

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Multiply or divide as indicated. Write the answer in lowest terms.

$$1) 4 \cdot 2\frac{17}{18} \quad 1) \underline{\hspace{2cm}}$$

$$2) 6\frac{2}{7} \cdot 1\frac{2}{5} \quad 2) \underline{\hspace{2cm}}$$

$$3) 1\frac{1}{3} \cdot 4\frac{1}{2} \quad 3) \underline{\hspace{2cm}}$$

$$4) 5\frac{5}{6} \cdot 2\frac{4}{7} \quad 4) \underline{\hspace{2cm}}$$

$$5) 5\frac{5}{7} \div 8 \quad 5) \underline{\hspace{2cm}}$$

$$6) 4\frac{4}{5} \div \frac{2}{5} \quad 6) \underline{\hspace{2cm}}$$

$$7) 6\frac{1}{6} \div 1\frac{1}{30} \quad 7) \underline{\hspace{2cm}}$$

$$8) 3\frac{5}{9} \div 2\frac{3}{4} \quad 8) \underline{\hspace{2cm}}$$

Add or subtract as indicated. Write the answer in lowest terms.

$$9) 4\frac{2}{9} - 2\frac{5}{6} \quad 9) \underline{\hspace{2cm}}$$

$$10) \frac{4}{9} + \frac{1}{3} - \frac{1}{6} \quad 10) \underline{\hspace{2cm}}$$

$$11) \frac{5}{8} - \frac{5}{11} + \frac{1}{2} \quad 11) \underline{\hspace{2cm}}$$

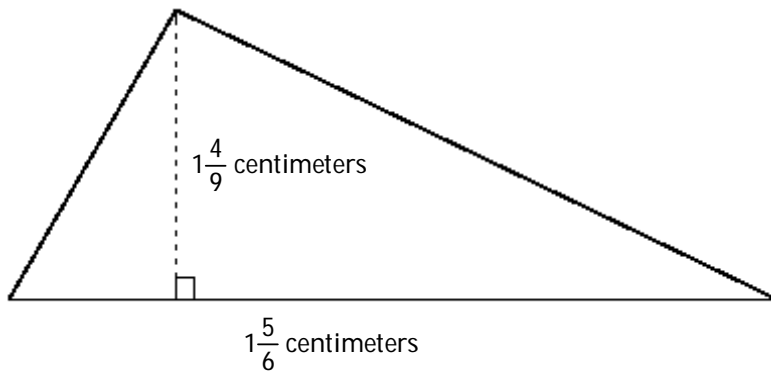
Evaluate the expression for the given replacement values.

$$12) 9y + \frac{45}{x} \quad x = 5, y = 7 \quad 12) \underline{\hspace{2cm}}$$

$$13) \frac{y}{z} + 2x^2 \quad x = 5, y = 16, z = 8 \quad 13) \underline{\hspace{2cm}}$$

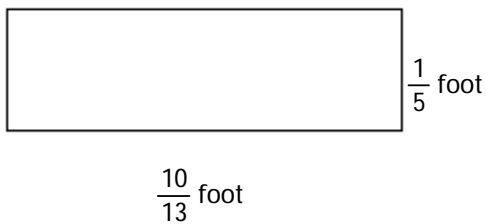
Find the area of the figure below. (The area of a rectangle is the product of its length and width. The area of a triangle is $\frac{1}{2}$ the product of its base and height.)

14)



14) _____

15)



15) _____

Simplify the expression by combining any like terms.

16) $-7m + 2 - 3 + 6 + m - 5$

16) _____

17) $-0.8c + 6 - 5c + 0.4$

17) _____

18) $5.6w - 1.5 - 3.4w + 8 + 2.3w$

18) _____

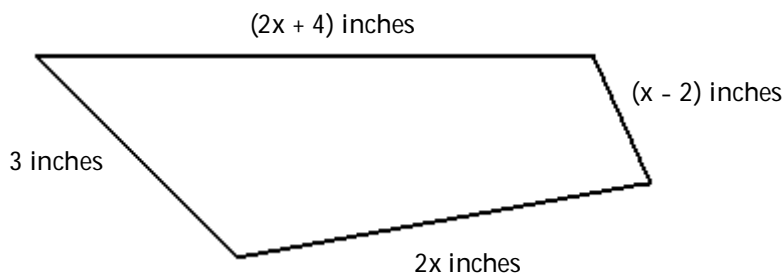
19) $7x^2 - 8x + 2 - 5x + 4 + 8x^2$

19) _____

Solve by combining like terms.

