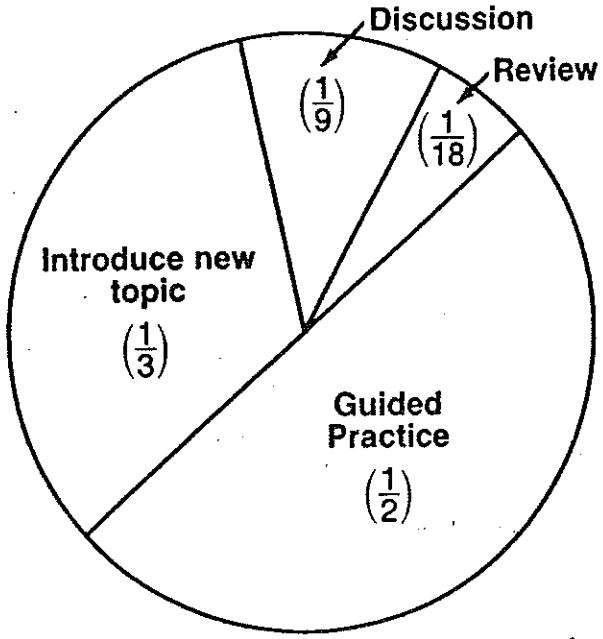
Name Skill #7

P60

Write each number as a percent.

1. $\frac{83}{100}$ = _____
2. $\frac{19}{100}$ = _____
3. $\frac{7}{100}$ = _____
4. $\frac{31}{50}$ = _____
5. $\frac{9}{50}$ = _____
6. $\frac{8}{25}$ = _____
7. $\frac{11}{25}$ = _____
8. $\frac{3}{4}$ = _____
9. $\frac{2}{5}$ = _____
10. $\frac{1}{3}$ = _____
11. $\frac{3}{8}$ = _____
12. $\frac{7}{16}$ = _____
13. $\frac{23}{40}$ = _____
14. $\frac{5}{9}$ = _____
15. $\frac{14}{20}$ = _____
16. $\frac{4}{5}$ = _____
17. $\frac{1}{6}$ = _____
18. $2\frac{1}{2}$ = _____
19. $7\frac{3}{10}$ = _____
20. $5\frac{2}{3}$ = _____
21. $\frac{17}{17}$ = _____

Miss Fisher teaches a mathematics class that is 54 minutes long. The graph shows what fraction of the time is spent on each activity. Tell what percent of the time is spent on each of the following.



22. Discussion _____

23. New topic _____

24. Guided practice _____

25. Review _____

Pg #25

Use after pages 146–147.

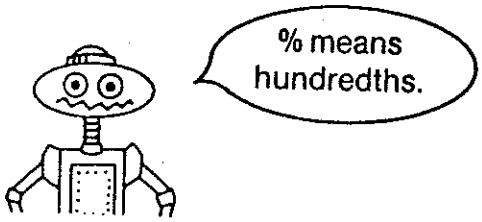
Name DRILL # 1

A. Write a percent for 7 out of 25.

7 out of 25 is the fraction $\frac{7}{25}$.

$\frac{7}{25} = \frac{28}{100} = 28\%$

When possible, write a fraction with a denominator of 100 and then write as a percent.



B. Write a percent for $\frac{3}{8}$.

$\frac{3}{8} = 3 \div 8$

$$8\overline{)3.00} = 0.37\frac{4}{8}, \text{ or } 0.37\frac{1}{2}$$

24
60
56
4

Divide until the quotient shows ***hundredths***.

$0.37\frac{1}{2} = 37\frac{1}{2}\%$

$\frac{3}{8} = 37\frac{1}{2}\%$

Write each number as a percent.

1. $\frac{1}{4} =$ _____
2. $\frac{2}{5} =$ _____
3. $\frac{3}{10} =$ _____
4. $\frac{3}{20} =$ _____
5. $\frac{3}{100} =$ _____
6. $\frac{3}{50} =$ _____
7. $\frac{27}{100} =$ _____
8. $\frac{41}{50} =$ _____
9. $\frac{4}{25} =$ _____
10. $\frac{1}{6} =$ _____
11. $\frac{5}{12} =$ _____
12. $\frac{3}{200} =$ _____
13. $\frac{7}{8} =$ _____
14. $\frac{7}{12} =$ _____
15. $1\frac{1}{4} =$ _____

Pg. #26

Use after pages 146–147.

Name Skill #7

P61

Complete the table. Write the fractions in lowest terms.

Fraction	Decimal	Percent
	0.25	
	$0.16\frac{2}{3}$	
$\frac{1}{2}$		
		75%
	1	
$\frac{1}{8}$		
	0.7	
		1%
$\frac{1}{5}$		
$\frac{9}{10}$		
	0.8	
$\frac{5}{6}$		

Fraction	Decimal	Percent
$\frac{3}{5}$		
	0.575	
		40%
		39%
$\frac{1}{3}$		
		$83\frac{1}{3}\%$
$\frac{3}{10}$		
		5%
	0.875	
$\frac{1}{10}$		
		37.5%
	0.625	

Pg #27

Name Skill # 7

A. Write 60% as a fraction.

$60\% = \frac{60}{100} = \frac{3}{5}$

$60\% = \frac{3}{5}$

B. Write $66\frac{2}{3}\%$ as a fraction.

$$66\tfrac{2}{3}\% = \frac{66\frac{2}{3}}{100}$$

$$= 66\tfrac{2}{3} \div 100$$

$$= \frac{200}{3} \div 100$$

$$= \frac{200}{3} \times \frac{1}{100}$$

$$= \frac{\overset{2}{\cancel{200}} \times 1}{3 \times \underset{1}{\cancel{100}}} = \frac{2}{3}$$

$66\frac{2}{3}\% = \frac{2}{3}$

C. Write 350% as a fraction in lowest terms or as a mixed number.

$350\% = \frac{350}{100} = \frac{7}{2} = 3\frac{1}{2}$

$350\% = 3\frac{1}{2}$

For each percent, write a fraction in lowest terms, as a mixed number, or as a whole number.

1. 5% = $\frac{5}{100} = \frac{1}{20}$
2. 50% = _____
3. 500% = _____
4. 2.5% = _____
5. 25% = _____
6. 250% = _____
7. 1% = _____
8. 10% = _____
9. 100% = _____
10. 300% = _____
11. 0% = _____
12. 75% = _____
13. 45% = _____
14. $16\frac{2}{3}\%$ = _____
15. $18\frac{1}{2}\%$ = _____

Pg. #28

Skill #8
Order of Operations

① $12 \cdot 6 \div 3 \cdot 2 \div 8 = x$

② $7 + \frac{60+4}{10-8} \div 2^5 = W$

③ $3^3 + 4 \div 2(5 \cdot 3) - 12 = y$

④ $\frac{-6(-3)}{-2} - (-7)(3) + 4^3$

⑤ $12 \cdot (-3) - \frac{-50}{2} \cdot 2^3 - 4$

⑥ $7 + 5^3 - \left(\frac{16}{-4}\right) \cdot -2^3 + 5$

⑦ $5 + 3^3 - 7 + (6 \cdot 3) = W$

⑧ $(5 \cdot 2)(4 \cdot 5) \div 5 = x$

⑨ $7 + (12 \div 4) \cdot 2^3 - 15 = B$

Skill #8

Order of Operations

① $6+4^2-(-8)\div(2)+(-3)(6)$

② $\frac{-4\cdot-3}{-2}-(-3)(10)+(-14)$

③ $10\cdot(-2)-\frac{-6}{2}\cdot3^2-5$

④ $9+\frac{4(-7)}{2}\cdot3+\frac{8-12}{4}-3^3$

⑤ $6+4^3-(7\cdot8)+4=N$

⑥ $12+\frac{12+6}{3}\div3\cdot9=x$

⑦ $-7(6+3)\div-9+2\cdot3=x$

⑧ $6\cdot5\div2\cdot4\div6=x$

⑨ $9+\frac{12+4}{4\div2}\cdot2^3-8=W$

⑩ $72-16+4^3+4\div2=B$

Name Skills # 8 and #15

Evaluate $\frac{22(2+2)}{2}$.

( ) tells you to multiply.

$$\frac{22(2+2)}{2}$$

Do operation inside ( ) first. Then do operation above fraction bar.

$$= \frac{22(4)}{2}$$

$\frac{88}{2}$ means $88 \div 2$.

$$= \frac{88}{2}$$

$$= 44$$

Standard order of operations:

Multiply as indicated by exponents.
Do × and ÷ left to right.
Then do + and − left to right.

If there are ( ) or division bars:

Do operations inside the ( ).
Then do operations above and below division bars.

Compute each answer. The answers are the whole numbers from 1–12.

1. $2 + 2 + 2 + 2 + 2 =$ ___

2. $2 + 2 + 2 - \frac{2}{2} =$ ___

3. $2(2 + 2) - 2 - 2 =$ ___

4. $2 + 2 - 2 - \frac{2}{2} =$ ___

5. $2 + 2 + 2 - 2 - 2 =$ ___

6. $\frac{22}{2} - 2 - 2 =$ ___

7. $\frac{22}{2} + \frac{2}{2} =$ ___

8. $2 + 2 + 2 + 2 - 2 =$ ___

9. $2 + 2 - 2 + \frac{2}{2} =$ ___

10. $\frac{2}{2} + 2(2 + 2) =$ ___

11. $2(2 + 2) + 2 - 2 =$ ___

12. $\frac{22}{2} + 2 - 2 =$ ___

Compute each answer.

13. $3 + 4^2 =$ ___

14. $(3 + 4)^2 =$ ___

15. $4(3^2 - 2) =$ ___

16. $2 \times 4 + 3^2 =$ ___

17. $\frac{2 \times 4 + 3^2}{(3 + 1)^2 + 1} =$ ___

18. $\frac{3 + (3^2 - 2)}{3(4) - 7} =$ ___

Pg. #31

Name skill #9

Add or subtract. **P31**

1. 0.95 − 0.088 = _____
2. 53.14 + 8.08 = _____
3. 48.33 + 28.34 = _____
4. 34 − 23.001 = _____
5. 72.54 − 16.67 = _____
6. 33.3 + 26.2 + 0.3 = _____
7. 4.9 + 2.04 + 0.38 = _____
8. 0.5 + 73.5 + 11 = _____
9. 313.002 + 8.457 + 66.3 + 3 = _____

What has a mouth but can't speak, and a bed that can't be slept in?

To find out, work each exercise. Find your answer below. Write the letter for that exercise. Two answers are not used.

10. 8.3 + 4.55 — **R**

11. 5.008 + 8.346 — **E**

12. 21.4 + 17.3 — **T**

13. 32.48 − 12.08 — **V**

14. 7.9 − 3.78 — **R**

15. 63.84 + 14 — **R**

16. 26 − 17.32 — **I**

17. 46.07 + 21.12 + 1.3 — **A**

68.49	12.85	8.68	20.4	13.354	4.12

Pg #32

Name Skill #9 *Decimals*

Adding Decimals

13.3 + 7.23 =	13.30 + 7.23 20.53

Add.

1. 3.456 + 2.894
2. 4.89 + 5.73
3. 3.5 + 8.4
4. 43.56 + 105.7
5. 15.76 + 34.23 + 3.9
6. 6.8 + 13.634 + 2.34
7. 5.7 + 5.34 + 4.78
8. 12.87 + 2.87
9. $13.39 + $7.40
10. .017 + 13
11. 5.02 + 5.20
12. 9.91 + 2.734 + 8.41
13. 121.9 + .736
14. 17.438 + 4.82
15. 322.815 + 6.876
16. 5.97 + 4.87 + 3.908
17. 3.83 + 45.90 + 5.00
18. 5.94 + 5.32
19. 6.41 + 3.99
20. 2.987 + 451.90

Name Skill #9

Adding Decimals

11.2 + 6.12 =	11.20 + 6.12 17.32

Add.

1. 2.312 + 5.371
2. 3.09 + 2.19
3. 2.15 + 4.58
4. 61.71 + 324.95
5. 46.29 + 22.53 + 5.6
6. 2.6 + 21.540 + 3.65
7. 5.4 + 7.38 + 6.21
8. 27.34 + 6.45
9. $12.52 + $8.32
10. .032 + 37
11. 3.43 + 5.45
12. 5.66 + 7.34 + 6.30
13. 281.7 + .736
14. 23.431 + 5.34
15. 654.595 + 3.650
16. 6.29 + 9.95 + 6.332
17. 8.45 + 95.20 + 5.34
18. 5.37 + 7.37
19. 8.22 + 8.41
20. 5.372 + 371.52

Name Skill #9

Subtracting Decimals

17.2 - 5.10 =	17.20 – 5.10 12.10

Subtract.

1. 13.2 – 6.7
2. 13.3 – 12.4
3. 62.1 – 33.29
4. 76.34 – 47.30
5. 325.34 – 235.34
6. 55.23 – 47.29
7. $21.73 – $16.43
8. 3.239 – .06
9. 23.28 – .002 – 1.2
10. 35.63 – .021
11. 543.43 – 35.342
12. 436.82 – 328.56
13. 75.034 – 22.439
14. 439.02 – 232.76
15. 756.98 – 32.43
16. 65.9 – 33.32
17. 21.32 – 4.28
18. 4.64 – .476
19. 121.32 – 4.34
20. 34.32 – 12.43

Name Skill #9

Subtracting Decimals

13.5 – 4.21 =	13.50 – 4.21 9.29

Subtract.

1. 4.7 – 2.3
2. 24.34 – 23.19
3. 84.87 – 78.45
4. 85.76 – 34.65
5. 342.43 – 259.24
6. 74.81 – 61.92
7. $54.68 – $23.76
8. 7.435 – .0345
9. 43.50 – .015 – 3.2
10. 56.40 – .043
11. 756.84 – 31.343
12. 34,245.34 – 28,674.87
13. 82.72 – 43.658
14. 954.34 – 657.56
15. 843.44 – 22.39
16. 84.8 – 44.87
17. 93.76 – 8.67
18. 6.56 – .654
19. 254.54 – 6.45
20. 39.43 – 15.34

Name Skill #9

P34

What two months of the year were named after famous Roman leaders?

To find out, multiply. Cross out each box in the chart that contains an answer. The remaining months are the answers.

1. $\begin{array}{r} 72 \\ \times\ 0.03 \\ \hline \end{array}$

2. $\begin{array}{r} 38 \\ \times\ 0.07 \\ \hline \end{array}$

3. $\begin{array}{r} 41 \\ \times\ 0.04 \\ \hline \end{array}$

4. $\begin{array}{r} 68 \\ \times\ 0.09 \\ \hline \end{array}$

5. $\begin{array}{r} 0.061 \\ \times\ 82 \\ \hline \end{array}$

6. $\begin{array}{r} 0.049 \\ \times\ 2.6 \\ \hline \end{array}$

7. $\begin{array}{r} 0.36 \\ \times\ 0.36 \\ \hline \end{array}$

8. $\begin{array}{r} 44 \\ \times\ 0.17 \\ \hline \end{array}$

9. $0.13 \times 0.13 =$ _____

10. $17.03 \times 0.08 =$ _____

11. $2.9 \times 0.43 =$ _____

12. $0.083 \times 7.2 =$ _____

2.16 **June**	0.5976 **September**	5.002 **March**	0.1274 **October**	1.247 **January**
0.0169 **June**	2.66 **October**	0.00038 **July**	7.48 **February**	0.1296 **April**
6.12 **December**	1.64 **January**	1.3624 **March**	0.0005 **August**	

Pg #37

Name_____ Skill #9

Multiplying Decimals

(.4) (.06)

3 decimal places

.4
x .06
.024

Multiply. Use mental math

1. 0.06 x 0.4
2. (1.2) (0.03)
3. (0.9) (0.9)
4. 0.03 x 0.08
5. 0.5 x 0.06
6. (0.11) (0.05)
7. (0.7) (0.07)
8. 0.12 x 0.04
9. (0.8) (0.005)
10. (0.9) (0.002)
11. (0.012) (0.7)
12. (0.7) (0.011)
13. 0.03 x 0.6
14. (1.1) (0.11)
15. (0.12) (.05)
16. 0.06 x 0.07
17. (0.10) (0.05)
18. (0.012) (1.2)
19. (0.6) (0.8)
20. (0.02) (1.2)

Name Skill #9

P38

Why doesn't the ocean overflow the land?

To find out, divide. Find each answer at the right. Write the letter for that exercise. Two answers are not used.

1. $0.0\,8\overline{)1.1\,2}$ T

2. $5.5\overline{)3\,8.5}$ I

3. $0.0\,6\overline{)5.4}$ T

4. $3.0\,5\overline{)1\,0.9\,8}$ E

5. $\frac{5.6}{0.07} =$ _____ D

6. $\frac{0.738}{0.82} =$ _____ S

7. $0.52 \div 13 =$ _____ I

8. $30.2 \div 6.04 =$ _____ B

9. $6.644 \div 3.02 =$ _____ I

10. $7.849 \div 0.5 =$ _____ P

Because . . .

7 _____

14 _____

2.2 _____

0.9 _____

90 _____

0.4 _____

80 _____

3.6 _____

Pg#39

Name Skill #9

Dividing Decimals

Divide. Use mental math.

