SP1

Pre-Algebra Regular Summer Review Packet

Compute. Use order of operations. Show all work!

1. $36 - 4 + \sqrt{25}$
2. $8(3 + 7) - 5$
3. $7(6) - 40 \div 5$
4. $15 + 18 \div 3^2 - 6$
5. $\sqrt{36} \div (15 - 9)\ 4$
6. $(8 - 3)^2 \cdot (14 - 8)$
7. $\dfrac{(12 - 5) \bullet 6}{7 - 4}$
8. $\dfrac{80 \div (6 - 2)}{35 \div 7}$
9. $2^4 \div [\,5^2 - (13 + 7)]$
10. $40 - 2(15)$
11. $6(8 - 4) + 5$
12. $9(4) - 24 \div \sqrt{16}$
13. $15 - 2(3)$
14. $98 - (36 + 15)$
15. $(98 - 36) + 15$
16. $17 + 3(4 + 2)$
17. $38 - 5(3 + 4)$
18. $5(8 + 4) - |12|$
19. $7\ (1 + 9) - 44$
20. $(24 - 9) - (1 + 3)$
21. $(50 + 16) - (17 - 6)$
22. $\dfrac{8 + 7}{7 - 2}$
23. $\dfrac{40}{4(2)}$
24. $\dfrac{4(3)}{14 - 4}$
25. $\dfrac{6(8 - 3)}{2}$
26. $\dfrac{8}{2} + \sqrt{121}$
27. $\dfrac{9}{3} - 1$
28. $|-7| + \dfrac{18}{3(3)}$
29. $\dfrac{9(2)}{6} + 4$
30. $12 - \dfrac{8(5)}{4}$

Use grouping symbols to make each statement true.

31. $25 - 8 \cdot 3 = 51$
32. $9 + 4 \cdot 5 - 3 = 17$
33. $9 + 9 \div 3 \cdot 5 - 3 = 12$
34. $6 \cdot 5 - 5^2 + 2 = 3$

Write as an algebraic expression.

1. 7 less than 4 times a number _____
2. 11 more than half a number _____
3. 6 less than twice w _____
4. the sum of triple z and half of x _____
5. 5 more than the product of 14 and y _____
6. ½ the difference of a number and 15 _____
7. double the sum of x and 5 _____
8. 4 less than the quotient of x and -5 _____

General Review

SP2

Write the place-value position for each digit in 48.092.

1. the 9
2. the 8
3. the 4
4. the 2

Replace each ◯ with <, >, or = to make a true sentence.

5. 5,048 ◯ 5,084
6. 7.641 ◯ 7.6410

Add, subtract, multiply, or divide.

7. $\begin{array}{r} 2{,}068 \\ +\ 487 \\ \hline \end{array}$
8. $\begin{array}{r} 40{,}236 \\ +\ 14{,}890 \\ \hline \end{array}$
9. $\begin{array}{r} 584 \\ -\ 391 \\ \hline \end{array}$
10. $\begin{array}{r} 6{,}000 \\ -\ 3{,}109 \\ \hline \end{array}$

11. 5.8 + 10.3 =
12. 4.39 + 21.6 + 0.934 =
13. 4.10 − 2.684 =
14. \$147.04 − \$76.38 =

15. $\begin{array}{r} 807 \\ \times\ 6 \\ \hline \end{array}$
16. $\begin{array}{r} 57 \\ \times\ 63 \\ \hline \end{array}$
17. $\begin{array}{r} 9.07 \\ \times\ 12 \\ \hline \end{array}$
18. $\begin{array}{r} 12.015 \\ \times\ 0.14 \\ \hline \end{array}$

19. $4\overline{)824}$
20. $38\overline{)342}$
21. $0.8\overline{)50.4}$
22. $0.56\overline{)1.148}$

Find the greatest common factor for each set of numbers.

23. 32 and 48
24. 16, 24, and 72

Find the least common multiple for each set of numbers.

25. 33 and 39
26. 22, 44, and 55

Write each fraction in simplest form.

27. $\frac{10}{16} =$
28. $\frac{15}{27} =$
29. $\frac{12}{40} =$
30. $\frac{28}{60} =$

Replace each ◯ with <, >, or = to make a true sentence.

31. $\frac{7}{9} \bigcirc \frac{5}{6}$
32. $\frac{10}{12} \bigcirc \frac{5}{6}$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____
30. _____
31. _____
32. _____

General Review

SP3

Add, subtract, multiply, or divide.
Write each result in simplest form.

33. $\frac{4}{11} + \frac{3}{11} =$

34. $\frac{7}{12} + \frac{1}{6} =$

35. $2\frac{8}{9} + 8\frac{2}{3} =$

36. $\frac{8}{17} - \frac{7}{17} =$

37. $\frac{2}{3} - \frac{7}{15} =$

38. $2\frac{5}{8} - 1\frac{5}{6} =$

39. $\frac{4}{5} \times \frac{1}{3} =$

40. $\frac{8}{15} \times \frac{3}{4} =$

41. $1\frac{7}{8} \times 3\frac{3}{5} =$

42. $\frac{1}{8} \div \frac{1}{3} =$

43. $\frac{3}{8} \div 6 =$

44. $5\frac{5}{8} \div 1\frac{7}{8} =$

Write each percent as a decimal and each decimal as a percent.

