

Name _____

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

Solve the equation.

1) $3x - 9 = -21$

1) _____

2) $-6x + 7 = 4x - 8$

2) _____

3) $-9x + 7(-3x - 6) = -68 - 4x$

3) _____

4) $5(2y - 4) = 9(y + 3)$

4) _____

5) $-\frac{1}{5}x = 3$

5) _____

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

6) _____

Solve the problem.

7) In one state, speeding fines are determined by the formula $F = 6(x - 60) + 100$, where F is the cost, in dollars, of the fine if a person is caught driving x miles per hour. If the fine comes to \$274, how fast was the person driving?

7) _____

Solve the formula for the specified variable.

8) $V = lwh$ for w

8) _____

9) $w = \frac{P - 2l}{2}$ for l

9) _____

Solve the problem.

10) What is 6% of 60?

10) _____

11) 66.6 is 37% of what?

11) _____

12) 1 is what percent of 12.5 ?

12) _____

13) Four times a number added to 7 times the number equals 55. Find the number. 13) _____

14) The president of a certain university makes three times as much money as one of the department heads. If the total of their salaries is \$290,000, find each worker's salary. 14) _____

15) A promotional deal for long distance phone service charges a \$15 basic fee plus \$0.05 per minute for all calls. If Joe's phone bill was \$75 under this promotional deal, how many minutes of phone calls did he make? Round to the nearest integer, if necessary. 15) _____

16) There are 12 more sophomores than juniors in an algebra class. If there are 98 students in this class, find the number of sophomores and the number of juniors in the class. 16) _____

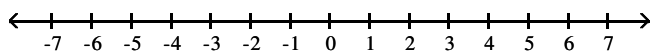
17) Sales at a local ice cream shop went up 20% in 5 years. If 34,000 ice cream cones were sold in the current year, find the number of ice cream cones sold 5 years ago. (Round to the nearest integer, if necessary.)

17) _____

Express the solution set of the inequality in interval notation and graph the interval.

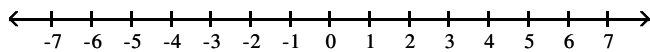
18) $x > -4$

18) _____



19) $x \leq 4$

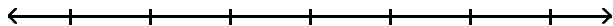
19) _____



Solve the inequality and graph the solution set on a number line.

20) $\frac{y}{3} \leq -4$

20) _____



21) $16 - 4x \geq -4$

21) _____



22) $2x + 6 < 3(x + 1)$

22) _____



Solve the problem.

23) Claire has received scores of 85, 88, 87, and 90 on her algebra tests. What score must she receive on the fifth test to have an overall test score average of at least 87?

23) _____

24) The length of a rectangle is 28 feet. For what widths is the perimeter less than 74 feet?

24) _____

Answer Key

Testname: E01PREPCH02V01

1) $\{-4\}$

2) $\left\{\frac{3}{2}\right\}$

3) $\{1\}$

4) $\{47\}$

5) $\{-15\}$

6) $\{-1\}$

7) 89 mph

8) $w = \frac{V}{lh}$

9) $l = \frac{P - 2w}{2}$

10) 3.6

11) 180

12) 8%

13) 5

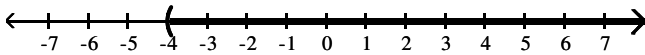
14) president's salary = \$217,500; department head's salary = \$72,500

15) 1200 min

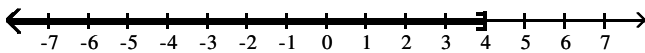
16) 55 sophomores; 43 juniors

17) 28,333 ice cream cones

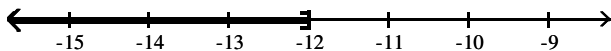
18) $(-4, \infty)$



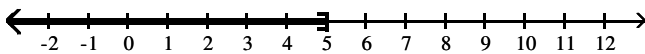
19) $(-\infty, 4]$



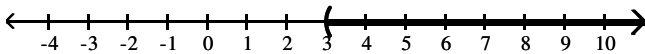
20) $(-\infty, -12]$



21) $(-\infty, 5]$



22) $(3, \infty)$



23) at least 85

24) widths less than 9 ft