1. $0.36 \div 0.4$
2. $5.4 \div 0.06$
3. $1.21 \div 0.11$
4. $1.69 \div 0.13$
5. $0.032 \div 0.4$
6. $9.6 \div 0.12$
7. $14.4 \div 1.2$
8. $0.012 \div 0.3$
9. $0.56 \div 0.008$
10. $0.072 \div 0.08$
11. $2.6 \div 0.02$
12. $0.55 \div 0.005$
13. $0.0027 \div 0.9$
14. $100 \div 0.01$
15. $0.132 \div 0.012$
16. $7.2 \div 0.06$
17. $0.064 \div 0.8$
18. $0.0054 \div 0.006$
19. $3.6 \div 0.009$
20. $0.24 \div 0.008$
21. $84 \div 1.2$
22. $0.108 \div 0.09$

Name Skill #9

Practice with Decimals

Perform the indicated operation.

1. 2.62 ÷ .54
2. 31.25 + 23.5
3. (9.9) (2.03)
4. 8726 ÷ 2.84
5. 1.32 ÷ 1.22
6. 6.55 + .08
7. 12.78 – 7.2
8. (3.2) (4.065)
9. 21.7 – 15.9
10. .6 + .09 + 1.75
11. (2.5) (3.4) (4.4)
12. 87.21 –23.98 + 11.12
13. (.03) (.23) (1.3)
14. 23.65 ÷ 22.81
15. 2.34 ÷ .983
16. 65.78 + 54.90
17. 432.42 – 237.89
18. 12.938 + 11.548
19. 789.987 – 231.093
20. (13.2) (34.9)
21. 1243.32 – 1032.90
22. 5.23 ÷ 3.12

Name Skill #9

Practice with Decimals

Perform the indicated operation.

1. 3.56 ÷ .73
2. 22.59 + 33.5
3. (4.3) (3.59)
4. 3496 ÷ 3.549
5. 7.459 ÷ 2.459
6. 7.546 + .0958
7. 15.54 – 8.34
8. (6.5) (5.304)
9. 43.7 – 34.5
10. .8 + .07 + 3.73
11. (5.5) (2.6) (4.0)
12. 33.54 –22.56 + 23.43
13. (2.3) (3.04) (3.46)
14. 84.34 ÷ 65.76
15. 4.33 ÷ .393
16. 54.34 + 31.98
17. 843.21 – 342.03
18. 23.434 + 23.403
19. 345.765 – 237.405
20. (23.4) (3.9)
21. 1465.65 – 1253.42
22. 6.37 ÷ 6.50

Maintenance

Add.

1. $\frac{1}{8} + \frac{3}{4} =$ ____
2. $\frac{2}{5} + \frac{1}{5} =$ ____
3. $\frac{5}{6} + \frac{3}{7} =$ ____
4. $\frac{1}{8} + \frac{5}{12} =$ ____
5. $\frac{6}{7} + \frac{8}{49} =$ ____
6. $\frac{4}{9} + \frac{13}{27} =$ ____
7. $2\frac{5}{6} + 3\frac{2}{3} =$ ____
8. $4\frac{6}{7} + 8\frac{1}{4} =$ ____
9. $\frac{7}{8} + \frac{5}{24} =$ ____
10. $\frac{3}{16} + \frac{13}{16} =$ ____
11. $\frac{1}{2} + \frac{3}{32} =$ ____
12. $\frac{2}{5} + \frac{1}{4} =$ ____
13. $\frac{2}{13} + \frac{5}{39} =$ ____
14. $\frac{1}{4} + \frac{7}{12} =$ ____
15. $8\frac{1}{2} + 5\frac{2}{3} =$ ____
16. $1\frac{8}{9} + 2\frac{2}{3} =$ ____
17. $7\frac{2}{3} + \frac{5}{51} =$ ____
18. $11\frac{1}{5} + \frac{17}{20} =$ ____
19. $\frac{1}{3} + \frac{5}{6} + \frac{1}{9} =$ ____
20. $\frac{1}{2} + \frac{1}{4} + \frac{3}{8} =$ ____

Pg. #43

Name Skill #10

P50

What kind of pets can you bring along to music lessons?

To find out, add. Find each answer in a box below and cross out that box. The letters in the remaining boxes answer the question. Write them in order on the blanks.

1. $3\frac{1}{3} + 2\frac{1}{4}$

2. $8\frac{3}{4} + 1\frac{1}{4}$

3. $16\frac{1}{5} + 3\frac{4}{5}$

4. $69\frac{1}{8} + 18\frac{3}{4}$

5. $4\frac{3}{4} + 16\frac{3}{4} =$ _____

6. $9\frac{1}{2} + 14\frac{1}{2} =$ _____

7. $23\frac{1}{5} + \frac{2}{3} =$ _____

8. $18\frac{5}{8} + 6\frac{3}{4} =$ _____

9. $14\frac{3}{5} + \frac{6}{7} =$ _____

10. $16\frac{1}{7} + 33\frac{6}{7} =$ _____

11. $4\frac{3}{8} + \frac{2}{3} + 5\frac{5}{6} =$ _____

12. $14\frac{1}{2} + 9\frac{1}{3} + \frac{5}{7} =$ _____

$15\frac{16}{35}$ S	25 T	10 O	$23\frac{13}{15}$ H	$15\frac{3}{5}$ R	$21\frac{1}{2}$ B	$9\frac{1}{2}$ U	$10\frac{7}{8}$ C	20 D	$24\frac{1}{7}$ M
24 O	50 A	$19\frac{3}{5}$ P	$78\frac{1}{4}$ E	$25\frac{3}{8}$ F	$5\frac{7}{12}$ I	11 T	$87\frac{7}{8}$ Y	$24\frac{23}{42}$ G	$15\frac{1}{7}$ S

_____ _____ _____ _____ _____ _____ _____ _____

Pg #44

Name Skill #10

Maintenance

Subtract.

1. $\frac{9}{16} - \frac{1}{16} =$ _____

2. $\frac{3}{4} - \frac{1}{16} =$ _____

3. $\frac{5}{6} - \frac{2}{5} =$ _____

4. $\frac{9}{10} - \frac{1}{3} =$ _____

5. $\frac{7}{8} - \frac{1}{4} =$ _____

6. $\frac{14}{15} - \frac{2}{3} =$ _____

7. $3\frac{2}{3} - 1\frac{5}{9}$

8. $1\frac{5}{16} - \frac{1}{8}$

9. $\frac{5}{6} - \frac{3}{7}$

10. $3\frac{6}{7} - \frac{1}{4}$

11. $4\frac{7}{9} - 2\frac{3}{5}$

12. $3\frac{2}{3} - 2\frac{5}{6}$

13. $\frac{6}{39} - \frac{2}{13}$

14. $9\frac{2}{5} - 4\frac{1}{4}$

15. $8\frac{1}{2} - 5\frac{2}{3}$

16. $2\frac{1}{3} - 1\frac{8}{9}$

17. $\frac{3}{8} - \frac{5}{32}$

18. $6\frac{31}{42} - \frac{6}{7}$

Pg. #45

Use after pages 186–187.

Name Skill #10

Subtract. P51

1. $\frac{7}{8} - \frac{5}{8} =$ _____ 2. $\frac{2}{3} - \frac{1}{4} =$ _____ 3. $\frac{3}{5} - \frac{1}{2} =$ _____

4. $\frac{5}{6} - \frac{1}{3} =$ _____ 5. $\frac{3}{4} - \frac{5}{12} =$ _____ 6. $\frac{8}{9} - \frac{4}{5} =$ _____

7. $1\frac{2}{3} - \frac{3}{5}$ 8. $3\frac{3}{4} - 2\frac{1}{7}$ 9. $6\frac{3}{7} - 1\frac{1}{3}$ 10. $21\frac{3}{8} - 9\frac{1}{3}$

11. $67\frac{4}{5} - 29\frac{1}{4}$ 12. $17\frac{23}{24} - \frac{2}{3}$ 13. $52\frac{2}{3} - 14\frac{1}{4}$ 14. $18\frac{3}{8} - 18\frac{1}{4}$

15. $34\frac{10}{21} - 11\frac{1}{3}$ 16. $33\frac{3}{5} - 5\frac{1}{6}$ 17. $7\frac{2}{3} - 4\frac{1}{8}$ 18. $44\frac{7}{9} - 13\frac{2}{3}$

Solve each problem.

19. An overpass has a clearance of $17\frac{3}{4}$ feet. How much space is there between the overpass and a truck that is $14\frac{1}{3}$ feet high?

_____

20. A truck loaded with cargo weighed $6\frac{5}{6}$ tons. When empty, the truck weighed $2\frac{1}{2}$ tons. How much did the cargo weigh?

_____

Pg #46

Name Skill #10

P52

Subtract.

1. $26\frac{5}{6} - 7\frac{1}{2}$

2. $14\frac{2}{3} - 6\frac{1}{5}$

3. $35 - 18\frac{1}{9}$

4. $16\frac{3}{8} - 7\frac{5}{8}$

5. $14\frac{2}{3} - \frac{7}{8}$

6. $19 - 7\frac{3}{8}$

7. $11\frac{3}{8} - 5\frac{9}{16}$

8. $14\frac{1}{2} - 6\frac{7}{8}$

9. $16\frac{1}{8} - 3\frac{1}{9}$

10. $35\frac{2}{3} - 16\frac{4}{5}$

11. $19 - 12\frac{3}{8}$

12. $12\frac{3}{8} - 9$

13. $60\frac{1}{8} - 16\frac{1}{7}$

14. $63\frac{8}{9} - 19\frac{1}{2}$

15. $60\frac{1}{4} - 11\frac{3}{5}$

16. $40\frac{3}{8} - 19\frac{3}{8}$

17. $8\frac{1}{6} - 6\frac{2}{3} =$ _____

18. $35\frac{1}{6} - 16\frac{3}{8} =$ _____

19. $17\frac{5}{8} - 3\frac{1}{3} =$ _____

20. $35 - 27\frac{1}{9} =$ _____

21. $26 - 8\frac{7}{8} =$ _____

22. $11\frac{7}{8} - 10\frac{8}{9} =$ _____

23. $46\frac{5}{7} - 39\frac{3}{4} =$ _____

24. $57\frac{2}{3} - 28\frac{4}{5} =$ _____

25. $8\frac{1}{9} - \frac{2}{3} =$ _____

Pg# 47

Name Skill #10

Adding and Subtracting Mixed Numbers

When the denominators are different, find the least common multiple. In this case, 8.

$3\frac{1}{4} + 1\frac{3}{8} = 3\frac{2}{8} + 1\frac{3}{8} = 4\frac{5}{8}$

1. $4\frac{5}{8} - 2\frac{2}{6}$
2. $8\frac{1}{6} + 5\frac{3}{4}$
3. $3\frac{7}{12} + 7\frac{5}{6}$
4. $12 - 3\frac{1}{5}$
5. $1\frac{9}{10} - 1\frac{3}{4}$
6. $5\frac{1}{2} - 2\frac{2}{7}$
7. $9\frac{3}{5} + 4\frac{2}{3}$
8. $16\frac{1}{3} - 7\frac{5}{8}$
9. $4\frac{1}{8} - 3\frac{1}{2}$
10. $12\frac{7}{9} + 3\frac{2}{3}$
11. $4\frac{8}{9} + 2\frac{5}{6}$
12. $3\frac{8}{12} - 1\frac{5}{18}$
13. $7\frac{1}{2} - 2\frac{7}{10}$
14. $6\frac{2}{7} - 1\frac{1}{3}$
15. $17\frac{3}{4} - 8\frac{2}{5}$
16. $6\frac{4}{5} + 2\frac{3}{8}$
17. $11\frac{4}{5} - 3\frac{5}{6}$
18. $4\frac{3}{6} + 7\frac{3}{8}$

Pg#48

Name Skill #10 *Fractions*

Multiplying Fractions

rewrite

$1\frac{2}{3} \cdot 2\frac{1}{2} = \frac{5}{3} \cdot \frac{5}{2} = \frac{25}{6}$ or $4\frac{1}{6}$

rewrite

1. $\frac{3}{5} \cdot \frac{15}{18}$
2. $\frac{2}{3} \cdot \frac{21}{24}$
3. $5\frac{1}{2} \cdot \frac{2}{11}$
4. $7\frac{2}{7} \cdot 2\frac{1}{3}$
5. $5\frac{3}{5} \cdot 2\frac{1}{7}$
6. $3\frac{12}{13} \cdot 4\frac{1}{3}$
7. $4\frac{4}{7} \cdot 1\frac{3}{4}$
8. $8\frac{1}{3} \cdot 6\frac{3}{5}$
9. $3\frac{1}{5} \cdot 12\frac{1}{2}$
10. $1\frac{1}{2} \cdot 3\frac{1}{5}$
11. $9\frac{1}{3} \cdot 2\frac{1}{7}$
12. $2\frac{3}{4} \cdot 1\frac{1}{3}$
13. $4\frac{5}{6} \cdot 5\frac{1}{7}$
14. $12\frac{2}{3} \cdot 7\frac{1}{2}$
15. $5\frac{2}{3} \cdot 8\frac{1}{4}$
16. $10\frac{2}{3} \cdot 7\frac{1}{8}$
17. $2\frac{4}{7} \cdot 2\frac{3}{9}$
18. $5\frac{3}{12} \cdot 2\frac{1}{7}$

Pg#49

Skill #10

Name _____ *Fractions*

Multiplying Fractions

rewrite

$2\frac{1}{3} \cdot 1\frac{1}{2} = \frac{7}{3} \cdot \frac{3}{2} = \frac{21}{6}$ or $3\frac{3}{6}$ or $3\frac{1}{2}$

rewrite

1. $12\frac{1}{2} \cdot 8\frac{2}{5}$

2. $8\frac{3}{4} \cdot 1\frac{3}{7}$

3. $13\frac{1}{3} \cdot 2\frac{2}{5}$

4. $5\frac{5}{7} \cdot 9\frac{4}{5}$

5. $7\frac{1}{8} \cdot 9\frac{1}{3}$

6. $4\frac{2}{3} \cdot 7\frac{1}{2}$

7. $3\frac{1}{3} \cdot 9\frac{3}{4}$

8. $7\frac{1}{3} \cdot 4\frac{1}{2}$

9. $6\frac{2}{9} \cdot 3\frac{6}{8}$

10. $3\frac{3}{5} \cdot 2\frac{7}{9}$

11. $3\frac{8}{9} \cdot 5\frac{2}{5}$

12. $4\frac{7}{12} \cdot 6\frac{2}{5}$

13. $8\frac{2}{5} \cdot 3\frac{4}{7}$

14. $15\frac{3}{4} \cdot 6\frac{2}{7}$

15. $8\frac{4}{5} \cdot 2\frac{5}{10}$

16. $10\frac{1}{2} \cdot 7\frac{1}{3}$

17. $5\frac{4}{9} \cdot 2\frac{4}{7}$

18. $11\frac{2}{3} \cdot 4\frac{4}{5}$

Pg#50

Name Skill #10

P47

Multiply.

1. $16 \times 2\frac{5}{8} =$ _____ 2. $3\frac{6}{7} \times 14 =$ _____ 3. $4 \times 3\frac{3}{4} =$ _____

4. $6 \times 1\frac{2}{3} =$ _____ 5. $24 \times 3\frac{1}{8} =$ _____ 6. $7\frac{1}{3} \times 15 =$ _____

7. $7\frac{1}{5} \times \frac{2}{9} =$ _____ 8. $8\frac{1}{2} \times 15 =$ _____ 9. $5\frac{1}{4} \times \frac{4}{5} =$ _____

10. $\frac{2}{3} \times 4\frac{5}{7} \times \frac{7}{10} =$ _____ 11. $3\frac{3}{5} \times 1\frac{1}{9} \times 2\frac{3}{4} =$ _____

12. $\frac{7}{8} \times \frac{5}{7} \times 3\frac{6}{7} =$ _____ 13. $6\frac{3}{4} \times \frac{4}{5} \times \frac{2}{9} =$ _____

Give the reciprocal of each number.

14. $\frac{4}{9}$ _____ 15. 7 _____ 16. $4\frac{1}{5}$ _____ 17. $2\frac{1}{3}$ _____

Solve the problem.

18. Bret can swim the length of a pool in $1\frac{1}{10}$ minutes. How long will it take him to swim 4 lengths of the pool? _____

Name Skill # 10 Additional Resource

64

Maintenance

Multiply.

1. $\frac{3}{8} \times 7 =$ ____

2. $\frac{1}{16} \times 8 =$ ____

3. $\frac{2}{3} \times \frac{12}{15} =$ ____

4. $\frac{3}{4} \times \frac{7}{8} =$ ____

5. $\frac{8}{9} \times \frac{11}{12} =$ ____

6. $\frac{7}{16} \times 8 =$ ____

7. $\frac{2}{3} \times \frac{3}{2} =$ ____

8. $\frac{4}{7} \times \frac{8}{7} =$ ____

9. $\frac{4}{7} \times \frac{7}{8} =$ ____

10. $\frac{2}{5} \times \frac{3}{4} =$ ____

11. $4\frac{1}{2} \times 8 =$ ____

12. $9\frac{7}{10} \times \frac{5}{6} =$ ____

13. $3\frac{1}{2} \times \frac{1}{7} =$ ____

14. $5\frac{5}{8} \times 6 =$ ____

15. $8\frac{1}{4} \times 12 =$ ____

16. $2\frac{1}{3} \times 2\frac{1}{3} =$ ____

17. $1\frac{3}{8} \times 2\frac{1}{3} =$ ____

18. $\frac{3}{8} \times \frac{8}{7} \times \frac{3}{9} =$ ____

19. $12 \times \frac{1}{2} \times \frac{3}{5} =$ ____

Pg. #52

Use after pages 154–155.