45. 6% =

46. 0.195 =

Find the percent of each number.

47. 125% of 10

48. 6.8% of 500

Complete the following.

49. 420 min = ☐ h

50. 5 ft = ☐ in.

Solve.

51. A train traveled 671 miles one day and 869 miles the next. How many miles is this altogether?

52. A 28-story building has 32 rooms on each floor. How many rooms are in the building?

53. There are 6 buses and 282 passengers. How many are on a bus if each one carries the same number of passengers?

54. A television set is on sale at $43.50 off the original price. Find the sale price if the original price is $350.

55. A shirt is purchased for $10.39. How much change is given from $15?

56. The admission to a movie is $3.50. What amount is collected for 136 admissions?

Find the mean for the following groups of numbers.

57. 63, 67, 60, 78, 74, 72

58. 41, 37, 25, 36, 31

33. _____
34. _____
35. _____
36. _____
37. _____
38. _____
39. _____
40. _____
41. _____
42. _____
43. _____
44. _____
45. _____
46. _____
47. _____
48. _____
49. _____
50. _____
51. _____
52. _____
53. _____
54. _____
55. _____
56. _____
57. _____
58. _____

Addition and Subtraction Equations

SP4

Solve each equation. Show algebra steps.

1. $z + 16 = 4$

2. $0 = m + 17$

3. $-3 = j + 5$

4. $h + 13 = 21$

5. $9 + g = -20$

6. $-7 + d = -26$

7. $a - 20 = -3$

8. $w - 18 = 7$

9. $t - 19 = 23$

10. $-9 = k - 11$

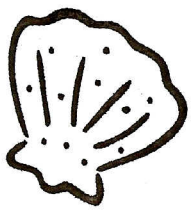
11. $-15 = n - 22$

12. $27 = x - 14$

13. $-8 + b = -5$

14. $t - 24 = 12$

15. $-28 + p = -3$



Write *true* or *false*. If false, explain why.

16.) The only prime factors of 252 are 2, 3, and 7.

17.) The GCF of 14 and 15 is 1.

18.) The prime factorization of 63 is 3×21.

19.) The only prime factors of a power of 10 are 2 and 5.

20.) The GCF of 27 and 45 is 3.

21.) If the GCF of two numbers is 1, the numbers have no common factors.

22.) Every multiple of 4 is a multiple of 16.

Solve. There are two numbers.

23.) One number is 10. The unknown number is less than 10. The GCF of the numbers is 2. Their LCM is 30. What is the unknown number?

SP5

Use the distributive property to write an equivalent expression.

1. 5(5 + c) _____

2. -8(y + 2) _____

3. (m + 1)9 _____

4. -3(2a + 5) _____

5. 4(y + 3z) _____

6. (2a + 3b)4 _____

Combine like terms.

7. 17c + 6c _____

8. 3y + 7x + 5y _____

9. 3a + 16 + 9a + 2a _____

10. 5m + 11n + 11m + 5n _____

11. 4(x + 5) + 8x + 7 _____

12. 36 – 72t + 4t _____

Scientific Notation

Write using <u>standard notation</u>.

13. 6.781×10^{5} _____

14. 2.001×10^{-2} _____

15. 7.61×10^{-5} _____

16. 3.114×10^{3} _____

Write using <u>scientific notation</u>.

17. 6,821,000 _____

18. 0.810001 _____

19. 0.00000671 _____

20. 2,631 _____

SP6

Multiplication and Division Equations

Solve each equation. Show perfect algebra steps.

1. -6y = -84
2. $\frac{7}{8}t = 49$
3. 440 = 15a
4. -136 = -17k
5. 126 = -21p
6. 0.15c = 600
7. $\frac{d}{-9} = 11$
8. $\frac{p}{8} = 4\frac{1}{4}$
9. 22 = $\frac{g}{-32}$
10. -2.1 = $\frac{r}{14}$
11. -15 = $\frac{w}{-12}$
12. $\frac{z}{-18}$ = 18

Write and solve an equation. Set up the variable first (let x =)

13. Joan's age is triple the age of her daughter. If Joan is 42 years old, how old is her daughter?

14. I have a secret number. Seven more than quadruple my number equals -5. What is my number?

15. Sam and three friends are splitting a pizza. If each person pays $4.50, what was the cost of the pizza?

Fraction Practice

SP7

Show all work.

1. Replace each ___?___ with >, <, or =.

a. $\frac{5}{9}$ ___?___ $\frac{5}{11}$

b. $\frac{47}{48}$ ___?___ $\frac{48}{49}$

c. $\frac{12}{25}$ ___?___ $\frac{10}{12}$

d. $\frac{24}{25}$ ___?___ $\frac{8}{9}$

e. $\frac{14}{25}$ ___?___ $\frac{14}{27}$

f. $\frac{9}{16}$ ___?___ $\frac{13}{18}$

2. Find each sum or difference. Write each answer in lowest terms.

a. $\frac{2}{3}-\frac{4}{9}$

b. $\frac{11}{12}-\frac{5}{8}$

c. $\frac{4}{15}+\frac{2}{3}$

d. $\frac{3}{8}+\frac{1}{6}$

e. $\frac{2}{3}-\frac{5}{11}$

f. $\frac{5}{12}+\frac{2}{9}$

3. Carl has a rock collection. Of the rocks, $\frac{3}{8}$ are quartz and $\frac{1}{3}$ are granite. What fraction of Carl's rocks are quartz or granite?

