

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

- 1) **Multiple choice** Evaluate  $x(3 + y^2)$  when  $x = 0.4$  and  $y = 2$ . 1) \_\_\_\_\_  
A) 6.32                      B) 10                      C) 2.8                      D) 23.12
- 2) **Multiple choice** Evaluate  $\frac{h(h + 1)}{2}$  when  $h = 10$ . 2) \_\_\_\_\_  
A) 15                      B) 13                      C) 55                      D) 50.5
- 3) **Multiple choice** Evaluate:  $\sqrt{49} + \sqrt{25}$  3) \_\_\_\_\_  
A)  $\sqrt{74}$                       B) 74                      C)  $\sqrt{12}$                       D) 12
- 4) **Multiple choice** Solve  $2.6y = 52$ . 4) \_\_\_\_\_  
A) 2                      B) 0.2                      C) 20                      D) 135.2
- 5) **Multiple choice** Solve  $36 > -3m$ . 5) \_\_\_\_\_  
A)  $m > 12$                       B)  $m > -12$                       C)  $m < 12$                       D)  $m < -12$
- 6) **Multiple choice** Simplify  $(8m + 2) + (5m - 7) + m$ . 6) \_\_\_\_\_  
A)  $13m - 9$                       B)  $14m - 9$                       C)  $13m - 5$                       D)  $14m - 5$
- 7) **Multiple choice** Solve  $-48 + v = 20$ . 7) \_\_\_\_\_  
A) -28                      B) -68                      C) 68                      D) 28
- 8) **Multiple choice** Solve  $17 < 5(z + 5) + 2$ . 8) \_\_\_\_\_  
A)  $3.6 < z$                       B)  $-2 < z$                       C)  $2 < z$                       D)  $-3.6 < z$
- 9) **Multiple choice** Simplify  $3x + y - 7x - 9y$ . 9) \_\_\_\_\_  
A)  $10x - 8y$                       B)  $-4x + 10y$                       C)  $10x + 10y$                       D)  $-4x - 8y$
- 10) **Multiple choice** Solve  $4 - 2(v + 5) = 6$ . 10) \_\_\_\_\_  
A)  $v = \frac{3}{2}$                       B)  $v = 6$                       C)  $v = -\frac{3}{2}$                       D)  $v = -6$
- 11) **Multiple choice** Solve  $-4h + 5 \leq -3$ . 11) \_\_\_\_\_  
A)  $h \geq 2$                       B)  $h \leq -2$                       C)  $h \leq 2$                       D)  $h \geq -2$

- 12) **Multiple choice** What is the solution to  $4k + 1 = 2k - 7$ ? 12) \_\_\_\_\_  
 A)  $k = 3$                       B)  $k = -1$                       C)  $k = -4$                       D)  $k = -3$
- 13) **Multiple choice** Solve  $-8d - 5 \leq 2d - 3$ . 13) \_\_\_\_\_  
 A)  $d \leq -5$                       B)  $d \geq -\frac{1}{5}$                       C)  $d \geq -5$                       D)  $d \leq -\frac{1}{5}$
- 14) **Multiple choice** What is 20% of 80? 14) \_\_\_\_\_  
 A) 160                              B) 16                              C) 4                              D) 0.25
- 15) **Multiple choice** Solve  $\frac{15t}{5} = \frac{2t + 3}{6}$ . 15) \_\_\_\_\_  
 A) 0.1875                      B) 0.03                      C) 0.15                      D) 0.0375
- 16) **Multiple choice** What is the slope of the line through (1, 3) and (2, -4)? 16) \_\_\_\_\_  
 A)  $-\frac{1}{7}$                       B) -1                      C)  $-\frac{1}{3}$                       D) -7
- 17) **Multiple choice** What is an equation for the line in standard form through the points(3, 0) and (-2, 3)? 17) \_\_\_\_\_  
 A)  $5x + 3y = 9$                       B)  $3x - 5y = -9$                       C)  $-3x - 5y = 9$                       D)  $3x + 5y = 9$
- 18) **Multiple choice** The line  $4x - 5y = 10$  has ... 18) \_\_\_\_\_  
 A) slope  $\frac{4}{5}$  and y-intercept - 2.                      B) slope 4 and y-intercept 2.  
 C) slope  $-\frac{4}{5}$  and y-intercept -2.                      D) slope 4 and y-intercept 10.
- 19) **Multiple choice** Evaluate  $(-2)^3$ . 19) \_\_\_\_\_  
 A) 8                              B) -8                              C) 6                              D) -6
- 20) **Multiple choice** Simplify  $\frac{x^{17}}{x^7}$ . 20) \_\_\_\_\_  
 A)  $\frac{1}{x^{24}}$                       B)  $x^{24}$                       C)  $x^{10}$                       D)  $\frac{1}{x^{10}}$
- 21) **Multiple choice** Solve  $x^2 - 6x - 27 = 0$ . 21) \_\_\_\_\_  
 A)  $x = 9$  and  $x = 3$                       B)  $x = -9$  and  $x = 3$   
 C)  $x = 9$  and  $x = -3$                       D)  $x = -9$  and  $x = -3$