Name Skill #10

Dividing Fractions

rewrite — invert and multiply

$$1\frac{2}{3} \div 2\frac{1}{2} = \frac{5}{3} \div \frac{5}{2} = \frac{5}{3} \cdot \frac{2}{5} = \frac{2}{3}$$

rewrite

1. $6\frac{2}{3} \div 3\frac{4}{12}$
2. $4\frac{1}{2} \div 5\frac{1}{4}$
3. $2\frac{2}{9} \div 4\frac{1}{6}$
4. $6\frac{2}{3} \div 4\frac{4}{9}$
5. $8\frac{3}{4} \div 2\frac{1}{2}$
6. $7\frac{3}{5} \div 1\frac{9}{10}$
7. $3\frac{1}{3} \div 1\frac{5}{9}$
8. $4\frac{3}{8} \div 2\frac{1}{12}$
9. $9\frac{2}{7} \div 2\frac{2}{14}$
10. $7\frac{1}{5} \div 3\frac{3}{5}$
11. $7\frac{3}{4} \div 1\frac{1}{4}$
12. $5\frac{2}{5} \div 4\frac{1}{2}$
13. $2\frac{7}{10} \div 3\frac{9}{15}$
14. $2\frac{2}{6} \div 4\frac{2}{3}$
15. $3\frac{1}{2} \div 4\frac{1}{3}$
16. $3\frac{3}{4} \div 1\frac{2}{3}$
17. $9\frac{4}{5} \div 1\frac{4}{10}$
18. $3\frac{1}{5} \div 1\frac{6}{10}$

Name Skill #10 *Fractions*

Dividing Fractions

rewrite / invert and multiply

$$1\frac{2}{3} \div 2\frac{1}{2} = \frac{5}{3} \div \frac{5}{2} = \frac{5}{3} \cdot \frac{2}{5} = \frac{2}{3}$$

rewrite

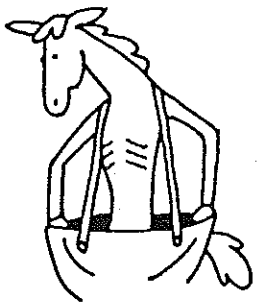
1. $7\frac{4}{5} \div 1\frac{3}{10}$
2. $5\frac{1}{2} \div 8\frac{4}{5}$
3. $9\frac{2}{7} \div 3\frac{3}{14}$
4. $8\frac{2}{5} \div 2\frac{1}{10}$
5. $3\frac{5}{7} \div 3\frac{15}{21}$
6. $8\frac{2}{7} \div 2\frac{1}{14}$
7. $9\frac{1}{6} \div 3\frac{8}{12}$
8. $11\frac{3}{7} \div 5\frac{10}{14}$
9. $7\frac{1}{9} \div 2\frac{2}{3}$
10. $9\frac{3}{5} \div 1\frac{6}{10}$
11. $12\frac{3}{5} \div 2\frac{7}{10}$
12. $8\frac{1}{3} \div 4\frac{1}{6}$
13. $7\frac{1}{2} \div 8\frac{3}{4}$
14. $9\frac{1}{5} \div 2\frac{3}{10}$
15. $12\frac{4}{5} \div 1\frac{1}{15}$
16. $10\frac{4}{5} \div 1\frac{8}{10}$
17. $13\frac{3}{4} \div 5\frac{1}{2}$
18. $3\frac{3}{4} \div 3\frac{1}{8}$

Pg#54

Name Skill #10

P48

What is a young, skinny horse?



To find out, divide. Find each answer below. Cross out the letter in the box. The remaining letters answer the riddle. Some answers are used more than once.

1. $4 \div \frac{3}{5} =$ _____

2. $9 \div \frac{3}{4} =$ _____

3. $\frac{3}{8} \div \frac{5}{16} =$ _____

4. $\frac{3}{4} \div \frac{8}{9} =$ _____

5. $\frac{1}{2} \div \frac{5}{8} =$ _____

6. $9 \div \frac{1}{2} =$ _____

7. $\frac{3}{7} \div \frac{3}{5} =$ _____

8. $7 \div 4\frac{1}{5} =$ _____

9. $8 \div 3 =$ _____

10. $\frac{5}{8} \div 2\frac{1}{2} =$ _____

11. $7\frac{7}{9} \div 1\frac{1}{9} =$ _____

12. $8\frac{2}{3} \div 1\frac{5}{8} =$ _____

13. $23\frac{1}{3} \div 8\frac{4}{7} =$ _____

14. $6\frac{3}{7} \div 5\frac{5}{7} =$ _____

15. $8\frac{2}{11} \div 4\frac{2}{7} =$ _____

$1\frac{10}{11}$	$3\frac{1}{3}$	$\frac{5}{7}$	$\frac{27}{32}$	$\frac{1}{4}$	6	$8\frac{2}{5}$	$6\frac{3}{4}$	15	$6\frac{2}{3}$	12	7	$\frac{4}{5}$
F	A	R	E	E	B	O	N	Y	S	A	A	T
$1\frac{1}{5}$	$2\frac{2}{3}$	$6\frac{2}{3}$	$15\frac{1}{8}$	3	$6\frac{1}{9}$	16	$1\frac{10}{11}$	$5\frac{1}{3}$	$1\frac{1}{8}$	18	$2\frac{13}{18}$	$1\frac{2}{3}$
S	T	O	P	O	N	Y	E	T	I	M	E	S

Pg #52

Maintenance

Add, subtract, multiply, or divide.

1. $\frac{5}{6} - \frac{1}{3} =$ ____

2. $\frac{3}{4} \div \frac{2}{3} =$ ____

3. $\frac{47}{49} + \frac{1}{7} =$ ____

4. $5\frac{6}{7} \times \frac{2}{5} =$ ____

5. $3\frac{3}{4} \times \frac{2}{7} =$ ____

6. $\frac{13}{35} + 4\frac{5}{7} =$ ____

7. $2\frac{1}{8} \div \frac{7}{8} =$ ____

8. $4\frac{1}{5} - 3\frac{1}{2} =$ ____

9. $1\frac{4}{5} \times 2\frac{2}{3} =$ ____

10. $3\frac{5}{8} + \frac{23}{24} =$ ____

11. $5\frac{1}{3} - 4\frac{2}{3} =$ ____

12. $4\frac{4}{5} \div \frac{6}{5} =$ ____

13. $4\frac{1}{7} - \frac{8}{9} =$ ____

14. $\frac{5}{6} \times \frac{7}{8} =$ ____

15. $8\frac{1}{2} + 9\frac{3}{4} =$ ____

16. $\frac{7}{10} \times \frac{7}{10} =$ ____

17. $8\frac{1}{2} \div \frac{3}{7} =$ ____

18. $2\frac{5}{6} \times \frac{8}{7} =$ ____

19. $\frac{9}{10} + \frac{3}{25} + \frac{33}{50} =$ ____

20. $\frac{29}{60} + \frac{3}{4} + \frac{5}{12} =$ ____

Pg. #56

Use after pages 258–259.

Name Skill #11

P62

Find each answer.

1. 62% of 90 is _____

2. 40% of 120 is _____

3. 100% of 84 is _____

4. 15% of 34 is _____

5. $63\frac{1}{2}$% of 55 is _____

6. 300% of 40 is _____

7. 110% of 19 is _____

8. 65% of 9 is _____

9. $18\frac{1}{2}$% of 40 is _____

10. $15\frac{1}{4}$% of 20 is _____

11. 87% of 18 is _____

12. $55\frac{1}{3}$% of 24 is _____

13. What is 0.3% of 478? _____

14. What is $5\frac{1}{4}$% of 132? _____

15. 0.9% of 2,100 is what number? _____

Estimate each answer.

16. 33% of 39 is about _____

17. $66\frac{2}{3}$% of 48 is about _____

18. 24% of 64 is about _____

19. 18% of 80 is about _____

Pg #57

Name

Skill #11

Find 130% of 62.

130% of 62 = n

130% = 1.3

$1.3 \times 62 = n$ Write an equation.

$80.6 = n$

Equivalents
$12.5\% = \frac{1}{8}$
$16\frac{2}{3}\% = \frac{1}{6}$
$33\frac{1}{3}\% = \frac{1}{3}$
$37.5\% = \frac{3}{8}$
$50\% = \frac{1}{2}$
$66\frac{2}{3}\% = \frac{2}{3}$
$75\% = \frac{3}{4}$

Find $33\frac{1}{3}\%$ of 57.

$33\frac{1}{3}\%$ of 57 = n

$33\frac{1}{3}\% = \frac{1}{3}$

$\frac{1}{3} \times 57 = n$ Write an equation.

$19 = n$

Find each answer.

1. 50% of 80 _____

2. 35% of 60 _____

3. 200% of 16 _____

4. 425% of 50 _____

5. $33\frac{1}{3}\%$ of 24 _____

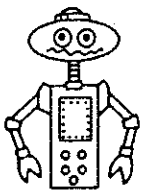
6. 12.5% of 56 _____

7. $16\frac{2}{3}\%$ of 96 _____

8. $66\frac{2}{3}\%$ of 45 _____

9. 126% of 72 _____

10. 37.5% of 88 _____



Cross off your answers. They are all here.

7	90.72	40	33	16
32	8	212.5	21	30

Name Skill #11 P64

Find each percent.

1. 18 is what percent of 30? _____

2. 14 is what percent of 35? _____

3. 8 is what percent of 20? _____

4. 32 is what percent of 50? _____

5. 23 is what percent of 10? _____

6. 9 is what percent of 5? _____

7. What percent of 115 is 322? _____

8. What percent of 450 is 18? _____

9. What percent of 30 is 12? _____

10. What percent of 118 is 531? _____

11. What percent of 240 is 48? _____

12. What percent of 44 is 11? _____

13. 10.9 is what percent of 43.6? _____

14. 83.2 is what percent of 320? _____

15. What percent of 55.6 is 65.9? _____

16. What percent of 42 is 74.9? _____

Pg #59

What percent of 30 is 21?

?% of 30 is 21 .

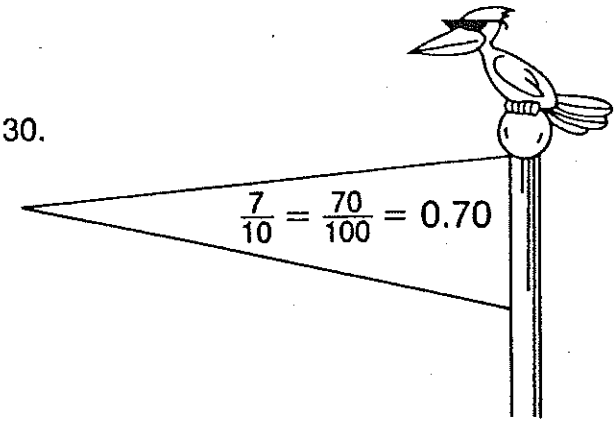
$n \times 30 = 21$ Write an equation.

$\frac{n \times 30}{30} = \frac{21}{30}$ Divide both sides by 30.

$n = \frac{21}{30}$

$n = \frac{7}{10} = 70\%$

21 is 70% of 30.



Write an equation for each sentence.

1. What percent of 50 is 10?

____% of ____ is ____.

_____

2. What percent of 72 is 60?

____% of ____ is ____.

_____

3. 8 is what percent of 200?

____ is ____ of ____.

_____

4. 125 is what percent of 200?

____ is ____ of ____.

_____

Find each percent.

5. What percent of 80 is 28?

____% of ____ is ____.

_____

6. What percent of 250 is 100?

____% of ____ is ____.

_____

7. 12 is what percent of 24?

____ is ____ of ____.

_____

8. 3 is what percent of 30?

____ is ____ of ____.

_____

Name Skill #11

48% of what number is 60?

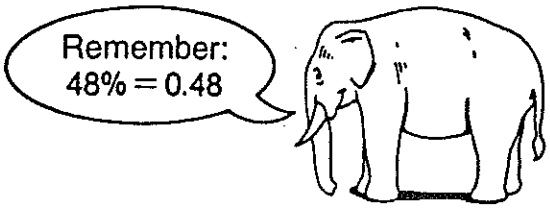
$\frac{48\%}{\downarrow}$ of $\frac{?}{\downarrow}$ is $\frac{60}{\downarrow}$.

$0.48 \times n = 60$ Write an equation.

$\frac{0.48 \times n}{0.48} = \frac{60}{0.48}$ Divide both sides by 0.48.

$n = \frac{60}{0.48}$

$n = 125$



48% of 125 is 60.

Write an equation for each sentence.

1. 10% of what number is 40?

____% of ____ is ____.

_____

2. 5% of what number is 35?

____% of ____ is ____.

_____

3. 20% of what number is 1.6?

____% of ____ is ____.

_____

4. 45% of what number is 4.14?

____% of ____ is ____.

_____

Find each number.

5. 50% of what number is 18?

____% of ____ is ____.

_____

6. 4% of what number is 6?

____% of ____ is ____.

_____

7. 27 is 30% of what number?

____ is ____ of ____.

_____

8. 10 is 20% of what number?

____ is ____ of ____.

_____

Pg. #61

Name Skill #12

P119

Compare these integers. Use > or <.

1. 7 ◯ 9
2. 4 ◯ 2
3. 1 ◯ −3
4. −32 ◯ 2
5. 0 ◯ −2
6. 4 ◯ −13
7. −3 ◯ −5
8. 0 ◯ 1
9. 0 ◯ −1
10. −3 ◯ 0
11. 14 ◯ −14
12. −36 ◯ −48
13. −4 ◯ −1
14. 12 ◯ −14
15. −9 ◯ 6
16. 22 ◯ 23

List these integers in order from least to greatest.

17. 4 −4 2 ____ ____ ____
18. 0 −3 6 ____ ____ ____
19. −3 −6 0 ____ ____ ____
20. 0 −6 2 ____ ____ ____
21. 17 −17 8 −3 ____ ____ ____ ____
22. −23 0 18 −14 ____ ____ ____ ____
23. −40 20 −9 5 ____ ____ ____ ____

The table shows temperatures taken at different times on a winter day in a northern city.

24. When did the highest temperatures occur, *morning* or *afternoon*?

_____

Degrees Fahrenheit	
2:00 A.M.	−12
7:00 A.M.	−8
12:00 NOON	−3
5:00 P.M.	6

Name Skill #12

Maintenance

Compare these integers. Use < or >.

1. 5 ◯ 10 2. 3 ◯ −2 3. −5 ◯ 0 4. −2 ◯ −3

5. 0 ◯ 8 6. 1 ◯ −5 7. −15 ◯ −21 8. −82 ◯ −2

List these integers in order from least to greatest.

9. 2 −2 7 _____

10. −5 −7 3 _____

11. 0 −1 1 _____

12. 2 −8 −14 _____

13. 5 7 2 _____

14. −7 0 11 _____

15. −1 49 −371 −190 −5 0 126 −11 _____

16. −5 6 40 −7 −100 −30 0 270 _____

17. Which is less, −38 or −42? _____

18. Which is more, 16 or 15? _____

19. Which is less, −24 or −14? _____

20. Which is more, −32 or −33? _____

Pg. #63

Use after pages 326–327.

Name Skill #12

P120

Add. Circle your answer in the chart below. Keep working exercises until you have circled six in a row, horizontally, vertically, or diagonally.

1. $14 + (-20) =$ ____
2. $-7 + 9 =$ _____
3. $8 + (-3) =$ _____
4. $-9 + 9 =$ _____
5. $0 + (-8) =$ _____
6. $-15 + 8 =$ _____
7. $17 + (-7) =$ ____
8. $-12 + 8 =$ _____
9. $13 + (-7) =$ ____
10. $-9 + 22 =$ _____
11. $-9 + (-9) =$ ____
12. $16 + (-2) =$ ____
13. $-12 + (-2) =$ ____
14. $-32 + 27 =$ _____
15. $16 + (-32) =$ ____
16. $-10 + 28 + (-7) =$ _____
17. $-19 + 21 + 15 + (-5) =$ _____

5	15	−21	−18	−2	13
23	0	−17	7	−5	−20
8	−10	−8	−49	−11	2
−13	11	−9	−7	98	52
−16	14	−40	9	−6	−52
−4	−14	10	−62	6	12

Pg#64

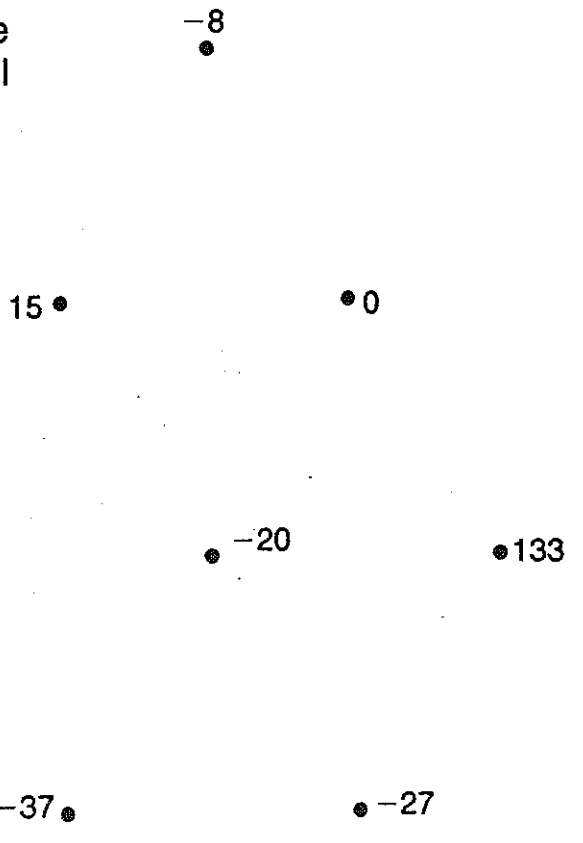
Name Skill #12

P121

Subtract.

