1. Evaluate this expression: $\frac{x+y}{7}$ for x = 15 and y = 20

2. Is t = 63 a solution to $\frac{t}{7}=9$? (Answer Yes or No)

3. Simplify: $\frac{14}{21}$

4. Find the prime factorization of 40.

5. Perform the indicated operation: $\frac{13}{18}-\frac{4}{9}$

6. Simplify the following expression: $|-58|$

7. Solve this equation (for x): $\frac{2}{3}+4x=6x-\frac{2}{15}$

8. Perform the indicated operation: $19-5\bullet 3+3$

9. Solve for x: $\frac{2}{3}+\frac{1}{4}x=6$

10. Solve for L: $P=2L+2W$

11. What number is 32% of 240?

12: Graph $-4\le x<3$

13: Solve this inequality for y: $6+5y \geq 26$

14: Find the coordinates of points A,B,C and D.

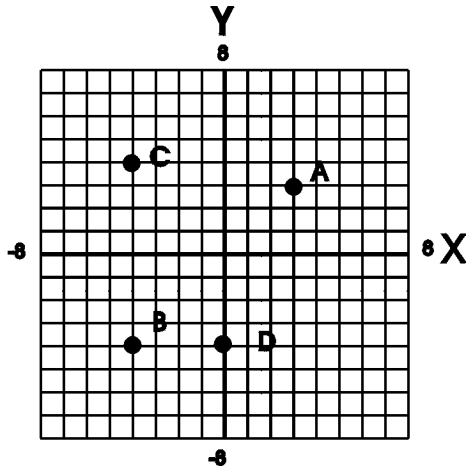
Enter the answers as an ordered pairs ; example: (1,2)

A:_____

B:_____

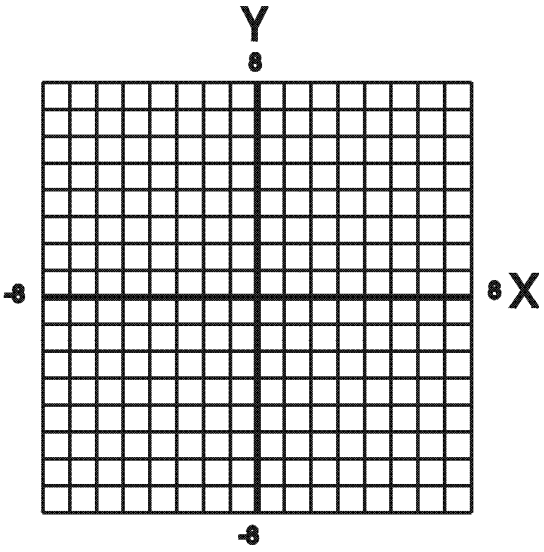
C:_____

D:_____

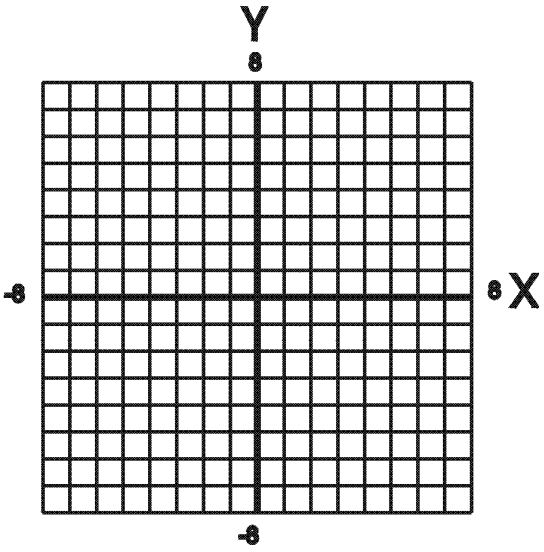


15: Is this ordered pair (4, 2) a solution to this equation 3y + 2x = 12 ?

16. Graph $y = -\frac{1}{2}x$



17: Graph: $8x - 6y = 12$



18: Find the x and y intercepts of this equation and write the answers as ordered pairs:

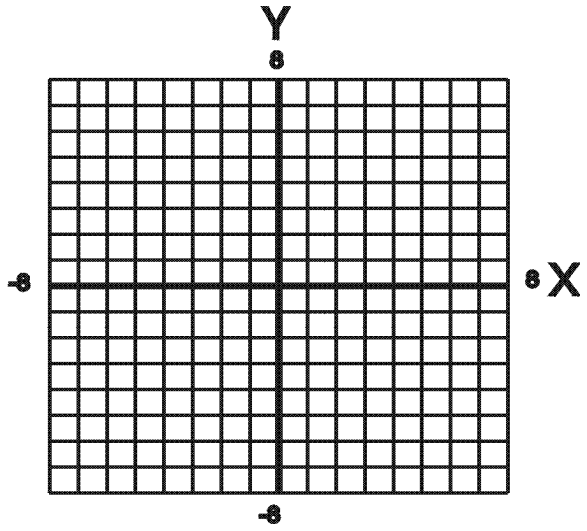
$x + 2y = 4$

x intercept:_____ y intercept:_____

19: Find the slope of the line containing the following pair of points
(4,5) and (–3,–2)

20: Draw a line that has the given slope and y-intercept:

Slope = m = $-\frac{6}{7}$, and y-intercept (0 , 5)



21: Find the slope and y-intercept for the following equation:

$$y = \frac{8}{9}x - 4$$

22: Are the lines described by this pair of equations parallel? Check either the YES or the NO answer.