For use with Section 3

4. Find each sum or difference. Write each answer in lowest terms.

a. $3\frac{2}{3}+1\frac{5}{9}$

b. $6\frac{2}{3}-4\frac{2}{5}$

c. $48\frac{1}{3}-26\frac{1}{2}$

d. $6\frac{3}{4}+9\frac{5}{6}$

e. $6\frac{3}{4}-2\frac{1}{2}$

f. $15-4\frac{7}{12}$

g. $78\frac{1}{2}-24\frac{3}{4}$

h. $12\frac{1}{2}+8\frac{7}{10}$

i. $18\frac{5}{6}-4\frac{3}{5}$

5. Find each product. Write each answer in lowest terms.

a. $4 \cdot 2\frac{1}{6}$

b. $5 \cdot 2\frac{1}{4}$

c. $\frac{3}{4} \cdot \frac{8}{9}$

d. $\frac{5}{8} \cdot \frac{2}{5}$

e. $2\frac{3}{5} \cdot 1\frac{3}{8}$

f. $1\frac{3}{4} \cdot \frac{2}{3}$

6. Find each quotient. Write each answer in lowest terms.

a. $6 \div \frac{5}{6}$

b. $3\frac{1}{4} \div 1\frac{3}{4}$

c. $3 \div 1\frac{2}{7}$

d. $9 \div \frac{3}{8}$

e. $2\frac{5}{6} \div \frac{1}{3}$

f. $2\frac{4}{9} \div \frac{2}{3}$

7. Sonya has 9 yd of wrapping paper. She cuts the paper into pieces that are $\frac{2}{3}$ yd long. How many pieces does she have?

8. A recipe for rice pudding calls for $3\frac{3}{4}$ c milk. How much milk would you need to triple the original recipe?

Did You Hear About . . .

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16 ?

Solve each equation or problem and find your solution in the answer column. Write the word next to the answer in the box containing the problem number.

Use algebra steps!

1 $5n + 4 = -26$

2 $-2a - 9 = 39$

3 $\frac{x}{4} - 1 = 7$

4 $\frac{m}{-5} + 13 = 20$

5 $-7y + 2 = -75$

6 $\frac{v}{3} - 10 = -14$

7 $-3 + 4p = -31$

8 $-\frac{w}{6} + 9 = 2$

9 $8 - 3x = 128$

10 $\frac{k}{-15} + 20 = 17$

11 $45 = 6d - 45$

12 $12 = \frac{n}{9} + 1$

13 Five more than twice a number is –13. Find the number.

14 Twelve less than the quotient of a number and 7 is –2. Find the number.

15 The sum of eight times a number and fifteen is seven. Find the number.

16 One fourth of a number, decreased by 10, is –50. Find the number.

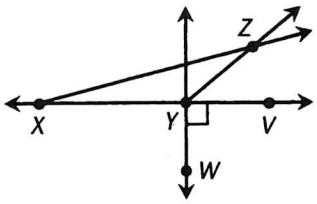
–9 • MARKET
42 • HE
–31 • UP
–12 • FEATHERS
–1 • GOING
–100 • PILLOWS
–6 • THE
45 • THAT
–7 • BECAUSE
–3 • DUCK
70 • WAS
32 • WHO
99 • STOCK
85 • SOFT
–35 • INVESTED
–40 • HEARD
–160 • DOWN
–24 • GUY
64 • HAD
15 • THE
11 • IN

Mixed Review

SP9

Choose the best answer.

1. Which of the following statements is false?



a. $\angle YXZ$ is obtuse.
b. $\angle XYV$ is straight.
c. $\angle ZYV$ is acute.
d. $\angle WYV$ is right.

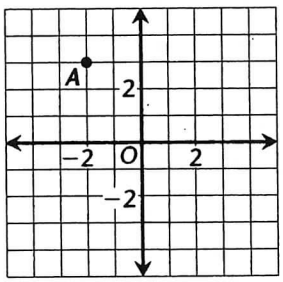
2. $\angle A$ and $\angle B$ are complementary. The measure of $\angle A$ is 20°. What is the measure of an angle that is supplementary to $\angle B$?

a. 70° **b.** 110°
c. 140° **d.** 160°

3. The deepest point in the world's oceans is 35,797 ft below sea level. Mt. Everest is 29,029 ft high. What is the difference between these two elevations?

a. 6668 ft **b.** 6768 ft
c. 64,826 ft **d.** 65,716 ft

4. What are the coordinates of point A?



a. (−2, 3) **b.** (−2, −3)
c. (3, −2) **d.** (−3, 2)

5. Evaluate $-14 - (18 - 21)$.

a. −11 **b.** −17
c. −43 **d.** −53

6. David wants to buy a \$1.25 sandwich and a \$0.95 soda for each of his n friends. Write an equation that models the relationship between his total cost C and n.

a. $C = n + 1.25 + 0.95$
b. $n = \frac{C}{1.25} + 0.95$
c. $C = n(1.25 + 0.95)$
d. $C = \frac{n(1.25)}{0.95}$