1. $-4 - (4) =$ _____
2. $8 - (-7) =$ _____
3. $-9 - (-9) =$ _____
4. $-25 - (-5) =$ _____
5. $37 - 22 =$ _____
6. $-8 - (-12) =$ _____
7. $9 - (-4) =$ _____
8. $-17 - 20 =$ _____
9. $15 - 42 =$ _____
10. $24 - (-10) =$ _____
11. $67 - (-66) =$ _____
12. $-36 - (-9) =$ _____
13. $6 - 26 =$ _____
14. $-22 - 15 =$ _____
15. $-32 - (-36) =$ _____
16. $32 - 54 - (-2) =$ _____
17. $61 - (-50) + 22 =$ _____
18. $-4 - 8 - (-12) =$ _____
19. $-38 - 21 - (-51) =$ _____

Can you trace this figure without lifting your pencil from the paper and without retracing any line? To find one way, trace through your answers in the order they are given.



Pg #65

Name Skill #12

Adding & Subtracting Integers

Simplify each subtraction expression by "adding the Opposite" of the second number.

1. -8 + -9
2. -10 – 4
3. -15 + 20
4. 31 – (-8)
5. -17 + 9
6. -9 – (-26)
7. -78 – 65
8. 13 + -7
9. 113 – (-62)
10. 0 – (-9)
11. 34 + -68
12. 608 – 343
13. -24 – (-38)
14. 0 – 17
15. -56 – 45
16. 73 + -18
17. -232 – (-232)
18. -108 + -676
19. 43 + -56 – 78
20. -98 – (-126) + 19
21. 91 – 176 – (-11)
22. -17 + 436 + -642
23. -121 + -732 – (-13)
24. -534 – (-454) + -78

Pg #66

Name Skill #12

Mixed Practice with Integers

Perform the indicated operations.

1. $-34 + -122$

2. $80 - (-22)$

3. $-3 \cdot 5$

4. $19 \cdot -23$

5. $83 + -85$

6. $28 - (-65)$

7. $28 - (-26)$

8. $-31 - (-21)$

9. $-35 + 62 + -90$

10. $12 \cdot -13 \cdot 6$

11. $(212 + -234 - 222) \div -6$

12. $100 \cdot 3 \cdot 21$

13. $\frac{175}{-5} \cdot -4$

14. $\frac{-555}{-5} \cdot -6$

15. $\frac{-424}{4}$

16. $\frac{-72}{8} + \frac{-64}{8} + \frac{33}{-11}$

17. $(225 \div 5) \cdot .2$

18. $(-19 - (-21) - (-34)) \div -6$

19. $(-18 - -77 - 22) \cdot 2$

20. $(10 + -31 + -80) \div 3$

21. $(16 - 21 + 34) \div -8$

22. $(-320 + -75 + 24) \cdot 4$

23. $(-12 + 13 + 55) \cdot 3$

24. $(-12 - 54 - 10) \cdot 2$

Pg #67

Maintenance

Give each answer.

1. $-2(15) =$ _____
2. $-15 \div (-3) =$ _____
3. $15 - 35 =$ _____
4. $12(2) =$ _____
5. $0(-88) =$ _____
6. $9 \div (-3) =$ _____
7. $\frac{44}{4} =$ _____
8. $\frac{56}{-7} =$ _____
9. $0 - 89 =$ _____
10. $-72 \div 9 =$ _____
11. $5 - (-2) =$ _____
12. $\frac{125}{-5} =$ _____
13. $\frac{-48}{6} =$ _____
14. $0 - (-3) =$ _____
15. $5 - (-2) =$ _____
16. $38 - (5 + 2) =$ _____
17. $(2)(-5)(0)(56) =$ _____
18. $15 + (-7) - (-18) - 17 =$ _____
19. $14 - (-10) - 18 - (-2) =$ _____
20. $-3(4)(-2)(-1) =$ _____
21. $6 - (-7 + 6) =$ _____
22. $32 + (-32) - 32 =$ _____
23. $32 \div (-32) =$ _____
24. $27 - (-5) - 11 =$ _____
25. $(-3)(-12)(2) =$ _____

Pg. #68

Use after pages 332-333.

Name Skill #13

Combine Like Terms

$9x + 7y + -21x = -12x + 7y$

Combine like terms.

1. $5x + 7x$
2. $19x + x$
3. $k - (-8k)$
4. $-12x + -4x$
5. $13c - 12c$
6. $-e + 8e$
7. $3yz + 5yz$
8. $-12n - -13n$
9. $12b + -34b$
10. $13ab + (-12ab)$
11. $4.7x - 5.9x$
12. $7s + 5x - 8s$
13. $4a + 9 + a$
14. $5x - 6y - 8y + 7x$
15. $23x + 8 + 6x + 3y$
16. $4xy + 7xy + 6x^2y + 7xy^2$
17. $-21x + 7y + 6xy + -3y^2$
18. $4x + 3y + -5y + 3xy + y$
19. $2xy + 7x + 6xy + 3xy + -3x$
20. $4x^2 + -7y + -4xy + 9x^2 + 2xy$

KW 1010

Pg# 69

Combine Like Terms

$5(x + 3) + (4x - 7y) + (3x + 2y) = 5x + 15 + 4x - 7y + 3x + 2y = 12x + 15 - 5y$

Combine like terms.

1. $-2x + 3y - 5x - -8y + 9y$
2. $3x + (-3y) - (5x) + y$
3. $7 - 4y + x + 9y$
4. $-21x + (-2x)$
5. $7(x - y) - 5(2x + 4y)$
6. $-n + 9n + 3 - 8 - 8n$
7. $4(x + 5y) + 3(x + 6y) + 6(3x + 8y)$
8. $12x + 6x + 9x - 3y + -7y + y$
9. $-2(c - d) + (c - d) - 6(c - d)$
10. $-3(4x + -2y) - 2(x + 3y) - 2(2x + 6y)$
11. $3(-4x + 7y) - 3x(2 + 3y)$
12. $2y + 3(2y + 8x) - 3(8y + 2x)$
13. $5(3x^2 - 2y^2) + 3x(x + 3y^2)$
14. $2 \bullet 4x \bullet 3y - 4x \bullet 7y$
15. $3x + 4y + 2x + 5y - 4x$
16. $4(x + 5y) + (5x + y)$
17. $5(x^2 + 3y^2) - y(x^2 + 5y)$
18. $3(2(-y^2 + y) - 3) - 3(2x + y)$
19. $4(x + 9y) - -2(2x + y)$
20. $7x + -2y^2 + 3xy^2 + 2x^2 + 5xy^2$

Pg#70

Skill #13

Variables and Equations

Keep in mind...
Triumph = Umph! added to Try

Combining Like Terms

8x + 5y + -17x = -9x + 5y

1. 9x + 4x
2. 17 x + x
3. m + (-4m)
4. -7x – 8x
5. 14a – 19a
6. -a + 9a
7. 6xy + 5xy
8. -9m – m
9. 15a + (-11a)
10. -14x + 13x
11. $5x^2y + 13x^2y$
12. 21xy + (-9xy)
13. 17x + 1
14. 3.5y – 7.2y
15. -4.7y –2.3y
16. 3a + 5c – 9a
17. 2x – 9x + 7
18. 7x – 8 – 11x
19. 3x – 3y – 9x + 7y
20. 17x + 4 – 3x
21. 3x – 7y – 12y
22. 11a – 13a + 15a
23. 17x + 5a – 3x – 4a
24. 6x + 9y + 2x – 8y + 5
25. $3xy + 4xy + 5x^2y + 6xy^2$
26. -25y – 17y + 6xy – 3xy

Pg# 71

Skill #13

Variables and Equations

...More Combining Like Terms

$3(a + 2) + (2a - 6b) = 3a + 6 + 2a - 6b = 5a - 6b + 6$

1. $5t + 3r + 9t - 10r - 8$
2. $4a + (-2b) + (-2a) + b$
3. $12x - 3y + x + 2y$
4. $-30x - (-1x)$
5. $6(x - y) - 3(3x + y)$
6. $17x + 3y + 30x - 5y$
7. $4p - 6q + 6q - 10p + q$
8. $-r + 7 + 3r - 9 - 2r$
9. $8(x + y) + 3(x - y)$
10. $3(x + 7y) - 5(x + 7y) + 9(x + 7y)$
11. $2(-2a^2 - 4d) - (-3a^2 + 17d)$
12. $2(3(-x^2 + x) - 1) - 5x + 6x^2$
13. $3(a + 2b) + -(b + 2a)$
14. $-5(a - b) - (a - b) + 8(a - b)$
15. $-4(x + 5(-3xy + x)) - (10 + 15xy)$
16. $\frac{5}{8}c^2 - \frac{1}{4}d - \frac{3}{7}c^2 + \frac{3}{5}d$
17. $3 \cdot 5a - 7 \cdot 3b - 3 \cdot 2a + 2 \cdot 9b$
18. $2\frac{1}{2}xy - xy + 3\frac{1}{3}xy$
19. $6(x^2 + y^2) - 7(x^2 + y^2)$
20. $4x - y + 2\frac{1}{2}x + 3\frac{1}{4}y$

Pg #72

Skill #13

Variables and Equations

Keep in mind...
Triumph = Umph! added to Try

Combining Like Terms

8x + 5y + -17x = -9x + 5y

1. 9x + 4x
2. 17 x + x
3. m + (-4m)
4. -7x – 8x
5. 14a – 19a
6. -a + 9a
7. 6xy + 5xy
8. -9m – m
9. 15a + (-11a)
10. -14x + 13x
11. $5x^2y + 13x^2y$
12. 21xy + (-9xy)
13. 17x + 1
14. 3.5y – 7.2y
15. -4.7y –2.3y
16. 3a + 5c – 9a
17. 2x – 9x + 7
18. 7x – 8 – 11x
19. 3x – 3y – 9x + 7y
20. 17x + 4 – 3x
21. 3x – 7y – 12y
22. 11a – 13a + 15a
23. 17x + 5a – 3x – 4a
24. 6x + 9y + 2x – 8y + 5
25. $3xy + 4xy + 5x^2y + 6xy^2$
26. -25y – 17y + 6xy – 3xy

Pg# 71

Skill #13

Variables and Equations

...More Combining Like Terms

$3(a + 2) + (2a - 6b) = 3a + 6 + 2a - 6b = 5a - 6b + 6$

1. $5t + 3r + 9t - 10r - 8$
2. $4a + (-2b) + (-2a) + b$
3. $12x - 3y + x + 2y$
4. $-30x - (-1x)$
5. $6(x - y) - 3(3x + y)$
6. $17x + 3y + 30x - 5y$
7. $4p - 6q + 6q - 10p + q$
8. $-r + 7 + 3r - 9 - 2r$
9. $8(x + y) + 3(x - y)$
10. $3(x + 7y) - 5(x + 7y) + 9(x + 7y)$
11. $2(-2a^2 - 4d) - (-3a^2 + 17d)$
12. $2(3(-x^2 + x) - 1) - 5x + 6x^2$
13. $3(a + 2b) + -(b + 2a)$
14. $-5(a - b) - (a - b) + 8(a - b)$
15. $-4(x + 5(-3xy + x)) - (10 + 15xy)$
16. $\frac{5}{8}c^2 - \frac{1}{4}d - \frac{3}{7}c^2 + \frac{3}{5}d$
17. $3 \cdot 5a - 7 \cdot 3b - 3 \cdot 2a + 2 \cdot 9b$
18. $2\frac{1}{2}xy - xy + 3\frac{1}{3}xy$
19. $6(x^2 + y^2) - 7(x^2 + y^2)$
20. $4x - y + 2\frac{1}{2}x + 3\frac{1}{4}y$

Pg #72

Name Skill #13

Simplifying Expressions

$3n - 2n + 4r = (3 - 2)n + 4r$
$= n + 4r$

Combine like terms.

1. $7r + 2r - 4$
2. $23x - 7x + 4x$
3. $3xy + 13xy - 12xy$
4. $-3n + 12 - 4n$
5. $12ax - 2ax + 14x - 2a + -3x$
6. $3x + 2y + xy - 6xy + 4x + -4y$
7. $2r + 4ry - 5r + 3x - 4ry$
8. $12p + 5pd - 3p + 6pd$
9. $4x - 2x + 6xy + 21x + -9xy - 9$
10. $4e + 5ed + 4d - 7ed + 7$
11. $3x + 2y - 2xy + 5x - 2xy$
12. $7a + a - a + 3ab - ab + 2ab$
13. $5m + 2m + 40m + m + 17$
14. $2x + 3xy + 4x + 5xy + 6x$

Name Skill #13

Simplifying Expressions

$5r - 3r + 4k = (5 - 3)r + 4k$
$= 2r + 4k$

Combine like terms.

1. $6r + 5r - 8p + 6p + 7(2r - 4r)$
2. $9x - 7x + 2x + 8(6x + 2x)$
3. $5xy - 12xy + 12xy - 9(x + y)$
4. $2t + 12t - 4(n + 4n)$
5. $-2(g + 5g) + -4(8f - (-12g))$
6. $7(2x + 5y) + xy - 6(3xy + 5x)$
7. $5m + 6mn - (-9n) + 2(m-n)$
8. $12p + 5pd - 3p + 6pd$
9. $3(x - 5x) + 2(xy + 8x) + (-8xy)$
10. $-2a - -3(a + 7) - 4(-a + b)$
11. $4n(x - y) + 3n(x + y) - 2$
12. $3(h - (-k)) + 2(-3h + -4k)$
13. $8(2x + 2y) - 4(3xy - (-5x))$
14. $3c - 4bc + (-7b) + 3(2bc - b)$

Pg #74

Name Skill #14 *Variables and Equations*

Solving One-Step Equations (Addition and Subtraction)

$$12 + x = -13$$
$$12 + -12 + x = -13 + -12$$
$$x = -25$$

Solve each equation for the given variable.

1. $y - 12 = 15$
2. $x - 13 = -23$
3. $12 + -g = 14$
4. $3 + x = 9$
5. $-13 + x = 18$
6. $-t + -7 = -56$
7. $27 = v + -5$
8. $-19 + b = 31$
9. $a + 5.7 = 18.9$
10. $-100 = b + -73$
11. $-4 = x - 3$
12. $2\frac{1}{3} + r = 4\frac{2}{9}$
13. $x + 2 = 2(3 - 4)$
14. $-13 = n + (-36)$
15. $c - 3 = 4.7$
16. $r = 4.4 + 3.9$
17. $z + 3.5 = 3.7$
18. $s - 9 = (6 + -8)$
19. $n + \frac{1}{2} = \frac{3}{4}$
20. $12 - -u = 19$

Pg #75

Name Skill #14

Solving Basic Equations

$$9x + 3 = 21$$
$$9x + 3 - 3 = 21 - 3$$
$$9x = 18$$
$$x = 2$$

Solve each equation for the given variable.

1. $5n - 8 = -23$
2. $6x - 2 = 22$
3. $5t - 8 = -18$
4. $6x - 5 = -41$
5. $13x + 7 = -32$
6. $2x + 8 = 6$
7. $-8(r - 2) = 40$
8. $2(w - 6) = 8$
9. $2(f + 7) - 8 = 22$
10. $3x - 4 = -16$
11. $2 + \frac{1}{5}x = -7$
12. $-6 = \frac{3u}{4} + 12$
13. $7.2 + 4x = 19.2$
14. $-3 + 2n = -15$
15. $5 - \frac{1}{2}g = 12$
16. $4k + 7 = -1$
17. $3(c - 2) = 15$
18. $7h + 1 = -13$
19. $5e + -4 = 26$
20. $\frac{m}{3} - 7 = -10$

Pg#76

Name Skill #14

Solving Equations with 2 Operations

$$3y - 6 = 30$$
$$3y - 6 + 6 = 30 + 6$$
$$3y = 36$$
$$\frac{3y}{3} = \frac{36}{3}$$
$$y = 12$$

Solve each equation for the given variable.

1. $-8r - 7 = -24$
2. $5x - 5 = -10$
3. $9 = 3y + 5$
4. $12 = 6c - 4$
5. $-23 = 3e - (-9)$
6. $16 = -2v + 9$
7. $\frac{3y}{4} = 12$
8. $13n - 13 = -12$
9. $23x - 12 = -33$
10. $-42 = 6b + 8$
11. $16 + 4y = -32$
12. $16 + \frac{r}{2} = -11$
13. $2x - 5 = 16$
14. $11 = 3y - 10$

Name Skill #14

Solving Basic Equations

$$12x + 3 = 147$$
$$12x + 3 - 3 = 147 - 3$$
$$12x = 144$$
$$x = 12$$

Solve each equation for the given variable.