20) Given the following quadrilateral, express the perimeter, or total distance around the figure, as an algebraic expression containing the variable x .

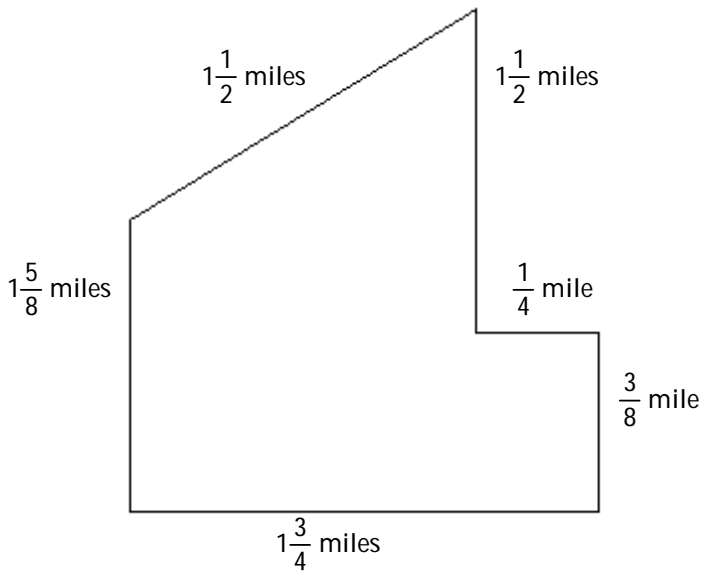
20) _____



The perimeter of a plane figure is the total distance around the figure. Find the perimeter of the figure.

21)

21) _____



Solve the equation.

22) $\frac{19}{14}x + \frac{6}{7} = \frac{9}{7}x$

22) _____

23) $\frac{1}{5}x + \frac{6}{5} = \frac{1}{7}x + \frac{8}{7}$

23) _____

24) $1.4x - 4.2 = 0.8x - 1.56$

24) _____

25) $0.09(5x + 4) = 0.45(x + 7) - 2.79$

25) _____

Solve.

26) To trim the edges of a rectangular table cloth, 36 feet of lace are needed. The length of the table cloth is exactly one-half its width. What are the dimensions of the table cloth?

26) _____

27) The length of a rectangular room is 7 feet longer than twice the width. If the room's perimeter is 182 feet, what are the room's dimensions?

27) _____

28) The perimeter of a triangle is 54 centimeters. Find the lengths of its sides, if the longest side is 7 centimeters longer than the shortest side, and the remaining side is 2 centimeters longer than the shortest side.

28) _____

Solve the formula for the specified variable.

29) $A = \frac{1}{2}h(B + b)$ for b

29) _____

30) $F = \frac{9}{5}C + 32$ for C

30) _____

31) $S = 2\pi rh + 2\pi r^2$ for h

31) _____

Solve. If needed, round money amounts to two decimal places and all other amounts to one decimal place.

- 32) Jeans are on sale at the local department store for 30% off. If the jeans originally cost \$57, find the sale price.

32) _____

- 33) A store is advertising 45% off sale on everything in the store. Find the discount of a chair that regularly sells for \$280.

33) _____

- 34) A company increased the number of its employees from 300 to 360. What was the percent increase in employees?

34) _____

- 35) The number of video stores in a region recently decreased from 136 to 121. Find the percent decrease.

35) _____

Solve.

- 36) Kevin invested part of his \$10,000 bonus in a certificate of deposit that paid 6% annual simple interest, and the remainder in a mutual fund that paid 11% annual simple interest. If his total interest for that year was \$700, how much did Kevin invest in the mutual fund?

36) _____

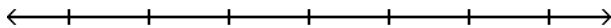
- 37) If \$2000 is invested at 10% simple annual interest, how much should be invested at 12% annual simple interest so that the total yearly income from both investments is \$5000?

37) _____

Solve the inequality. Graph the solution set and write it in interval notation.

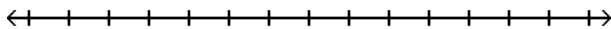
38) $-3x + 4 + 9x < 6 + 4x + 8$

38) _____



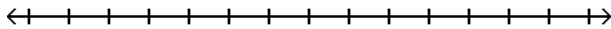
39) $\frac{3}{5}x \geq 7$

39) _____



40) $-30 \leq -4x - 2 \leq -14$

40) _____



41) $4 \leq 2(x - 5) \leq 8$

41) _____