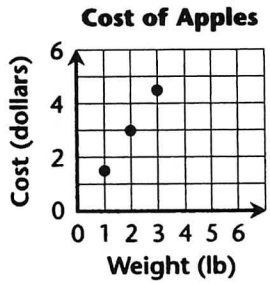
7. Evaluate $a^2 - b + 4$ when $a = 5$ and $b = -2$.

a. 4 **b.** 16
c. 19 **d.** 31

8. Write an equation that models this sentence:
Eight less than three times a number y equals x.

a. $8 - 3y = x$ **b.** $8(3 - y) = x$
c. $3(x - 8) = y$ **d.** $3y - 8 = x$

9. Predict the cost of 5 lb of apples.



a. \$6.50 **b.** \$7.00
c. \$7.50 **d.** \$8.00

10. Solve $-24 = 6 - 3x$.

a. −6 **b.** −10
c. 10 **d.** 18

SP10

Integer Practice

Evaluate. Let $x = 6$, $y = -4$, and $z = 10$

1.) $x - y =$ _____

2.) $x^2 + y^2 =$ _____

3.) $xy + z =$ _____

4.) $3yz - 40 =$ _____

5.) $x^2 + x =$ _____

6.) $5z - y =$ _____

7.) $\frac{y+z}{x} =$ _____

8.) $\frac{xz}{y} =$ _____

Compute.

9. $(-3)^2(-2)^3$

10. $(-3)(-12)(-1)$

11. $(-7)(5)(-4)$

12. $\frac{-6+(-3)+(-7)}{4}$

13. $\frac{-60}{-3}+\frac{-48}{4}$

14. $\frac{-9\cdot 5}{3}$

15. $-5\cdot 2\cdot 53$

16. $-1(-6)+8(-2)$

17. $(-2)(-3)+(-1)(7)$

18. $-8+17+(-3)$

19. $(-9)^2(-1)^5$

20. $(-4)^3$

21. $\frac{-72}{8}+\frac{-56}{7}$

22. $(-8)(-1)(4)(-3)$

23. $\frac{(-4)(-25)}{5}$

24. $(-3\cdot 7)+(-2\cdot 4)$

25. $\frac{9(-4)}{-2}$

26. $\frac{-19+(-11)}{6}$

27. $\frac{170}{-10}+\frac{96}{12}$

28. $\frac{-32}{2}+\frac{-75}{-15}$

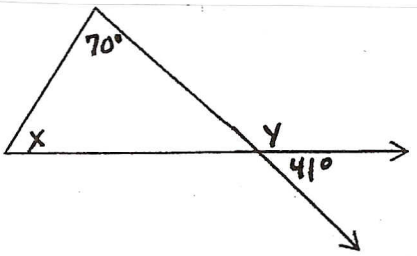
29. $80+(-50)+(-70)$

Geometry

SP11

Find the missing angle measures using algebraic equations.

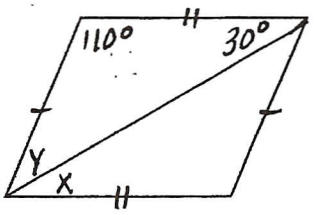
1.)



m∠x = _____

m∠y = _____

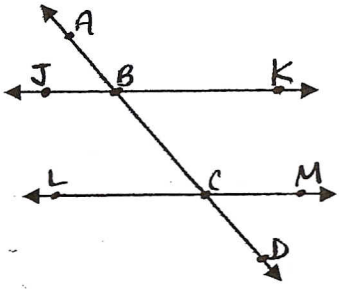
2.)



m∠x = _____

m∠y = _____

3.)



$\overleftrightarrow{JK} \parallel \overleftrightarrow{LM}$

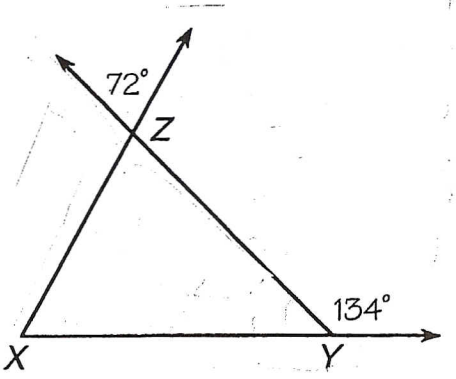
a.) Give another name for $\overrightarrow{AD}$ _____