1. $3(x - 7) = 9$
2. $\frac{m}{4} + 6 = 2$
3. $4(c + 2) = -28$
4. $-9r + 5 = -22$
5. $4 + 3g = -14$
6. $7t - 3 + 4t = -25$
7. $14a + 5 - 8a = -1$
8. $2m - 3 - 8m = -27$
9. $-5 + 7d + 3 = 33$
10. $b + 9 - 2b = 6$
11. $4j - 9j + 3 = -32$
12. $3d - 5 - 2d = -9$
13. $2k + 3(k + 4) = -3$
14. $3e + 4e + 1 = 36$
15. $5(j - 4) + j = -8$
16. $12k - 3(k + 5) = 48$
17. $-6r + 12 - 8r = -2$
18. $-j + 3j + 2 = -14$
19. $5(m - 3) + 2m = 27$
20. $4e + 6 - 11e = -8$

Pg# 78

Name Skill #14

Solving Equations

$$3x + 5 = 4x + 6$$
$$3x - 4x + 5 = 4x - 4x + 6$$
$$-x + 5 = 6$$
$$-x + 5 - 5 = 6 - 5$$
$$-x = 1$$
$$\frac{-x}{-1} = \frac{1}{-1}$$
$$x = -1$$

Solve each equation for the given variable.

1. $3m - 8 = 5m + 8$
2. $-t + 9 = t + 5$
3. $7y - 7 = 5y + 13$
4. $4h + 10 = 2h - 22$
5. $-r - 3 = 1 - 3r$
6. $17 + p = 7p - 13$
7. $4x - 7 = 2x + 7$
8. $23b + 9 = 4b + 66$
9. $-4g + 12 = g + 2$
10. $-8t = 27 + t$
11. $13y - 26 = 7y + 22$
12. $4n - 6 = 6n + 14$
13. $e + 8 = 2e - 12$
14. $9w + 6 = 6w - 15$

Pg #79

Name Skill #14

Solving Equations with Variables on Both Sides

$$6x - 7 = x + 23$$
$$6x - x - 7 = x - x + 23$$
$$5x - 7 = 23$$
$$5x = 30$$
$$x = 6$$

Solve each equation for the given variable.

1. $2x - 7 = 3x + 4$
2. $-7c + 9 = c + 1$
3. $4(2y - 4) = 5y + 2$
4. $-6 - -2n = 3n - (6 + 5)$
5. $4(t + 5) - 3 = 6t - 13$
6. $2(r - 4) = 5(r + -7)$
7. $7 - 6a = 6 - 7a$
8. $12m - 9 = 4m + 15$
9. $8(x - 3) + 8 = 5x - 22$
10. $3c - 12 = 14 + 5c$
11. $9a + 5 = 3a - 1$
12. $6(x - 9) = 4(x - 5)$
13. $2(x - 4) + 8 = 3x - 8$
14. $3x - 3 = -3x + -3$
15. $-10x + 6 = -7x + -9$
16. $5 + 3x = 7(x + 3)$
17. $\frac{5}{2}x + 3 = \frac{1}{2}x + 15$
18. $2x + 6 = 5x - 9$
19. $4e - 19 = -3(e + 4)$
20. $5t + 7 = 4t - 9$

Pg # 80

Skill #14

Variables and Equations

Solving Equations with Variables on Both Sides

$$4x - 6 = x + 9$$
$$4x - x - 6 = x - x + 9$$
$$3x - 6 = 9$$
$$3x - 6 + 6 = 9 + 6$$
$$\frac{3x}{3} = \frac{15}{3}$$
$$x = 5$$

1. $4x - 6 = x + 9$
2. $4 - 7x = 1 - 6x$
3. $-4x - 3 = -6x + 9$
4. $41 - 2n = 2 + n$
5. $6(2 + y) = 3(3 - y)$
6. $4y = 2(y - 5) - 2$
7. $6x - 9x - 4 = -2x - 2$
8. $-(x + 7) = -6x + 8$
9. $3 - 6a = 9 - 5a$
10. $-9x + 6 = -x + 4$
11. $5x - 7 = -10x + 8$
12. $7y + 3 = 4y - 18$
13. $-3(y + 3) = 2y + 3$
14. $2(-3a + 5) = -4(a + 4)$
15. $7x - 3 = 2(x + 6)$
16. $-6x + 9 = 4(5 - x)$
17. $3(x + 2) = -5 - 2(x - 3)$
18. $2(x - 3) = (x - 1) + 7$
19. $\frac{1}{3}(6y - 9) = -2y + 13$
20. $\frac{1}{6}(12 - 6x) = 5(x + 4)$

Skill #14

Variables and Equations

Equations, the Big Picture...Putting It All Together

1. $\frac{3}{2}x - 9 = 0$

2. $6x + 3 = -5x + 14$

3. $\frac{1}{8}x + 3 = 2$

4. $5y = 2y - 42 - 3y$

5. $37 + 8x = 4(7 - x)$

6. $5(2 - x) = 7x - 26$

7. $6 + 4x = \frac{1}{3}(6x + 9)$

8. $1.6(3y - 1) + 2 = 5y$

9. $7x - 10 = 6(11 - 2x)$

10. $3(4x - 9) = 5(2x - 5)$

11. $\frac{3}{4}(x + 7) = x + 50$

12. $\frac{5}{7}y - 15 = 5y + 30$

Pg# 82

Skill #14

Algebraic Fractions

Proportions

$\frac{x}{12} = \frac{5}{3}$

$3x = 12 \cdot 5$

$3x = 60$

$x = 20$

A pipe delivers 5 gallons of water in 45 seconds. How much will it deliver in 15 minutes?

$\frac{5 \text{ gal}}{45 \text{ sec}} = \frac{x \text{ gal}}{15 \cdot 60 \text{ sec}}$

$45x = 5 \cdot 900$

$45x = 4500$

$x = 100$

100 gallons

1. $\frac{9}{11} = \frac{16}{x}$

2. $\frac{5}{13} = \frac{a}{65}$

3. $\frac{y}{2.5} = \frac{21}{5}$

4. $\frac{z-8}{21} = \frac{1}{3}$

5. $\frac{2x+1}{3} = \frac{4}{5}$

6. $\frac{n}{16-n} = \frac{5}{3}$

7. $\frac{2x+1}{9} = \frac{x}{4}$

8. $\frac{3m}{m+4} = \frac{5}{3}$

9. $\frac{x-2}{x} = \frac{x-1}{x+2}$

10. If 30m of wire weigh 8 kilograms, what will 40m of the same kind of wire weigh?

11. On a map, $1\frac{1}{2}$ cm represents 60 km. What distance does 6 cm represent?

12. A post casts a shadow 9 feet long. A girl 5 feet tall casts a shadow 15 feet long at the same time and place. How tall is the pole?

13. If Marilyn drove 270 miles in $4\frac{1}{2}$ hours, how far would she travel in 7 hours?

14. The sales tax on an $800 purchase is $24. At this rate, what is the tax on a $600 purchase?

Pg#83

Exponents - Skill #15

Write in expanded form.

① 5^3 = _____

② 4^5 = _____

③ 2^5 = _____

④ 3^4 = _____

Solve:

⑤ 2^5 =

⑥ 5^3 =

⑦ 10^5 =

⑧ $(-1)^5$ =

⑨ 4^2 =

⑩ 3^3 =

Name Skill #16

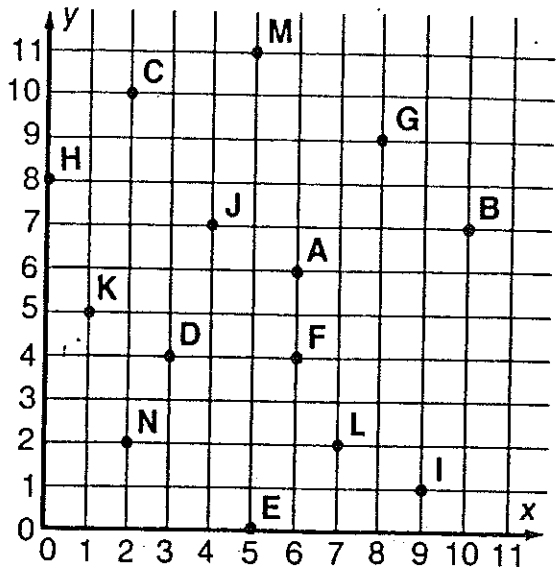
P23

Give the coordinates of:

1. M _____ 2. J _____

3. E _____ 4. L _____

5. B _____ 6. H _____



Name the point with the given coordinates.

7. (1, 5) _____ 8. (2, 10) _____

9. (6, 6) _____ 10. (3, 4) _____

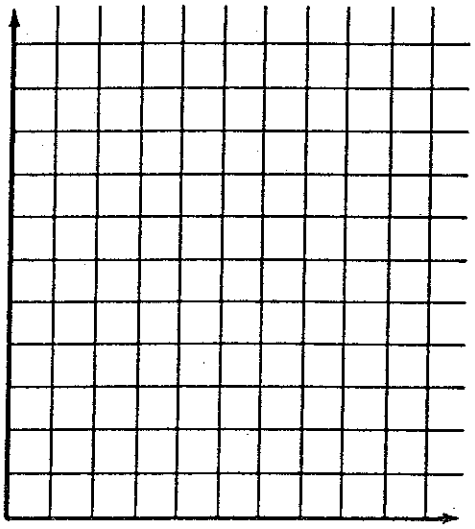
11. (8, 9) _____ 12. (9, 1) _____

Label the x-axis and the y-axis on the grid below. Graph these points and label them with the ordered pairs.

13. (2, 3) 14. (0, 5)

15. (6, 4) 16. (2, 0)

17. (1, 3) 18. (8, 9)

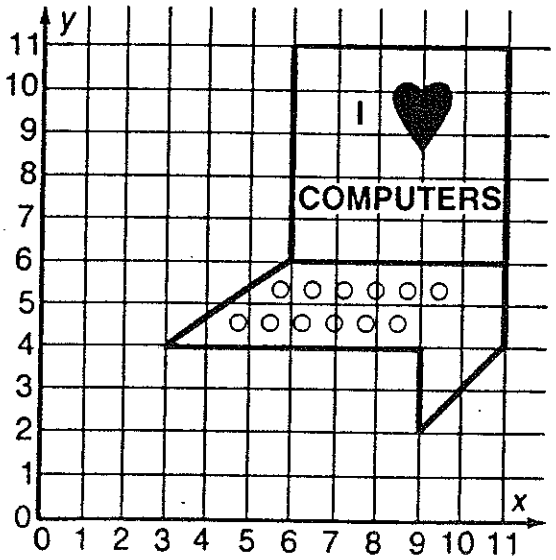


Complete the picture below by drawing the lines that begin and end with these points.

19. (9, 4) to (11, 6)

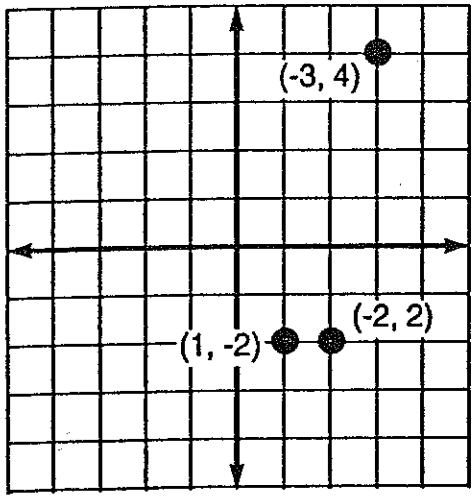
20. (3, 2) to (3, 4)

21. (3, 2) to (9, 2)



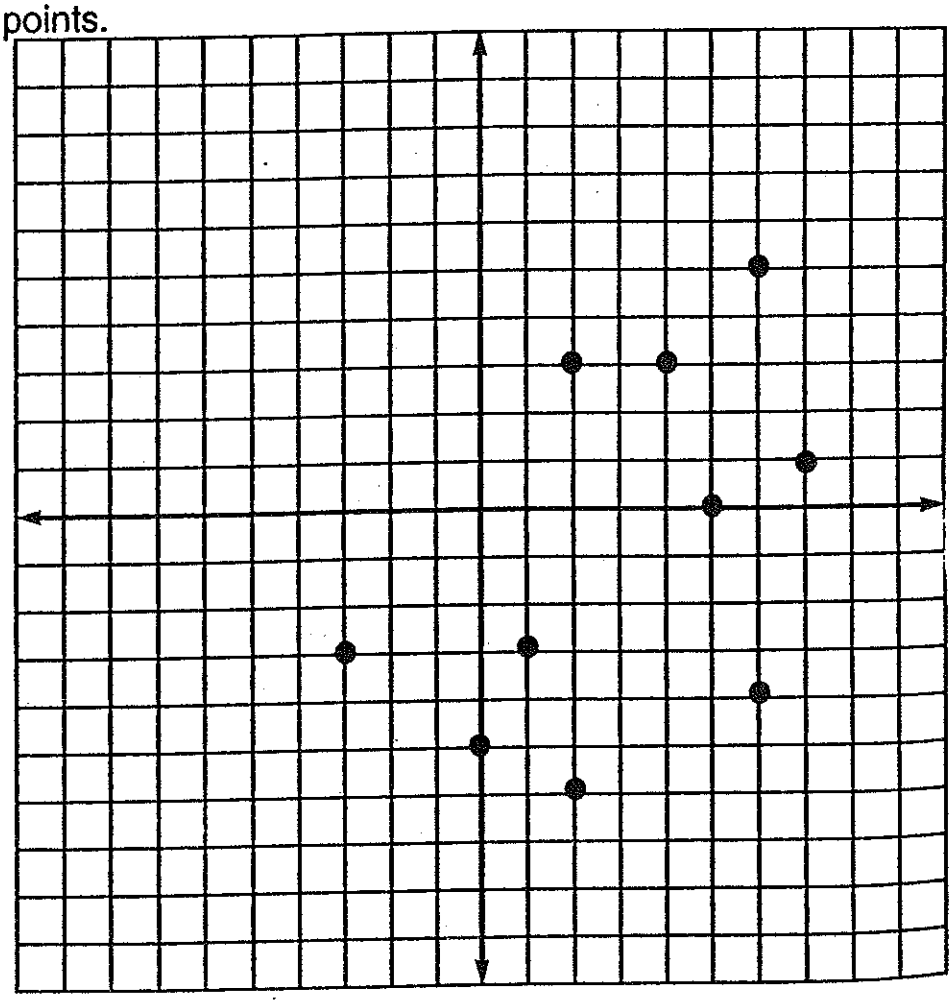
Plotting Points

(x,y) = (1, -2) Over 1 and down 2
(x,y) = (-3, 4) Over 3 and up 4
(x,y) = (2, -2) Over 2 and down 2



Identify the following points.

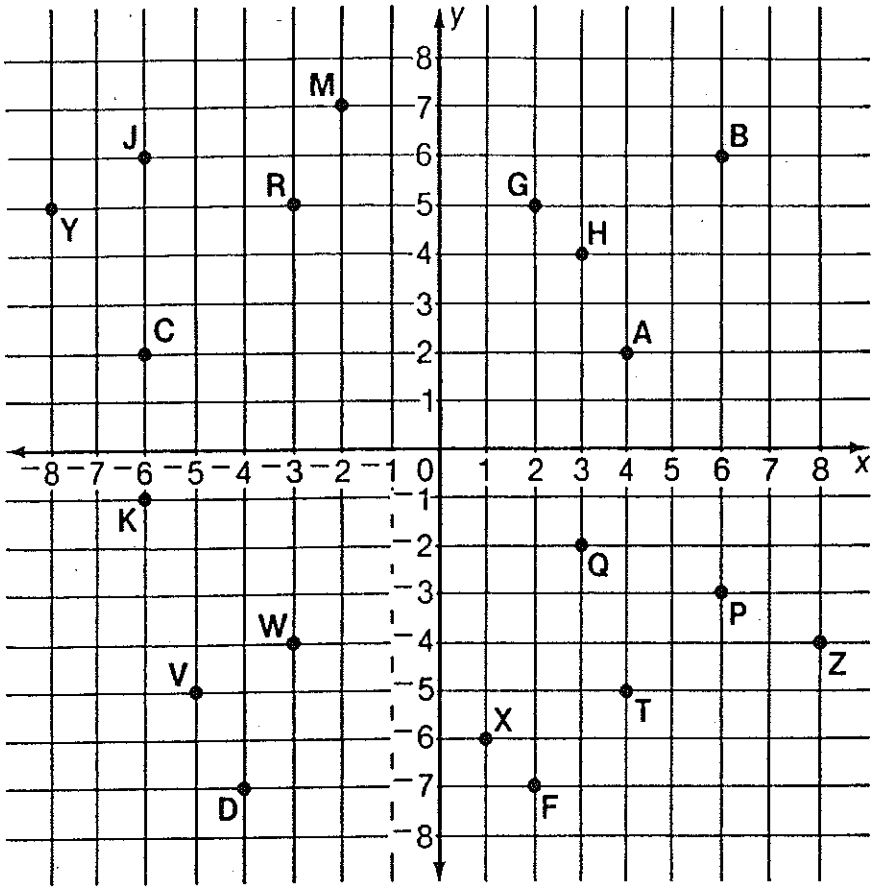
A (2, -6)
B (1, -3)
C (-3, -3)
D (6, -4)
E (0, -5)
F (5 , 0)
G (6, 5)
H (7, 1)
I (4, 3)
J (2, 3)



Pg # 86

Name Skill #16

Captain Roman's video screen shows ships of his Star Fleet at these locations.



A. Which Star Ship is located at (−3, −4)?

Start at the origin.
Move left 3 units. Move down 4 units.

← ↓

(−3, −4)

Star Ship W is located at (−3, −4).

B. Report the location of Star Ship Q.

Start at the origin.
Move left or right for the first number.
Move up or down for the second number.

Star ship Q is located at (3, −2).

Name the Star Ship located by each ordered pair.