22) **Multiple choice** Solve  $5c^2 + 3c = 2$ . 22) \_\_\_\_\_  
 A)  $c = 1$  and  $c = 0.4$  B)  $c = 1$  and  $x = -0.4$   
 C)  $c = -1$  and  $c = -0.4$  D)  $c = -1$  and  $c = 0.4$

23) **Multiple choice** Simplify  $\sqrt{3} \cdot \sqrt{75}$ . 23) \_\_\_\_\_  
 A) 15 B) 25 C)  $5\sqrt{15}$  D)  $5\sqrt{3}$

24) **Multiple choice** Simplify  $\sqrt{48}$ . 24) \_\_\_\_\_  
 A)  $4\sqrt{3}$  B)  $8\sqrt{3}$  C) 24 D)  $3\sqrt{4}$

25) **Multiple choice** Simplify  $(k - 5) - (k^2 + 8)$ . 25) \_\_\_\_\_  
 A)  $-k^2 + k - 13$  B)  $k^2 + k + 3$  C)  $k^2 + k + 13$  D)  $-k^2 + k + 3$

26) **Multiple choice** Simplify  $(y + 9)(y - 9)$ . 26) \_\_\_\_\_  
 A)  $y^2 - 81$  B)  $y^2 + 81$  C)  $y^2$  D)  $y^2 - 18$

27) **Multiple choice** Simplify  $(t - 2)^2$ . 27) \_\_\_\_\_  
 A)  $t^2 - 4t - 4$  B)  $t^2 - 4t + 4$  C)  $t^2 + 4t + 4$  D)  $t^2 + 4t - 4$

28) **Multiple choice** What is the solution to the system? 28) \_\_\_\_\_

$$\begin{cases} y = \frac{1}{3}x \\ x + 3y = 24 \end{cases}$$

A) (-12, -4) B) (-4, -12) C) (12, 4) D) (4, 12)

29) **Multiple choice** What is the solution to the system? 29) \_\_\_\_\_

$$\begin{cases} 3x + y = 20 \\ x = 3y \end{cases}$$

A) (2, 6) B) (-6, -2) C) (6, 2) D) (-2, -6)

30) **Multiple choice** What is the solution to the system? 30) \_\_\_\_\_

$$\begin{cases} -2x + 3y = 0 \\ x - 3y = -12 \end{cases}$$

A) (-8, -12) B) (-12, -8) C) (12, 8) D) (8, 12)

31) **Multiple choice** What is the solution to the system?

31) \_\_\_\_\_

$$\begin{cases} x - 3y = 0 \\ x - 2y = 5 \end{cases}$$

A) (-5, -15)

B) (-15, -5)

C) (15, 5)

D) (5, 15)

32) **Multiple choice**  $12x^2 + 17x + 6 = ?$

32) \_\_\_\_\_

A)  $(12x + 2)(x + 3)$

B)  $(3x - 2)(4x - 3)$

C)  $(3x + 2)(4x + 3)$

D)  $(12x + 1)(x + 6)$

33) **Multiple choice**  $9x^2 + 18x + 8 = ?$

33) \_\_\_\_\_

A)  $(9x + 1)(x + 8)$

B)  $(3x + 2)(3x + 4)$

C)  $(3x - 2)(3x - 4)$

D)  $(9x + 2)(x + 4)$

34) **Multiple choice** What are the solutions for the equation  $x^2 - 6x - 27 = 0$ ?

34) \_\_\_\_\_

A) 3, 9

B) -3, 9

C) -3, -9

D) 3, -9

35) **Multiple choice** What are the solutions for the equation  $x^2 - 5x - 14 = 0$ ?

35) \_\_\_\_\_

A) -7, -2

B) 2, 7

C) -2, 7

D) -7, 2

36) **Multiple choice** If  $f(x) = |x + 2|$ , then  $f(-3) = ?$ .

36) \_\_\_\_\_

A) -5

B) 1

C) -1

D) 5

37) **Multiple choice** If  $f(x) = 9^x$ , then  $f(2) = ?$ .

37) \_\_\_\_\_

A) 7

B) 11

C) 18

D) 81