b.) Give another name for $\overrightarrow{ML}$ _____

c.) Name a supplement to ∠BCL _____

d.) ∠JBC and ∠_____ are corresponding angles

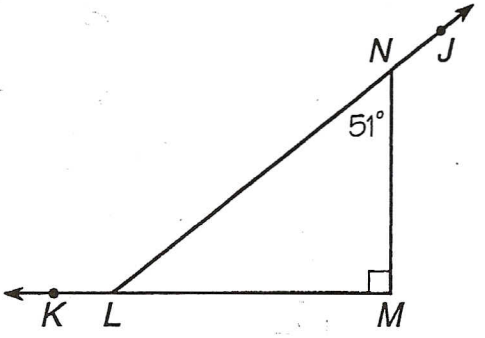
e.) ∠KBC and ∠BCL are _____ angles



L $m\angle XZY =$

D $m\angle ZYX =$

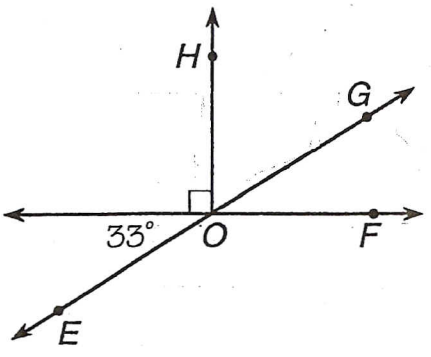
B $m\angle X =$



U $m\angle JNM =$

Z $m\angle NLM =$

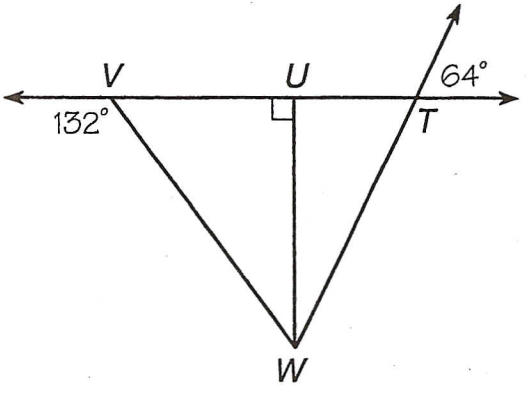
I $m\angle NLK =$



O $m\angle FOG =$

H $m\angle GOH =$

R $m\angle EOF =$



C $m\angle UVW =$

E $m\angle VWU =$

N $m\angle UWT =$

Graphs and Statistics

SP12

Find the missing value from the mean.

1.) Friends ages: 18, 13, 14, _____ Mean = 14

2.) Cost of t-shirts: $15, $8, $12.50, $9.50, _____ Mean = $11

Terence wants to earn at least a B (80%) in science. His scores so far are: 91, 75, 68, 84, ___

3.) Is it possible for him to earn a B overall? _____

4.) What is the lowest score he needs on the fifth test to earn a B? _____

Use the table for Exercises 5–7. The table shows the number of hospitals in ten different states.

5. Make a stem-and-leaf plot of the data. Be sure to include a key and a title.

6. Find the range, the mean, the median, and the mode for the data.

7. Vermont has 15 hospitals. Suppose you include Vermont in the list. How would your stem-and-leaf plot change?

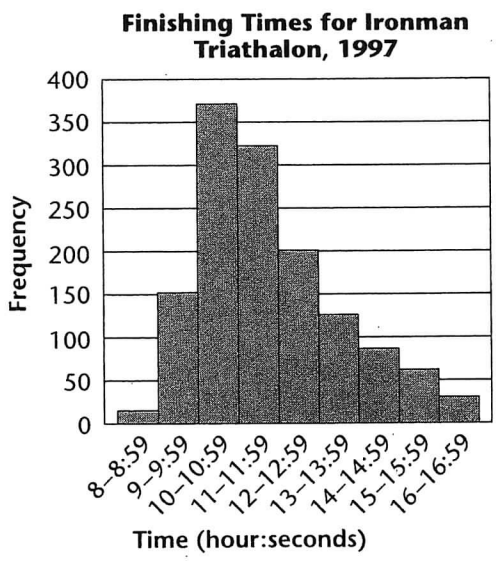
Number of Hospitals in Selected States

State	Number of hospitals
Arizona	60
Colorado	69
Idaho	41
Maryland	49
Montana	53
New Mexico	37
North Dakota	46
South Carolina	67
Utah	42
West Virginia	58

Use the histogram for Exercises 8 and 9.

8. How many triathletes finished the Ironman triathalon in less than 10 hours?

9. Can you tell the slowest time in which anyone finished the triathalon? Explain.



Proportions

SP13

Use equivalent ratios or cross-products to solve each proportion.

1. $\frac{2}{7} = \frac{24}{x}$

2. $\frac{4}{15} = \frac{x}{90}$

3. $\frac{x}{20} = \frac{154}{280}$

4. $\frac{x}{14} = \frac{10}{4}$

5. $\frac{x}{22} = \frac{20}{5}$

6. $\frac{x}{16.5} = \frac{84}{132}$

7. $\frac{40}{24} = \frac{x}{9}$

8. $\frac{63}{93} = \frac{x}{31}$

9. $\frac{x}{14} = \frac{11}{35}$

In Exercises 22–25, write and solve a proportion to solve the problem.

10. Four notebooks cost $4.40. How many notebooks can you buy for $6.60?

11. Two roses cost $3.50. How many roses can you buy for $17.50?

12. A roll of paper towels cost $1.90. How many rolls can you buy for $9.50?

13. Carl works 8 hours and earns $52. How many hours would he have to work to earn $130?

14. Use the table below that shows the prices of several fruits to answer the following questions.

Fruit	Price
Apples	4 for $3.00
Bananas	3 lb/$1.50
Cantaloupes	2 for $2.50
Cherries	2 lb/$2.40
Peaches	1 lb/$.90

a. How much would 5 pounds of bananas cost?

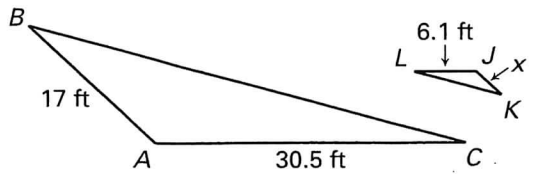
b. How much would 7 apples cost?