1. (3, 4) ____ 2. (−6, 2) ____ 3. (8, −4) ____ 4. (2, 5) ____

5. (−6, −1) ____ 6. (−6, 6) ____ 7. (2, −7) ____ 8. (4, 2) ____

Report the location of each Star Ship by using ordered pairs.

9. C (_____) 10. D (_____) 11. K (_____) 12. M (_____)

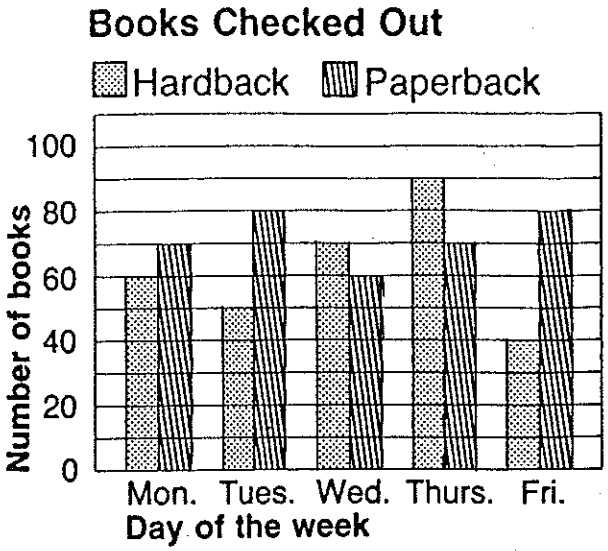
13. Y (_____) 14. R (_____) 15. X (_____) 16. B (_____)

17. V (_____) 18. P (_____) 19. J (_____) 20. T (_____)

Pg. #87

Name Skill #16

Use the double bar graph to find the number of books checked out each day.



1. Paperbacks on Tuesday _____
2. Hardbacks on Monday _____
3. Hardbacks on Friday _____
4. Paperbacks on Friday _____
5. Paperbacks on Wednesday _____
6. Hardbacks on Tuesday _____
7. Total books on Tuesday _____
8. Total books on Friday _____
9. Total books on Thursday _____
10. Total books on Monday _____
11. On which days were more than 70 paperback books checked out?

    _____

12. On which days were more hardback books than paperback books checked out?

    _____

13. What is the range of the data for hardback books?

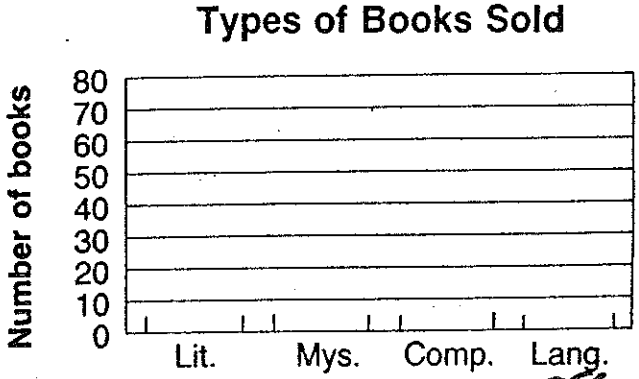
    _____

14. What is the range of the data for paperback books?

    _____

15. A clerk was asked to keep a record of the number of certain kinds of books sold during one week. Make a bar graph for his data.

    Literature 78
    Mystery 35
    Computers 40
    Languages 12



Pg # 88

Name Skill #16

U.S. Immigration (1861–1960)

Use the graph to answer each question.

In which decade was immigration about

1. 4 million? _____ 2. 6 million? _____

About how many people immigrated in the decade

3. 1871–1880? _____

4. 1881–1890? _____

5. 1941–1950? _____

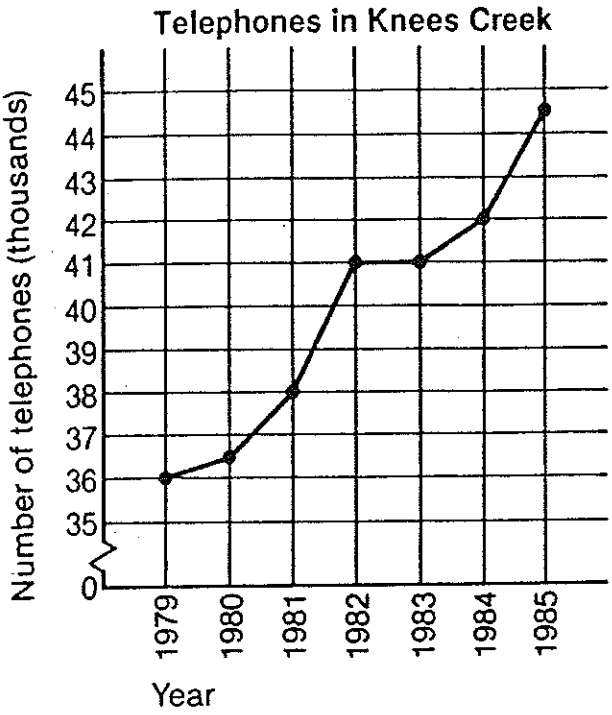
6. 1951–1960? _____

7. What is the range for the data? _____

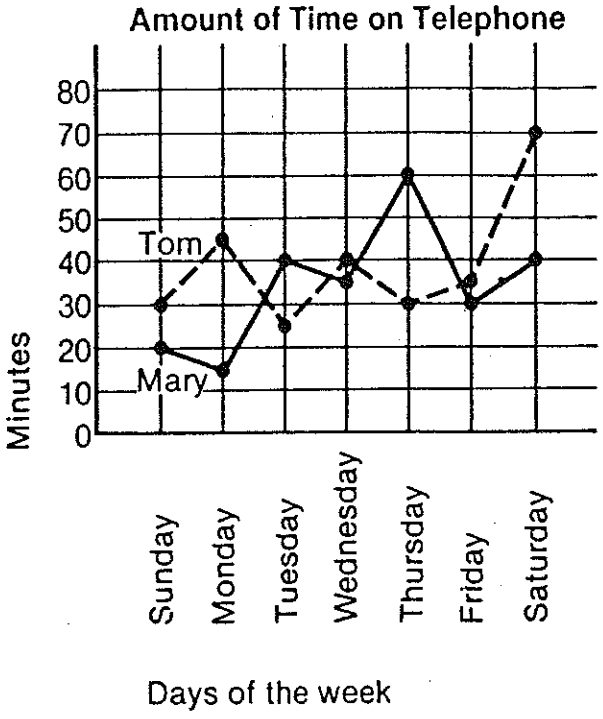
8. During which decade did immigration increase the most? _____

Name Skill #16

A. The ***broken-line graph*** below shows the number of phones in the town of Knees Creek.



B. Mrs. Lee recorded the amount of time Mary and Tom spent on the phone during one week.



Use the graph in Example A.

1. In which year were there about 36,500 telephones in Knees Creek? _____

2. How many telephones were there in Knees Creek in 1984? _____

3. What is the range of the data? _____

Use the graph in Example B.

4. On which day did Mary talk on the telephone for 60 minutes? _____

5. How long did Tom talk on the telephone on Monday? _____

6. On which days did Mary talk longer on the phone than Tom? _____

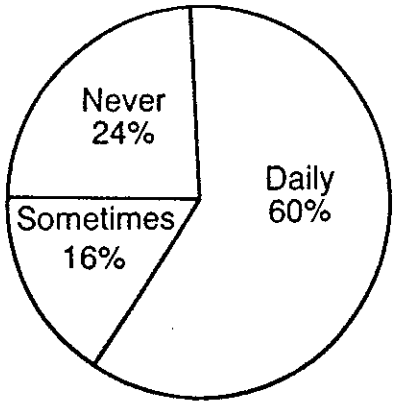
Use after pages 266–267.

Pg. #90

Name Skill #16

The graphs show results of a general population survey of health habits.

Do You Eat Breakfast?



1. About how many people would you expect to eat breakfast daily in a town of 20,000?

_____

2. About how many people would you expect to sometimes eat breakfast in a city of 500,000?

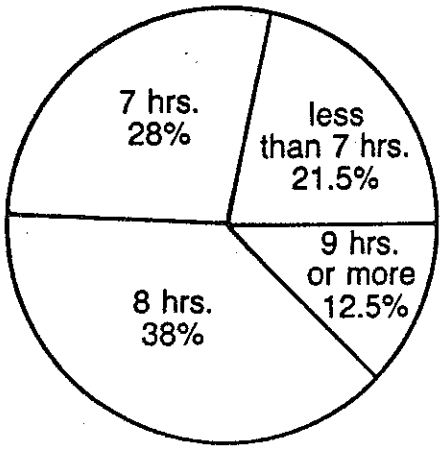
_____

3. How many degrees are in the central angle for 60%?

_____

In a city of 1,500,000 people, how many would you expect to get

How Many Hours Do You Sleep per Day?



4. less than 7 hours of sleep per day?

_____

5. 7 hours of sleep per day?

_____

6. 8 hours of sleep per day?

_____

7. 9 or more hours of sleep per day?

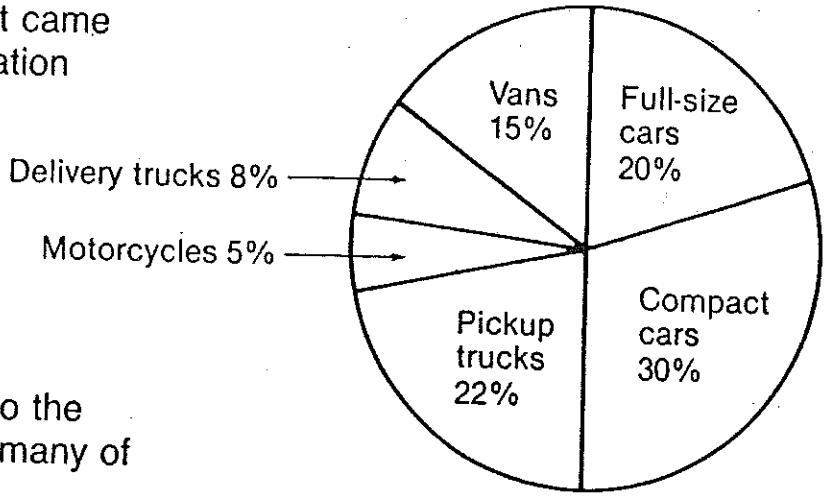
_____

8. How many degrees are in the central angle for 12.5%?

_____

Name SKill #16

This circle graph show the percent of different vehicles that came to the Petro Service Station last month.



Find each percent of 4,000.

If 4,000 vehicles came to the station last month, how many of them were

1. compact cars?

$0.30 \times 4{,}000 =$ _____

2. delivery trucks?

$0.08 \times 4{,}000 =$ _____

3. vans?

_____

4. full-size cars?

_____

5. motorcycles?

_____

6. pickup trucks?

_____

If the percentages stayed the same for the next month but only 2,500 vehicles came to the station, how many of the vehicles would you expect to be

Find each percent of 2,500.

7. compact cars?

_____

8. delivery trucks?

_____

9. vans?

_____

10. full-size cars?

_____

11. motorcycles?

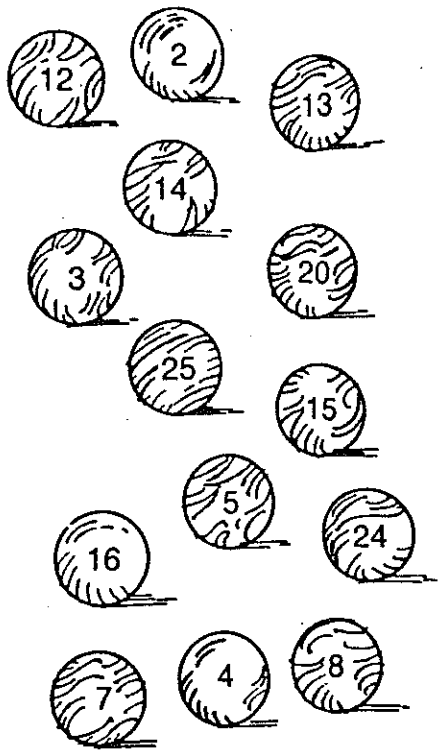
_____

12. pickup trucks?

_____

Name Skill #18

Use the pictures on the right to answer the questions.

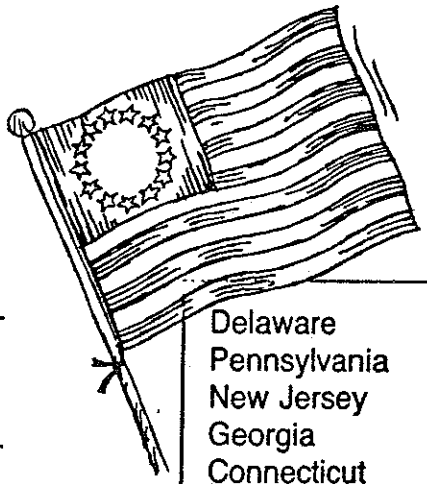


Each number is written on a marble. The marbles are placed in a hat. One marble will be drawn from the hat at random.

What is the probability of drawing a marble with a number that is

1. a 24? _____
2. a prime number? _____
3. an 8 or a 16? _____
4. an even number? _____
5. an odd number? _____
6. a number less than 6? _____

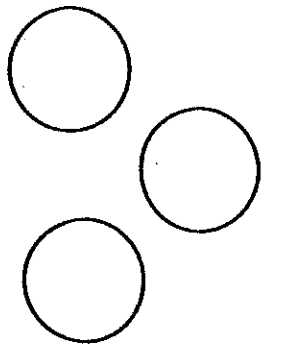
The marbles are replaced by 13 cards. Each card has the name of one of the original 13 states. Find the probability of drawing a card that shows a state that



7. begins with *W*. _____
8. begins with *NEW*. _____
9. ends in *g*. _____
10. contains *a* vowel. _____
11. begins with *M*. _____
12. ends in *e*. _____
13. has fewer than 6 letters in its name. _____
14. has more than 6 letters in its name. _____

Delaware
Pennsylvania
New Jersey
Georgia
Connecticut
Massachusetts
Maryland
South Carolina
New Hampshire
Virginia
New York
North Carolina
Rhode Island

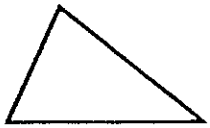
Diane placed six cards with these shapes in a box. She chose one card at random, replaced it, and drew another. What is the probability that



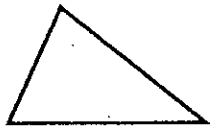
1. both shapes were circles? _____

2. both shapes were triangles? _____

3. both shapes were parallelograms? _____



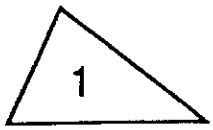
4. after three draws, all shapes were circles? _____



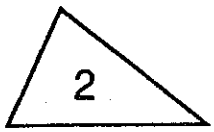
5. after three draws, all shapes were triangles? _____

6. the first draw was a circle, the second draw was a triangle, and the third draw was a parallelogram? _____

7. the first draw was a circle, and the second draw was either a triangle or a parallelogram? _____

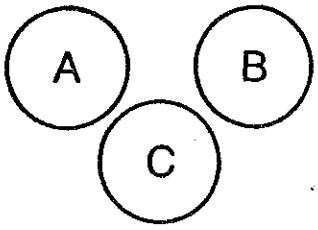


Then Diane numbered the triangles and lettered the circles and placed them in separate boxes. What is the probability of drawing



8. an A and a 1? _____

9. a B and a 1 or a 2? _____



10. either an A or a C and a 1 or a 2? _____

Use after pages 282–283.

Pg #94

Maintenance

A box of 10 balls contains 2 red, 3 blue, and 5 green balls. If one ball is chosen at random, what is the probability of choosing

1. a red ball? _____

2. a blue ball? _____

3. a green ball? _____

4. a red ball or a blue ball? _____

There are 28 students in Ms. King's class. 15 of the students are girls. If Ms. King calls on a student at random to work a problem, what is the probability that she will choose

5. a boy? _____

6. a girl? _____

Use the table to give each answer.

If the same number of birds are to be seen at the same feeder this week, what is the probability that the next bird seen will be

Birds seen at feeder during past week	
Type of bird	**Number of birds**
Sparrow	72
Robin	6
Bluebird	28

7. a sparrow? _____

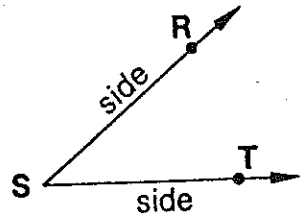
8. a robin? _____

Pg. #95

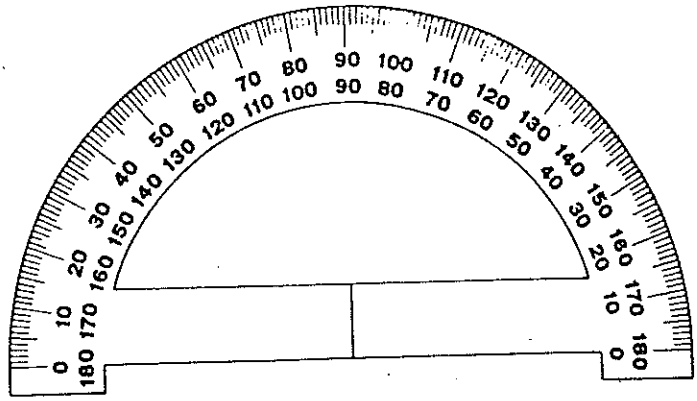
Use after pages 316–317.

Name Skill #18

$\overrightarrow{SR}$ and $\overrightarrow{ST}$ form an angle.



