

QUIZ REVIEW (SECTIONS 1.1, 1.2, & 1.3)

Evaluate the expression for the given value(s) of the variable(s).

1. $12x - 21$ when $x = 3$

$$12(3) - 21$$

$$36 - 21$$

$$15$$

Evaluate the expression for the given value(s) of the variable(s).

2. $8x - (4x + 5)$ when $x = \frac{1}{2}$

$$8\left(\frac{1}{2}\right) - \left(4 \cdot \frac{1}{2} + 5\right)$$

$$8\left(\frac{1}{2}\right) - (2 + 5)$$

$$\frac{8}{1} \cdot \frac{1}{2} = 4$$

$$8\left(\frac{1}{2}\right) - 7$$

$$4 - 7 = -3$$

Evaluate the expression for the given value(s) of the variable(s).

3. $x^2 + 5x - 8$ when $x = -3$

$$\underline{(-3)^2} + 5(-3) - 8$$

$$9 + 5(-3) - 8$$

$$9 - 15 - 8$$

$$-6 - 8 = -14$$

Evaluate the expression for the given value(s) of the variable(s).

4. $x^2 - 11x + 40y - 14$
when $x = 5$ and $y = -2$

$$\underline{(5)^2} - 11(5) + 40(-2) - 14$$

$$25 - 11(5) + 40(-2) - 14$$

$$25 - 55 + 40(-2) - 14$$

$$25 - 55 - 80 - 14$$

$$-30 - 80 - 14$$

$$-110 - 14$$

$$-124$$

Simplify the expression.

5. $3x - 2y - 9y + 4 + 5x$

$$8x - 11y + 4$$

Simplify the expression.

6. $3(x - 2) - 1(4 + x)$

$$3x - 6 - 4 - x$$

$$2x - 10$$

Simplify the expression.

7. $5x^2 - 3x + 8x - 6 - 7x^2$

$$-2x^2 + 5x - 6$$

Simplify the expression.

8. $4(x^2 + 2x) + 2(x^2 - x)$

$$4x^2 + 8x + 2x^2 - 2x$$

$$6x^2 + 6x$$

Solve the equation.

$$9. \quad \boxed{7x} + 12 = -16$$
$$\quad \quad \quad -12 \quad -12$$
$$\quad \quad \quad \underline{7x} = \underline{-28}$$
$$\quad \quad \quad \underline{7} \quad \quad \underline{7}$$
$$\quad \quad \quad \boxed{x = -4}$$

Solve the equation.

$$10. \quad 1.2x = 2.3x - 2.2$$
$$\quad \quad \quad -2.3x \quad -2.3x$$
$$\quad \quad \quad \underline{-1.1x} = \underline{-2.2}$$
$$\quad \quad \quad \underline{-1.1} \quad \quad \underline{-1.1}$$
$$\quad \quad \quad \boxed{x = 2}$$

Solve the equation.

$$11. \quad 4x + 21 = 7(x + 9)$$

$$4x + 21 = 7x + 63$$

$-4x \qquad -4x$

$$21 = 3x + 63$$

$-63 \qquad -63$

$$\frac{-42}{3} = \frac{3x}{3}$$

$$x = -14$$

Solve the equation.

$$12. \quad \frac{1.3}{4.3}z + \frac{2.4}{3.4} = \frac{1.6}{2.6}z - \frac{3.3}{4.3}$$

$$\frac{3}{12}z + \frac{8}{12} = \frac{6}{12}z - \frac{9}{12}$$

$-\frac{3}{12}z \qquad -\frac{3}{12}z$

$$\frac{8}{12} = \frac{3}{12}z - \frac{9}{12}$$

$+\frac{9}{12} \qquad +\frac{9}{12}$

$$\frac{12}{3} \cdot \frac{17}{12} = \frac{3}{12}z \cdot \frac{12}{3}$$

$$z = \frac{17}{3}$$