Summer Assignemt Algebra II CP

Name_____

**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 $-8d - 5 \le 2d - 3$. 13) _____

A) $d \le -5$ B) $d \ge -\frac{1}{5}$ C) $d \ge -5$ D) $d \le -\frac{1}{5}$

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) _____

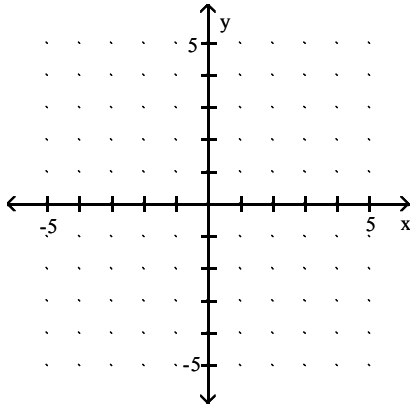
A) –5 B) 1 C) –1 D) 5

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

A) 7 B) 11 C) 18 D) 81

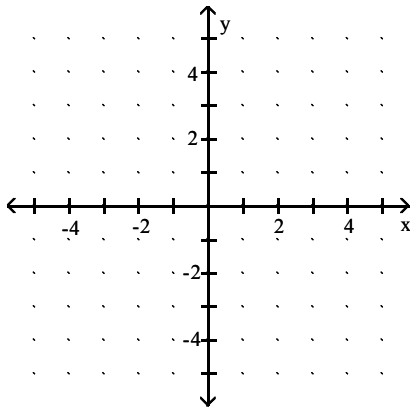
**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

38) Graph the line which goes through (1, –3) and has a slope of $-\frac{1}{3}$. 38)



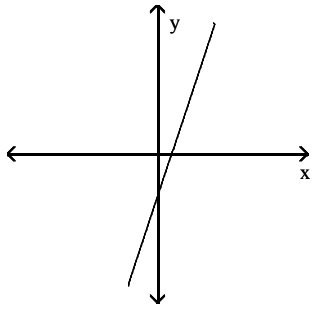
39) Graph the inequality $y < -x + 1$.

39)




40) Explain how you know that this is **not** the graph of $y = -2x + 1$.

40) _____



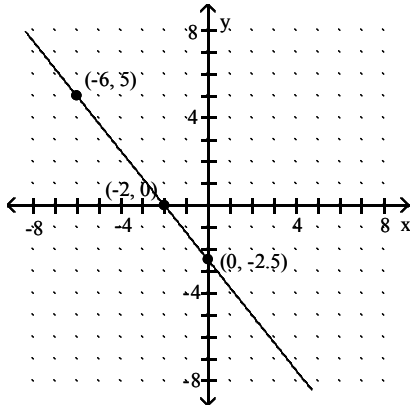

41) Refer to the graph below.

41) a. _____

**a.** Give the y–intercept of the line.
**b.** Give the x–intercept of the line.
**c.** Calculate the slope of the line.

b. _____

c. _____



42) Describe the rates of change illustrated in this graph. 42) _____