

Quiz 1

Name _____

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

Solve the equation.

1) $(y - 7) - (y + 4) = 6y$ 1) _____

2) $2(x + 6) = (2x + 12)$ 2) _____

Decide whether the equation is conditional, an identity, or a contradiction. Give the solution set.

3) $12k + 51 = 3(4k + 15)$ 3) _____

Solve the equation.

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

Solve the equation for the specified variable. Use the distributive property to factor as necessary.

5) $5s + 6p = tp - 6$ for p 5) _____

Solve the formula for the specified variable.

6) $S = 2\pi rh + 2\pi r^2$ for h 6) _____

Solve the problem.

7) Find the corresponding Fahrenheit temperature for a temperature of 81°C . Round to the nearest tenth, if necessary. 7) _____

8) Find the total amount that must be repaid if \$1900 is borrowed at 14% simple interest for 2.5 years. 8) _____

Translate the verbal phrase into a mathematical expression. Use x to represent the unknown number.

9) The product of 5 more than a number and 1 less than the number 9) _____

Use the variable x for the unknown, and write an equation representing the verbal sentence. Then solve the problem.

10) If 6 times a number is added to -4 , the result is equal to 10 times the number. 10) _____

Solve the problem.

11) A rectangular Persian carpet has a perimeter of 160 inches. The length of the carpet is 18 in. more than the width. What are the dimensions of the carpet? 11) _____

12) A biologist collected 188 fern and moss samples. There were 12 fewer ferns than moss samples. How many fern samples did the biologist collect? 12) _____

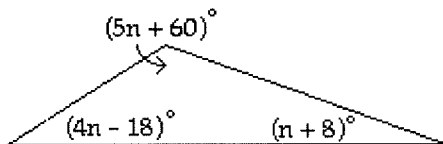
Solve the percent problem.

13) At the end of the day, a storekeeper had \$1144 in the cash register, counting both the sale of goods and the sales tax of 4%. Find the amount that is the tax. 13) _____

Solve the problem.

- 14) Find the measure of each angle in the triangle.

14) _____



Solve the problem involving consecutive integers.

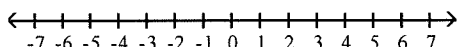
- 15) The sum of three consecutive even integers is 180. Find the integers.

15) _____

Solve the inequality. Give the solution set in both interval and graph forms.

- 16) $2 < -3x + 5 \leq 14$

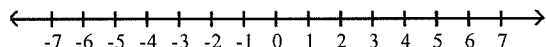
16) _____



For the compound inequality, give the solution set in both interval and graph forms.

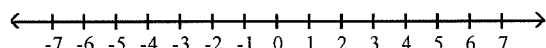
- 17) $-11 < 8x - 3$ and $9x - 2 < 25$

17) _____



- 18) $-31 < 5x - 1$ and $3x + 9 < 3$

18) _____



Solve the equation.

- 19) $|x| = -0.6$

19) _____

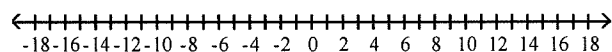
- 20) $|4m + 5| = 6$

20) _____

Solve the inequality and graph the solution set.

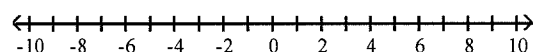
- 21) $|r + 9| > 2$

21) _____



- 22) $|5x + 6| < 2$

22) _____



Solve the absolute value equation.

- 23) $|3s + 3| = |-7 - s|$

23) _____

Solve the problem.

- 24) A certificate of deposit pays \$2613.75 in simple interest for 1 yr on a principal on \$42,500. What is the rate of interest?

24) _____

Solve the investment problem.

25) Roberto invested \$30,000 at 7% interest rate for 5 years, how much will he have if

25) _____

(a) compound semiannually

(b) compound monthly

1) $\left\{-\frac{11}{6}\right\}$

2) {All real numbers}

3) Contradiction; \emptyset

4) $\left\{-\frac{60}{43}\right\}$

5) $p = \frac{-5s - 6}{6 - t}$ or $p = \frac{5s + 6}{t - 6}$

6) $h = \frac{S - 2\pi r^2}{2\pi r}$

7) 177.8°F

8) \$2565.00

9) $(x + 5)(x - 1)$

10) $6x + (-4) = 10x; -1$

11) Width: 31 in.; length: 49 in.

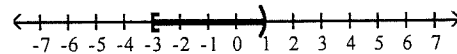
12) 88 fern samples

13) \$44

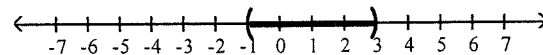
14) $34^\circ, 125^\circ, 21^\circ$

15) 58, 60, 62

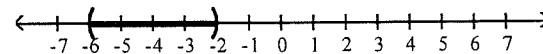
16) $[-3, 1)$



17) $(-1, 3)$



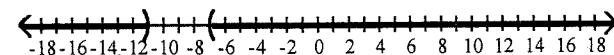
18) $(-6, -2)$



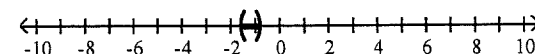
19) \emptyset

20) $\left\{\frac{1}{4}, -\frac{11}{4}\right\}$

21) $(-\infty, -11) \cup (-7, \infty)$



22) $\left(-\frac{8}{5}, -\frac{4}{5}\right)$



23) $\left\{2, -\frac{5}{2}\right\}$

24) 6.15%

25) \$42,317.96

\$42,528.76