

Name _____

Equations, functions, inequalities...

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

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

1) $-6x - 2$; $x = -4$ 1) _____
 A) 22 B) -22 C) 26 D) -26

2) $2x^2 - 8xy + 3y^2$; $x = -2, y = 3$ 2) _____
 A) 145 B) 78 C) 51 D) 83

3) $\frac{x-3}{x+8}$; $x = -7$ 3) _____
 A) $\frac{4}{15}$ B) -10 C) $\frac{15}{4}$ D) $-\frac{1}{10}$

Solve and check the equation.

4) $x - 23 = 16$ 4) _____
 A) {-7} B) {7} C) {39} D) {-39}

5) $\frac{x}{2} = 4$ 5) _____
 A) {2} B) {5} C) {8} D) {6}

6) $5x - 5 = 20$ 6) _____
 A) {5} B) {24} C) {20} D) {9}

7) $7x - (2x - 1) = 2$ 7) _____
 A) $\left\{\frac{1}{5}\right\}$ B) $\left\{-\frac{1}{9}\right\}$ C) $\left\{\frac{1}{9}\right\}$ D) $\left\{-\frac{1}{5}\right\}$

8) $0.2(x + 8) = 6$ 8) _____
 A) {22} B) {-2} C) {38} D) {-10}

Solve the proportion.

9) $\frac{x}{33} = \frac{9}{11}$ 9) _____
 A) {36} B) $\left\{\frac{121}{3}\right\}$ C) {27} D) {3}

10) $\frac{2}{3} = \frac{3}{x}$ 10) _____
 A) {9} B) $\left\{\frac{9}{2}\right\}$ C) {6} D) $\left\{\frac{3}{2}\right\}$

Review Algebra

MGF 1107

11. Solve the inequality and graph the solution set.

a) $-x < 8$

b) $4x + 2 < 26$

c) $-4x - 12 \geq -5x - 13$

d) $5x \leq 60$

e) $6x - 3 \geq 4x + 5$

f) $21x + 12 > 3(6x - 3)$

12. Graph the equation.

a) $y = 5x - 6$

b) $y = x - 3$

c) $y = x^2 + 1$

13. Use the x and y intercepts to graph the linear equation.

a) $x + 2y = 4$

b) $2x - 6y = 8$

c) $x - 2y = -8$

d) $y - x = 2$

14. Graph the linear function using the slope and y intercept.

a) $y = -5x - 2$

b) $y = x + 5$

c) $y = -2x$

15. In the following problem: a. Put the equation in slope – intercept form. b. Identify the slope and y intercept. c. Graph the line.

i. $9y + x = 0$

ii. $6x + y = 5$

16. Graph the horizontal or vertical line.

i. $x = -5$

ii. $y = 4$