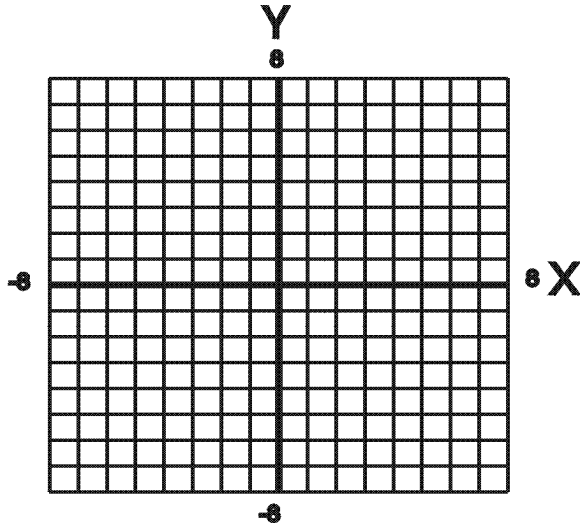
$2x + 2 = y$ $2y = 4x - 9$

YES _____ NO_____

23: Find the slope and y-intercept for the following equation: $y = \frac{-3}{8}x + 6$

24: Draw a line that has the given slope and y-intercept:

Slope = m = $-\frac{6}{7}$, and y-intercept (0,5)



25: Multiply: $w^4 \bullet w^2$

26: Divide and simplify $\frac{5^8 m^8}{5^3 m^3}$

27: Evaluate n^0 when n = –18

28: Simplify $\left(3m^{13}n^{12}\right)^2$

29: Evaluate the following polynomial for x = 4 $2x^2 - 3x + 6$

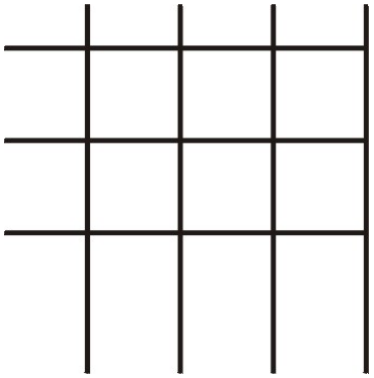
30: Add and write in proper order: $\left(-3x + 4\right) + \left(x^2 + x - 7\right)$

31: Subtract : $\left(5x + 6\right) - \left(-3x + 7\right)$

32: Multiply : $\left(0.2x^9\right)\left(0.5x^8\right)$

33:Use the Table method to multiply the following
Write answer in proper order.

$$\left(x^2+x+6\right)\left(x-6\right)$$



34: Multiply the following: $\left(x+3\right)\left(x-3\right)$

35: Subtract these polynomials: $(a^3 - b^3) - (-5a^3 + 2a^2b - ab^2 + 3b^3)$

36: Multiply: (xy+7)(xy–4)

37: Multiply: (6x-2y)(5x–3y)

38. Divide : $(18t^3 - 24t^2 + 6t) \div (3t)$

39: Divide: $(8x^2 - 10x + 2) \div 2$

40: Divide: $\dfrac{50x^5 - 7x^4 + x^2}{x}$

41:Divide $\dfrac{x^2-9}{x+3}$

42: Express using positive exponents $\left(\dfrac{a}{b}\right)^{-3}$

43: Multiply (leave answer in scientific notation)

$$\left(1.9\times10^{8}\right)\left(3.4\times10^{-3}\right)$$

44:Factor : $x\left(x-2\right)+7\left(x-2\right)$

45: Factor completely**:** $\mathbf{5x^5 + 10\ x^3}$

46:Factor completely: $\mathbf{x^2 + x - 42}$

46 Factor completely $\mathbf{5x^2 - 30x + 45}$

47: Which ordered pair is a solution to this system of equations:

$$2x+3y=12$$

$$x-4y=-5$$

(a) (3,3) (b) (3,2)

(c) (–1,1) (d) (7,3)

48: Solve this system of equations by the substitution method. Show your work. Write your answer as an ordered pair.

$$x+y=7 \qquad y=x+3$$

49: Solve this system of equations by the elimination method. This means add or subtract the equations to eliminate one of the variables. Show your work. Write your answer as an ordered pair.

$$x-y=6 \qquad x+y=12$$

50: The radical $\sqrt{67}$ is between which set of numbers?

(a) 5 and 6 (b) 6 and 7

(c) 7 and 8 (d) 8 and 9

51: Multiply $\sqrt{14}\sqrt{14}$

52: Simplify $\dfrac{\sqrt{20}}{\sqrt{5}}$

53:Rationalize the denominator $\dfrac{\sqrt{7}}{\sqrt{3}}$

54: Simplify $5\sqrt{7}+4\sqrt{7}$

55: Multiply $\left(\sqrt{2}+\sqrt{7}\right)\left(\sqrt{2}-\sqrt{7}\right)$

56: Solve for x: $\sqrt{2x+3}=11$

57: Solve for x: $\sqrt{2x+7}=\sqrt{3x+3}$

58: (Ch 9) Solve for x: $(x-1)^2=25$

59: Divide, if possible $\dfrac{x^2+9}{x+3}$

60: Solve by factoring: $x^2-4x=0$
(there are two answers!)