Similar Triangles

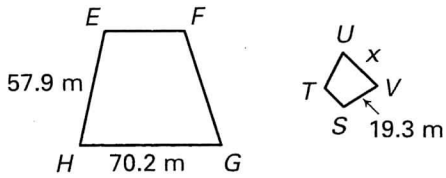
SP14

Use a proportion to find the specified length marked with an *x*.

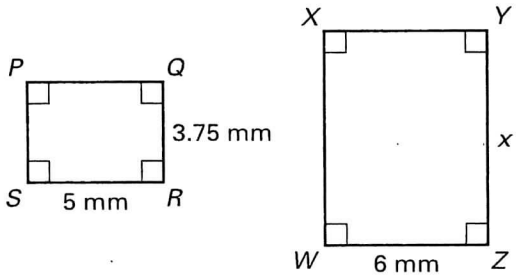
1. Given $\triangle ABC \sim \triangle JKL$, find *JK*.



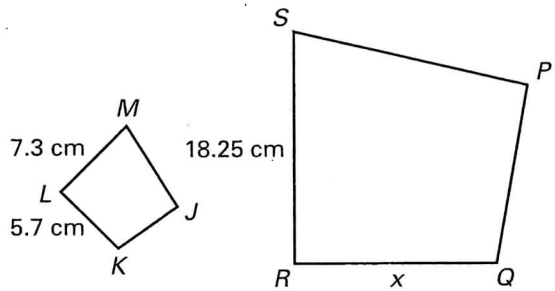
2. Given *EFGH* ~ *STUV*, find *UV*.



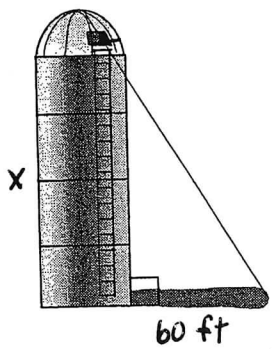
3. Given *PQRS* ~ *WXYZ*, find *YZ*.



4. Given *JKLM* ~ *PQRS*, find *QR*.



5. A farmer is standing next to the silo on his farm. The farmer is 6 feet tall and his shadow is 2.5 feet long. If the shadow of the silo is 60 feet long, what is the height of the silo? Write and solve a proportion to find the answer.



(Not drawn to scale)

Percent Problems

SP15

Use mental math.

1.) What is 25% of 48? _____

2.) What is 75% of 60? _____

3.) What is 150% of 18? _____

4.) 8 is 20% of what number? _____

5.) 4 is what percent of 12? _____

6.) What is 15% of $80? _____

Solve using a proportion or equation.

7) What is 32% of 84?

8) What percent of 24 is 8?

9) 48% of what number is 38.4?

10) What percent of 84 is 70?

11) What is 45% of $180?

12) 120% of what number is 90?

13) What is 57% of 250?

14) 3.5 is what percent of 50?

15) What is $2\frac{1}{2}$% of 624?

Find the discount and sale price. Round to the nearest cent.

16) regular price: $87
rate of discount: $33\frac{1}{3}$%

17) regular price: $39.95
rate of discount: 25%

18) regular price: $42
rate of discount: 30%

Find the sales tax on each item and the total cost.

19) tennis racket
cost: $59.98;
sales tax: 6%

20) television
cost: $2,150;
sales tax: $5\frac{1}{2}$%

21) compact disc
cost: $14.95;
sales tax: 7.6%

Solve using a proportion or equation.

22.) Toni has $8.40, which is 70% of the price of a concert ticket. What is the full price?

23.) There are 140 students in the seventh grade and 84 of them are in the band. What percent of the seventh grade is <u>not</u> in the band?

24.) A $45 video game is on sale at 15% off. How much money will be saved?

25.) Ms. Chu receives 7% commission on her sales. How much will she earn on sales of $4200?

26.) Serena scored 63 points on the 84-point test. What percentage did she earn?

SP16

Geometry, Area, Volume Practice

Set A

Complete. Use Figure 1. $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$. $\overleftrightarrow{EF} \perp \overleftrightarrow{CD}$. $m\angle 1 = 65°$

1. $\overleftrightarrow{EF} \perp$ _____.
2. $\angle 14$ is a(n) _____ angle.
3. $\overleftrightarrow{EF}$ and $\overleftrightarrow{HI}$ intersect at _____.
4. $\angle 4$ is a(n) _____ angle.
5. $\angle$_____ and $\angle$_____ are complementary angles.
6. $\angle 12$ and $\angle$_____ are adjacent angles.
7. $\angle 2$ and $\angle$_____ are vertical angles.
8. $\angle 1$ and $\angle$_____ are corresponding angles.
9. $m\angle 12 =$ _____
10. $m\angle HGD =$ _____

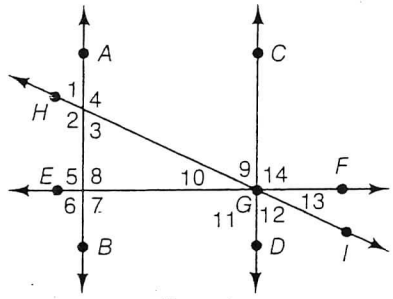
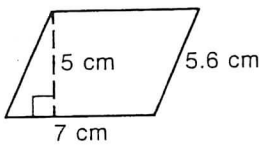
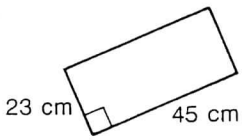


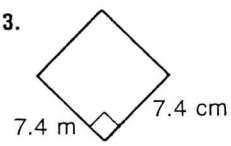
Figure 1

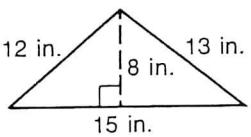
Set B

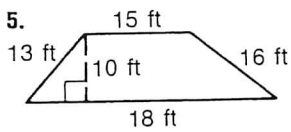
Find the area of each figure. Use 3.14 for π.