The angle can be named ∠RST, ∠TSR, or ∠S.



Use this protractor to measure the angles below.

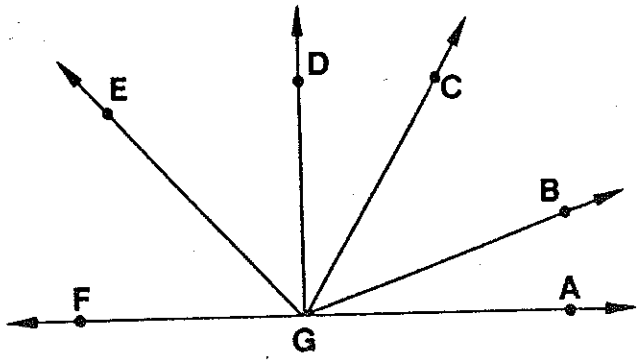
Use the diagram on the right.

1. Give another name for ∠AGB.

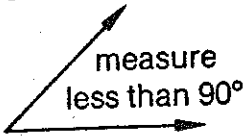
_____

2. Name the sides of ∠DGB.

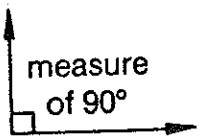
_____



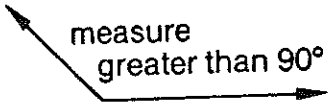
Angles can be described by their measures.



Acute angle



Right angle



Obtuse angle

Use a protractor to measure each angle. Tell whether the angle is *acute*, *right*, or *obtuse*.

3. m∠EGA = _____

_____

4. m∠DGF = _____

_____

5. m∠CGB = _____

_____

6. m∠FGB = _____

_____

7. m∠CGA = _____

_____

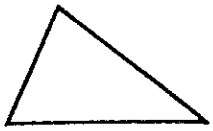
8. m∠EGC = _____

_____

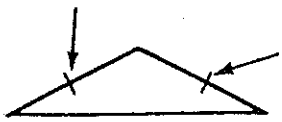
Pg #96

Triangles named by sides

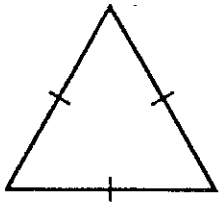
Scalene
No congruent sides



Isosceles
2 congruent sides

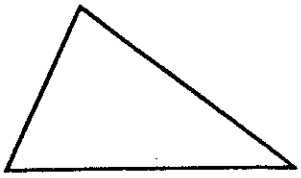


Equilateral Triangle
3 congruent sides

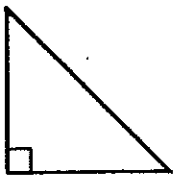


Triangles named by angles

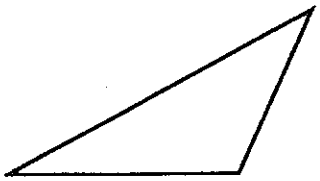
Acute
3 acute angles



Right
1 right angle

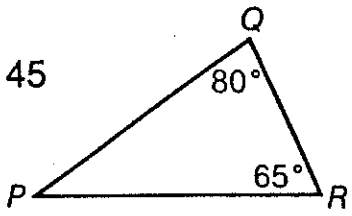


Obtuse
1 obtuse angle



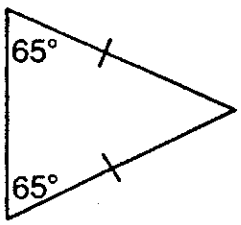
Find $m\angle P$.

Add the given measures. $80 + 65 = 145$
Subtract from 180°. $180 - 145 = 35$
$m\angle P = 35°$



For each triangle, find the missing measure. Then classify the triangle by its sides and by its angles.

1.



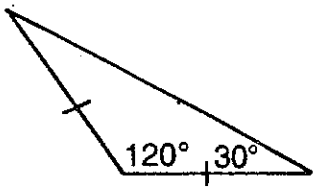
°

_____

_____

_____

2.



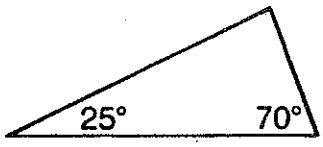
°

_____

_____

_____

3.



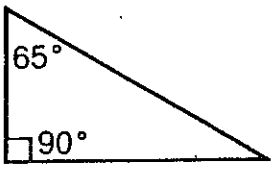
°

_____

_____

_____

4.



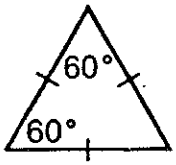
°

_____

_____

_____

5.



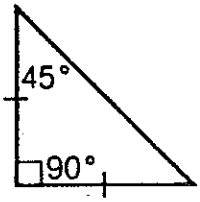
°

_____

_____

_____

6.



°

_____

_____

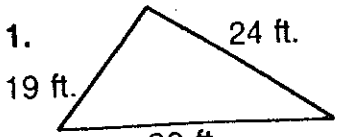
_____

Pg. #97

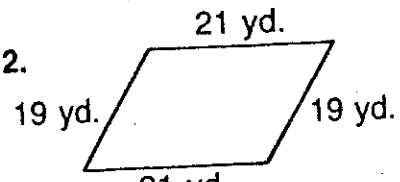
Name Skill #18 P94

Find the perimeter of each polygon.

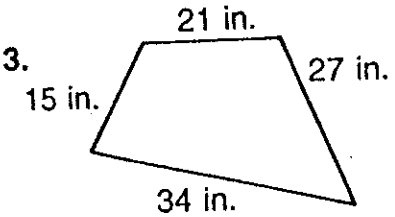
1.



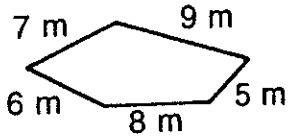
2.



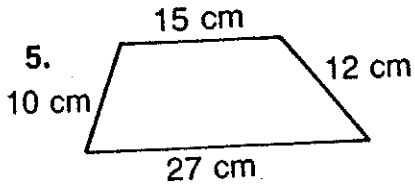
3.



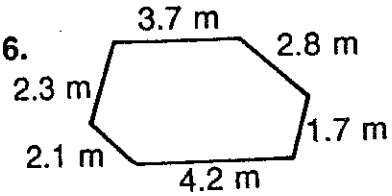
4.



5.



6.



7. A rectangle 0.7 cm by 6.4 cm

8. A regular pentagon with sides 11.8 feet long

9. A quadrilateral whose sides are 7 cm, 4.2 cm, 12 cm, and 6.9 cm

10. A rhombus with sides 4 m long

Solve each problem.

11. How much fencing is needed to enclose a rectangular yard 22 feet by 27 feet?

12. How much trim is needed around a rectangular cradle 20 inches by 36 inches?

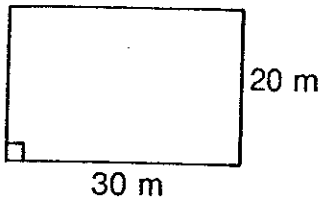
Pg #98

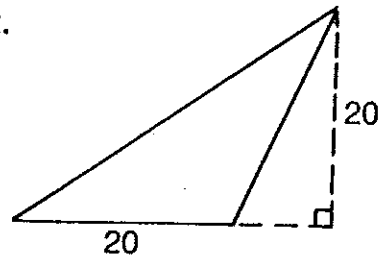
Use after pages 234–235.

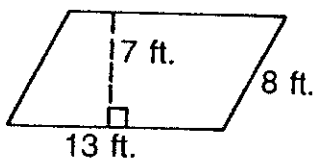
Name Skill #18

P95

Find the area of each polygon.

1. 

2. 

3. 

4. A triangle with base 45 in. and height 24 in.

5. A parallelogram with base 1.5 and height 2

6. A triangle with base 3.2 cm and height 3.4 cm

Solve each problem.

7. Find the area of a square garden, 25 m on a side.

8. Find the area of a square table, 120 in. by 120 in.

9. Find the area of a garden, 49 yd. by 1 yd.

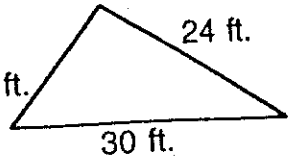
10. Find the area of a square carpet, 2.7 m on a side.

Pg#99

Name Skill #18

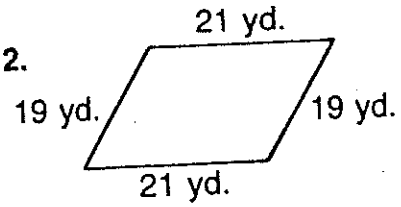
Find the perimeter of each polygon.

1.



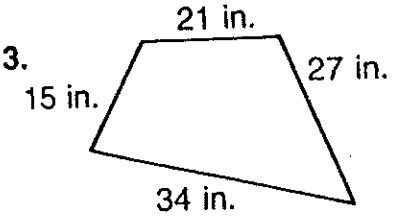
_____

2.



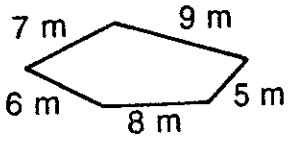
_____

3.



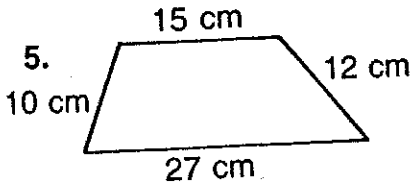
_____

4.



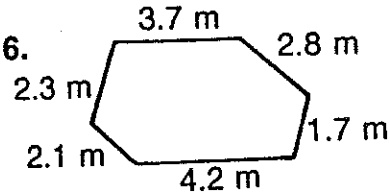
_____

5.



_____

6.



_____

7. A rectangle 0.7 cm by 6.4 cm

_____

8. A regular pentagon with sides 11.8 feet long

_____

9. A quadrilateral whose sides are 7 cm, 4.2 cm, 12 cm, and 6.9 cm

_____

10. A rhombus with sides 4 m long

_____

Solve each problem.

11. How much fencing is needed to enclose a rectangular yard 22 feet by 27 feet?

_____

12. How much trim is needed around a rectangular cradle 20 inches by 36 inches?

_____

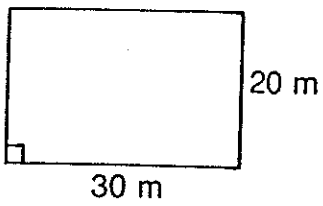
Pg#98

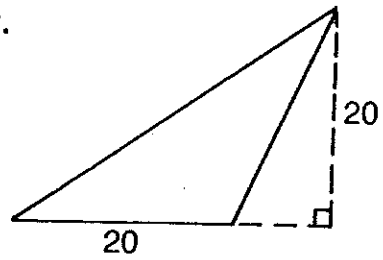
Use after pages 234–235.

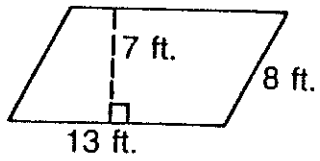
Name Skill #18

P95

Find the area of each polygon.

1. 

2. 

3. 

4. A triangle with base 45 in. and height 24 in.

5. A parallelogram with base 1.5 and height 2

6. A triangle with base 3.2 cm and height 3.4 cm

Solve each problem.

7. Find the area of a square garden, 25 m on a side.

8. Find the area of a square table, 120 in. by 120 in.

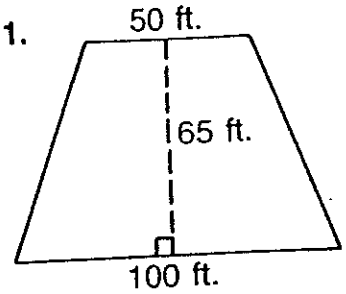
9. Find the area of a garden, 49 yd. by 1 yd.

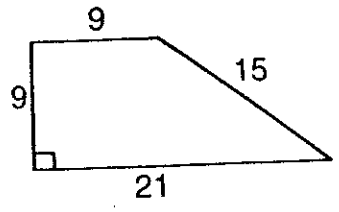
10. Find the area of a square carpet, 2.7 m on a side.

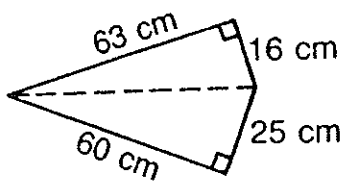
Pg#99

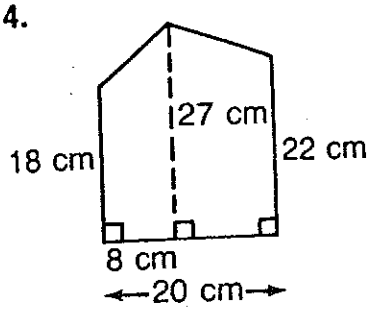
Name SKILL #18

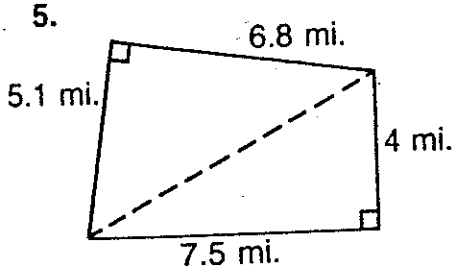
Find each area. Give decimal answers to the nearest tenth.

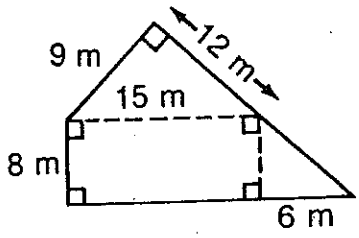
1. 

2. 

3. 

4. 

5. 

6. 

7. A trapezoid with bases 40 and 50 and a height of 70

8. A trapezoid with bases 1.5 m and 2.5 m and a height of 2 m

9. A trapezoid with bases 20 in. and 30 in. and a height of 30 in.

Solve each problem.

10. A seating plan for a piano recital is a trapezoid with bases 4 m and 8 m and a height of 9 m. Find the amount of floor area available for chairs.

11. A garden is staked out in the shape of a trapezoid with bases 5 ft. and 7 ft. and a height of $2\frac{1}{2}$ ft. Find the ground area that can be planted.

Pg # 100

Name: SKILL #10

Find the circumference of a circle with the given diameter d or radius r. Use $3\frac{1}{7}$ or 3.14 for π. Round each decimal answer to the nearest whole unit.

1. $d = 4.2$ m _____

2. $r = 7$ cm _____

3. $d = 10.2$ m _____

4. $d = 8.6$ cm _____

5. $r = 4$ in. _____

6. $r = 8$ ft. _____

7. $d = 2\frac{1}{3}$ yd. _____

8. $r = 12$ in. _____

9. $d = 5.4$ cm _____

10. $r = 9$ ft. _____

11. $r = 7.3$ m _____

12. $d = 22$ in. _____

Solve each problem. Use $3\frac{1}{7}$ for π.

13. Find the distance around the rim of a bucket with a diameter of $16\frac{4}{5}$ in.

_____

14. Find the distance around a record with a radius of $5\frac{3}{4}$ in.

_____

Pg #101

Name Skill # 18

The circumference of a circle is equal to *pi* (π) times the diameter d.

$$C = \pi d$$

Find the circumference of the circle. Use $3\frac{1}{7}$ for π.

$C = \pi d$

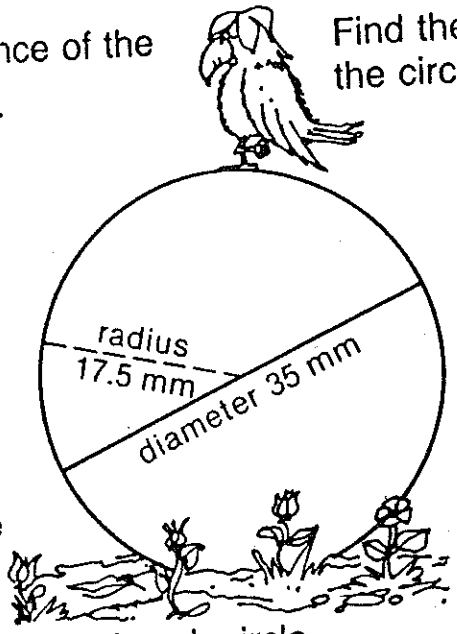
$C \approx 3\frac{1}{7}(35)$

$C \approx \frac{22}{7}(35)$

$C \approx \frac{22 \times 35}{7 \times 1}$

$C \approx 110$

The circumference is about 110 mm.



The circumference of a circle is equal to two times *pi* (π) times the radius r.

$$C = 2\pi r$$

Find the circumference of the circle. Use 3.14 for π.

$C = 2\pi r$

$C \approx 2(3.14)(17.5)$

$C \approx 109.9$

The circumference is about 110 mm.

Find the circumference of each circle. Use $3\frac{1}{7}$ for π in Exercises 1–3. Use 3.14 for π in Exercises 4–9. Round each decimal answer to the nearest whole unit.

1. Diameter: 14 dm

$C \approx$ _____

2. Radius: 21 cm

$C \approx$ _____

3. Diameter: 42 mm

$C \approx$ _____

4. Radius: 10 m

$C \approx$ _____

5. Diameter: 30 mm

$C \approx$ _____

6. Radius: 9 km

$C \approx$ _____

7. Radius: 4.5 mm

$C \approx$ _____

8. Diameter: 2.4 cm

$C \approx$ _____

9. Radius: 0.7 mm

$C \approx$ _____

pg. # 102

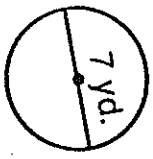
Use after pages 240–241.

Skill #18

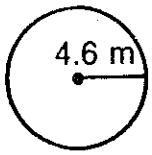
Name _____

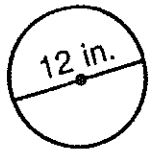
P98

Find the area of a circle with the given diameter d or radius r. Use $3\frac{1}{7}$ or 3.14 for π. Round each decimal answer to the nearest tenth.

1. 

2. 

3. 

4. 

_____ _____ _____ _____

5. $d = 10.4$ _____

6. $r = 4\frac{1}{2}$ in. _____

7. $r = 8.7$ mm _____

8. $d = 14$ yd. _____

9. $d = 10$ in. _____

10. $r = 11$ _____

11. $d = 6.8$ m _____

12. $r = 17$ mi. _____

Solve each problem. Use $3\frac{1}{7}$ for π.

13. A circular patio has a radius of 12 ft. What is the area of the patio?

_____

14. The bottom of a large planter is circular with a diameter of 26 in. What is the area of the bottom?

_____

Pg# 103

Skill #18

Name _____ **R98**

Find the area of the circle.
Use 3.14 for π.

$A = \pi r^2$

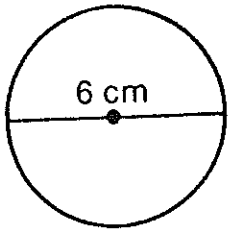
$A \approx 3.14(3^2)$

$A \approx 3.14(9)$

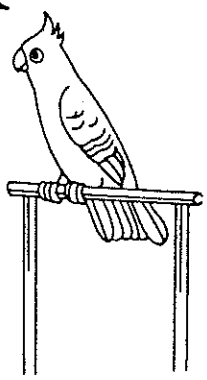
$A \approx 28.26$

The area is about 28.3 cm^2.

The radius is one half the diameter.

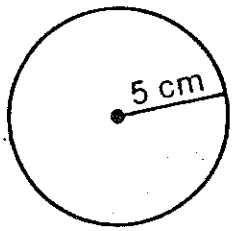


The area of a circle is equal to *pi*(π) times the radius *r* squared.



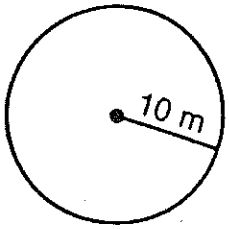
Find the area of each circle. Use 3.14 for π.
Round each decimal answer to the nearest tenth.

1.



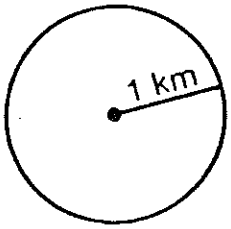
$A \approx$ _____

2.



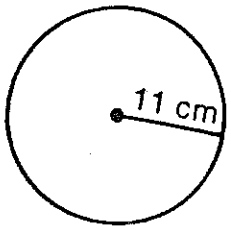
$A \approx$ _____

3.



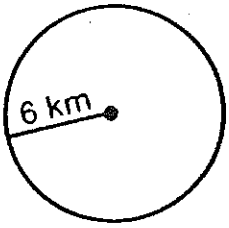
$A \approx$ _____

4.



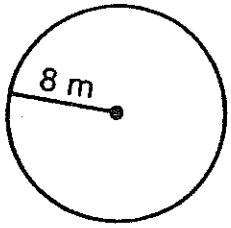
$A \approx$ _____

5.



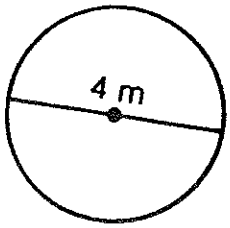
$A \approx$ _____

6.



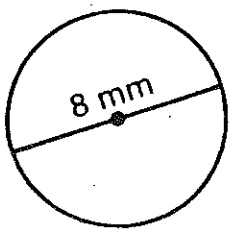
$A \approx$ _____

7.



$A \approx$ _____

8.



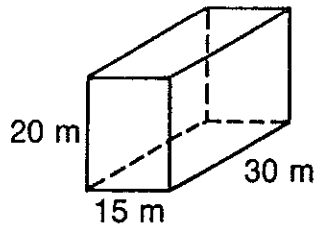
$A \approx$ _____

Name Skill #18

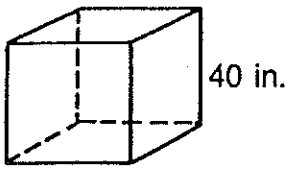
P100

Find the surface area of each polyhedron.
Give decimal answers to the nearest tenth.

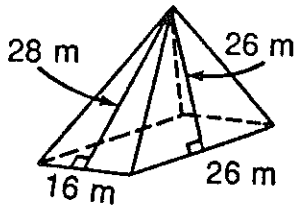
1. Rectangular prism



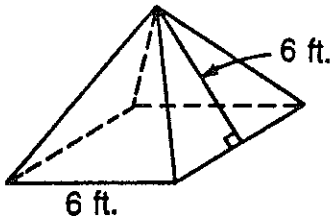
2. Cube



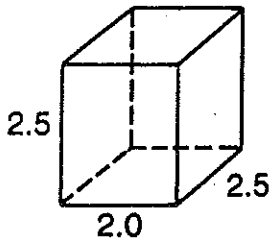
3. Rectangular pyramid



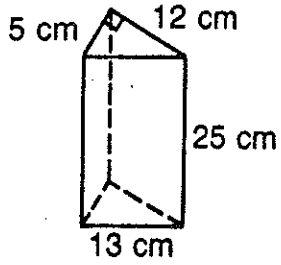
4. Square pyramid



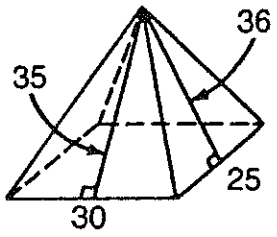
5. Rectangular prism



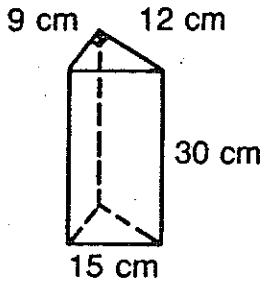
6. Triangular prism



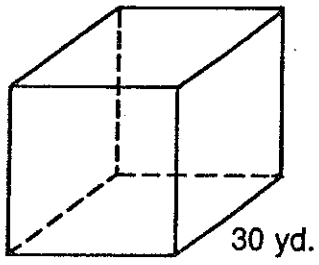
7. Rectangular pyramid



8. Triangular prism



9. Cube



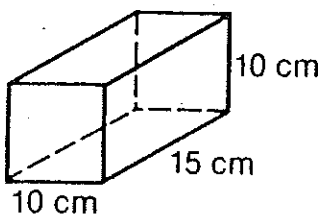
Pg #105

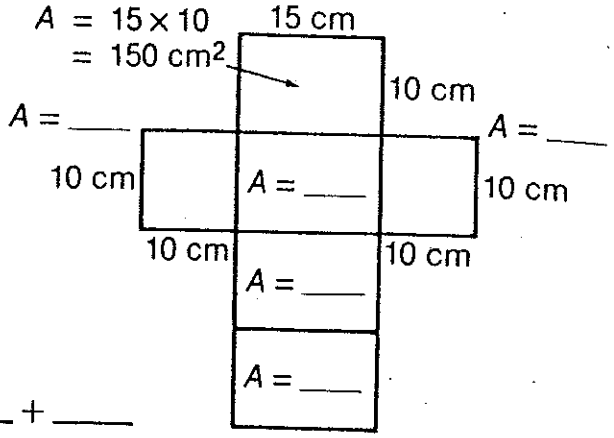
Name 5E11 #18

R100

Find the ***surface area*** of each polyhedron.

1.

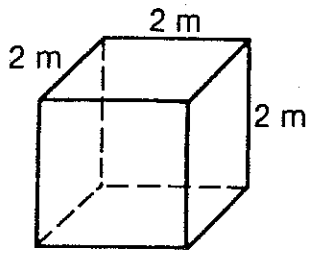


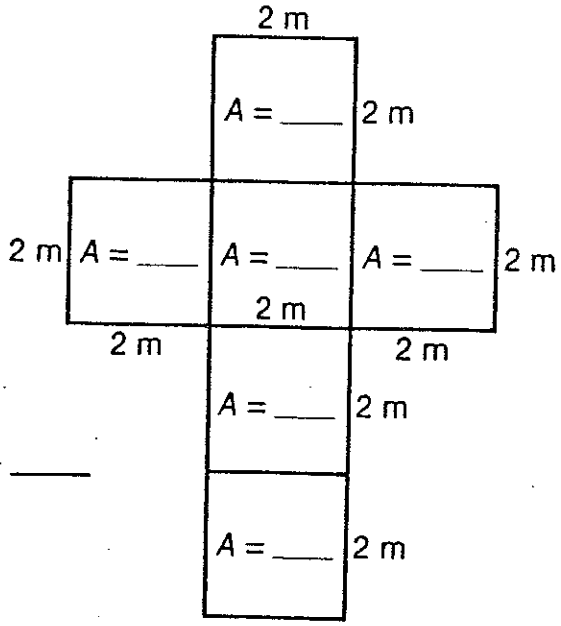


Area = 150 + ____ + ____ + ____ + ____ + ____

= ____ The area is ____ cm^2.

2.

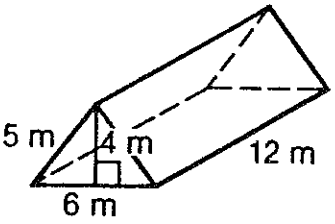


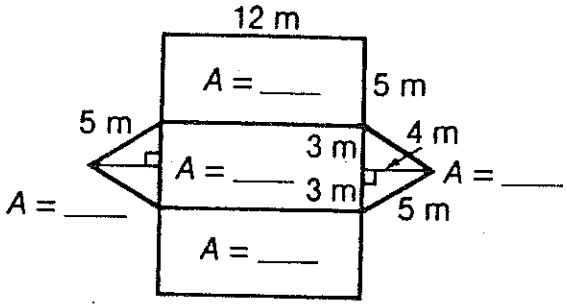


Area = ____ + ____ + ____ + ____ + ____ + ____

= ____ The area is ____ m^2.

3.





Area = ____ + ____ + ____ + ____ + ____

= ____ The area is ____ m^2.

Pg. #106

Name Skill #18

The volume of any prism or cylinder is equal to the area of the base times the height.

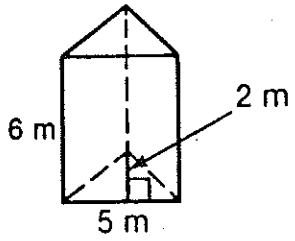
Triangular prism
Base: triangle $B = \frac{1}{2}bh$

$V = Bh$

$V = \left(\frac{1}{2}bh\right)(h)$

$V = \frac{1}{2}(5)(2)(6)$

$V = 30$



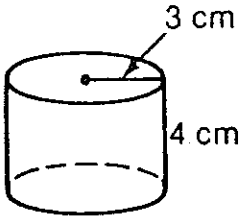
The volume is 30 m^3.

Cylinder
Base: circle $B = \pi r^2$

$V = Bh$

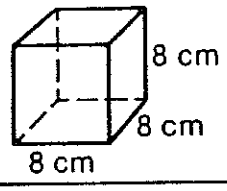
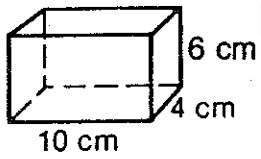
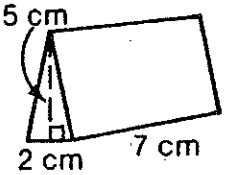
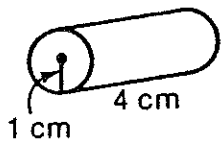
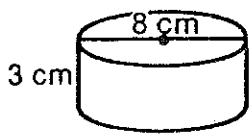
$V \approx 3.14(3)^2(4)$

$V \approx 113.04$



The volume is about 113.04 cm^2.

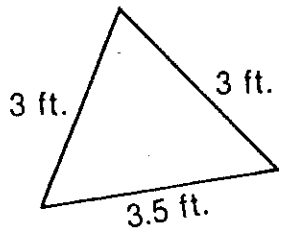
Find the volume for each figure. Use 3.14 for π.

Figure	Area of base (cm^2)	Height (cm)	Volume (cm^3)
1. 			
2. 			
3. 			
4. 			
5. 			

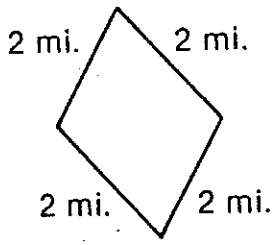
Pg. #107

Maintenance

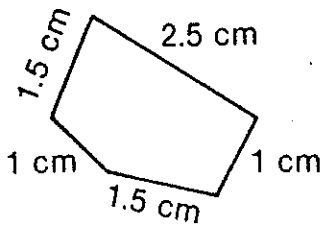
Find the perimeter of each polygon.

1. 

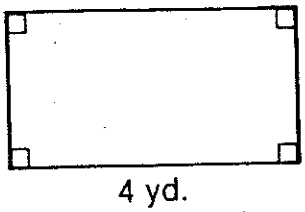
_____

2. 

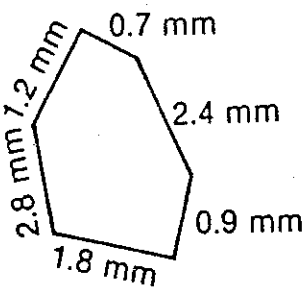
_____

3. 

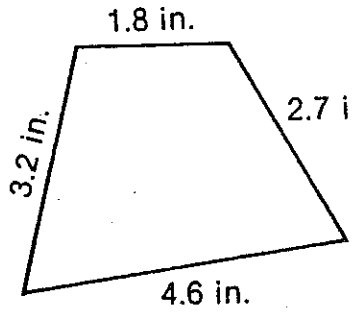
_____

4. 

_____

5. 

_____

6. 

_____

Solve each problem.

7. How much fencing is needed for a rectangular garden plot that is 7 feet by 9 feet?

_____

8. Sandy put molding on both the inside and outside of a doorway that measures 3 feet by 8 feet. He did not put molding along the bottom. How much molding did he use?

_____

Pg. #10

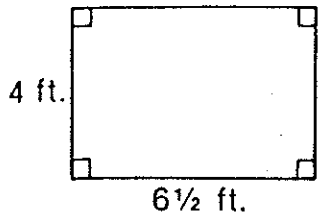
Use after pages 264–265.

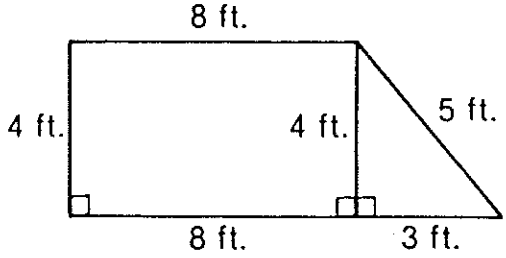
Name Skill #18 Additional Resource

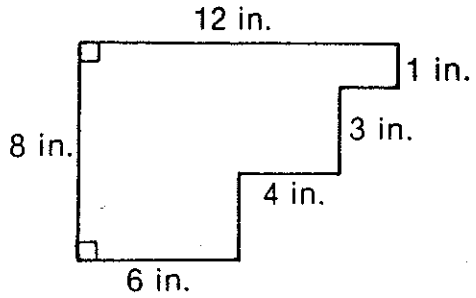
107

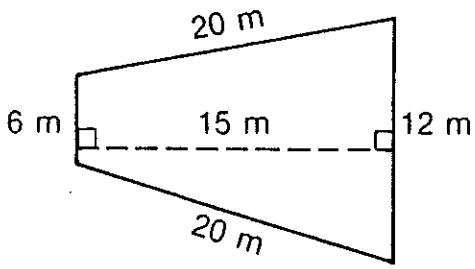
Maintenance

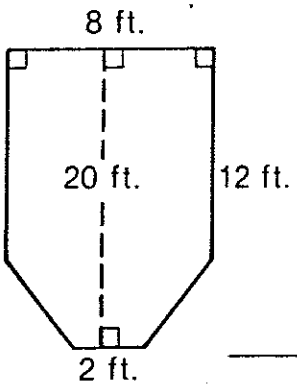
Find the area of each polygon.

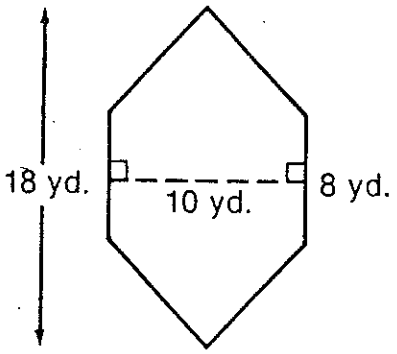
1. 

2. 

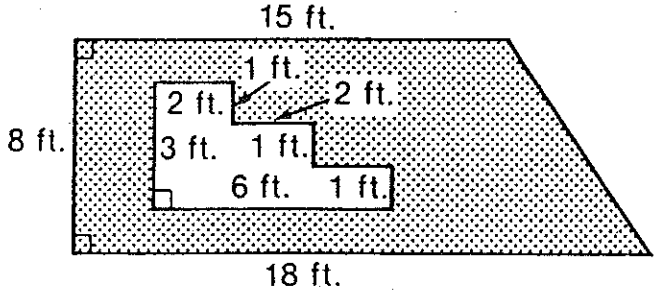
3. 

4. 

5. 

6. 

7. Find the area of the shaded region.



Pg. #109

Use after pages 266–267.