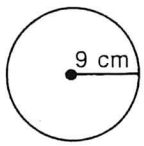
1. 

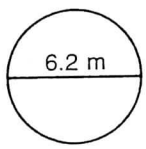
2. 

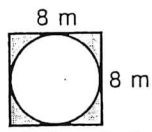
3. 

4. 

5. 

6. 

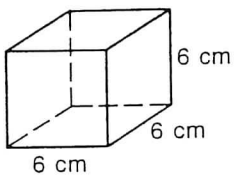
7. 

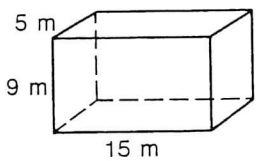
8. 

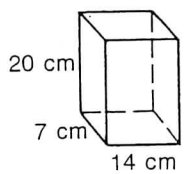
(shaded region)

Set C

Find the volume and surface area of each figure.

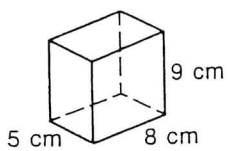
1. 

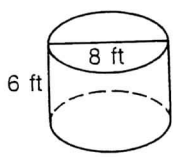
2. 

3. 

Set D

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

1. 

2. 

Formulas

$A = \ell w$	$V = \ell wh$
$A = s^2$	$V = e^3$
$A = bh$	$V = \pi r^2 h$
$A = \frac{1}{2}bh$	
$A = \frac{1}{2}(b_1 + b_2)h$	
$A = \pi r^2$	
$SA = 2\ell w + 2\ell h + 2wh$	
$SA = 6e^2$	

Summer Review Packet

7th Grade Pre-Algebra Regular

Answer Key

SP #1

1. 37
2. 13
3. 34
4. 11
5. 4
6. 150
7. 14
8. 4
9. 3.2
10. 10
11. 29
12. 30
13. 9
14. 47
15. 77
16. 35
17. 3
18. 48
19. 26
20. 11
21. 55
22. 3
23. 5
24. 1.2
25. 15
26. 15
27. 2
28. 9
29. 7
30. 2
31. (25-8)•3=51
32. 9+4•(5-3)=17
33. (9+9)÷3•(5-3)=12
34. 6•5-(5^2+2)=3
1. 4n – 7
2. $\frac{n}{2}$ + 11
3. 2w – 6
4. 3z + ½ x
5. 14y + 5
6. ½ (n – 15)
7. 2 (x + 5)
8. $\frac{x}{-5}$ – 4

SP #2

1. hundredths
2. ones
3. tens
4. thousandths
5. <
6. =
7. 2,555
8. 55,126
9. 193
10. 2,891
11. 16.1
12. 26.924
13. 1.416
14. $70.66
15. 4,842
16. 3,591
17. 108.84
18. 1.6821
19. 206
20. 9
21. 63
22. 2.05
23. 16
24. 8
25. 429
26. 220
27. $\frac{5}{8}$
28. $\frac{5}{9}$
29. $\frac{3}{10}$
30. $\frac{7}{15}$
31. <
32. =

SP #3

33. $\frac{7}{11}$
34. $\frac{3}{4}$
35. $11\frac{5}{9}$
36. $\frac{1}{17}$
37. $\frac{1}{5}$
38. $\frac{19}{24}$
39. $\frac{4}{15}$
40. $\frac{2}{5}$
41. $6\frac{3}{4}$
42. $\frac{3}{8}$
43. $\frac{1}{16}$
44. 3
45. .06
46. 19.5%
47. 12.5
48. 34
49. 7
50. 60
51. 1,540 miles
52. 896 rooms
53. 47
54. $306.50
55. $4.61
56. $466.00
57. 69
58. 34

SP #4

1. z = -12
2. m = -17
3. j = -8
4. h = 8
5. g = -29
6. d = -19
7. a = 17
8. w = 25
9. t = 42
10. k = 2
11. n = 7
12. x = 41
13. b = 3
14. t = 36
15. p = 25
16. true
17. true
18. false
19. true
20. false
21. false
22. false
23. 6

SP #5

1. 25 + 5c
2. -8y - 16
3. 9m + 9
4. -6a - 15
5. 4y + 12z
6. 8a + 12b
7. 23c
8. 7x + 8y
9. 14a + 16
10. 16m + 16n
11. 12x + 27
12. 36 – 68t
13. 678,100
14. 0.02001
15. 0.0000761
16. 3,114
17. 6.821×10^{6}
18. 8.10001×10^{-1}
19. 6.71×10^{-6}
20. 2.631×10^{3}

SP #6

1. y = 14
2. t = 56
3. a = 29.333……
4. k = 8
5. p = -6
6. c = 4000
7. d = -99
8. f = 34
9. g = -704
10. r = -29.4
11. w = 180
12. z = -324
13. let x = daughter's age
    42 = 3x, x=14 years old
14. let x = secret number
    4x + 7 = -5, x=-3
15. let x = pizza cost

$\frac{x}{4} = 4.50$, x = $18

SP #7

1. a. >
   b. <
   c. <
   d. >
   e. >
   f. <
2. a. $\frac{2}{9}$
   b. $\frac{7}{24}$
   c. $\frac{14}{15}$
   d. $\frac{13}{24}$
   e. $\frac{7}{33}$
   f. $\frac{23}{36}$
3. $\frac{17}{24}$
4. a. $5\frac{2}{9}$
   b. $2\frac{4}{15}$
   c. $21\frac{5}{6}$
   d. $16\frac{7}{12}$
   e. $4\frac{1}{4}$
   f. $10\frac{5}{12}$
   g. $53\frac{3}{4}$
   h. $21\frac{1}{5}$
   i. $14\frac{7}{30}$
5. a. $8\frac{2}{3}$
   b. $11\frac{1}{4}$
   c. $\frac{2}{3}$
   d. $\frac{1}{4}$
   e. $3\frac{23}{40}$
   f. $1\frac{1}{6}$
6. a. $7\frac{1}{5}$
   b. $1\frac{6}{7}$
   c. $2\frac{1}{3}$
   d. 24
   e. $8\frac{1}{2}$
   f. $3\frac{2}{3}$
7. $13\frac{1}{2}$ *pieces*
8. $11\frac{1}{4}$ cups

SP #8

1. n = -6
2. a = -24
3. x = 32
4. m = -35
5. y = 11
6. v = -12
7. p = -7
8. w = 42
9. x = -40
10. k = 45
11. d = 15
12. n = 99
13. n = -9
14. n = 70
15. n = -1
16. n = -160

"The Guy Who Invested In Feathers Because He Heard That The Stock Market Was Going Down?"

SP #9

1. a
2. b
3. c
4. a
5. a
6. c
7. d
8. d
9. c
10. c

SP #10

1. 10
2. 52
3. -14
4. -160
5. 42
6. 54
7. 1
8. -15
9. -72
10. -36
11. 140
12. -4
13. 8
14. -15
15. -530
16. -10
17. -1
18. 6
19. -81
20. -64
21. -17
22. -96
23. 20
24. -29
25. 18
26. -5
27. -9
28. -11
29. -40

SP #11

1. $m\angle x = 69^o$
   $m\angle y = 139^o$
2. $m\angle x = 30^o$
   $m\angle y = 40^o$
3. a. choose 2 points ABCD, any order
   Ex: $\overleftrightarrow{AB}$
   b. $\overrightarrow{MC}$
   c. $\angle$BCM or $\angle$LCD
   d. LCD
   e. alternate interior

L. 72^o
D. 46^o
B. 62^o
U. 129^o
Z. 39^o
I. 141^o
Q. 33^o
H. 57^o
R. 147^o
C. 48^o
E. 42^o
N. 26^o

SP #12

1. 11
2. 10
3. yes
4. 82
5. Hospitals in Ten States

3	**7**
4	**1 2 6 9**
5	**3 8**
6	**0 7 9**

3 | 7 = 37 hospitals

6. Mean = 52.2
   Median = 51
   Mode = None
7. There would be a gap formed in the lower data
8. ≈170 triathletes
9. No. You only the range of the slowest times (betn.16-17 hours)

SP #13

1. 84
2. 24
3. 11
4. 35
5. 88
6. 10.5
7. 15
8. 21
9. 4.4
10. 6 notebooks
11. 10 roses
12. 5 rolls
13. 20 hours
14. a. $2.50
    b. $5.25

SP #14

1. 3.4 feet
2. 23.4 m
3. 8 mm
4. 14.25 cm
5. The silo is 144 ft. tall.

SP #15

1. 12
2. 45
3. 27
4. 40
5. $33\frac{1}{3}\%$
6. 12
7. 26.88
8. $33\frac{1}{3}\%$
9. 80
10. $83\frac{1}{3}\%$
11. 81
12. 75
13. 142.5
14. 7%
15. 15.6
16. discount $29
    sale price $58
17. discount $9.99
    sale price $29.96
18. discount $12.60
    sale price $29.40
19. tax $3.60
    total $63.58
20. discount $118.25
    sale price $2268.25
21. discount $1.14
    sale price $16.09
22. $12
23. 40%
24. $6.75
25. $294
26. 75%

SP #16

Set A

1. $\overleftrightarrow{AB}$ or $\overleftrightarrow{CD}$
2. right
3. G
4. obtuse
5. 9 & 10 or 12 & 13
6. 11 or 13
7. 4
8. 9
9. 65°
10. 115°

Set B

1. 35 cm^2
2. 1035 cm^2
3. 54.76 m^2
4. 60 in^2
5. 165 ft^2
6. 254.35 cm^2
7. 30.18 m^2
8. 13.76 m^2

Set C

1. V = 216 cm^3
   SA = 216 cm^2
2. V = 675 cm^3
   SA = 510 cm^2
3. V = 1960 cm^3
   SA = 1036 cm^2

Set D

1. 360 cm^3
2. 301.44 ft^3