

## Fall Benchmark #1 Study Guide

Date \_\_\_\_\_ Period \_\_\_\_\_

**(MFA.AA.1.c) Write each as an algebraic expression.**

1) twice a number

2) the sum of a number and 5

3) 8 more than 10

4) the sum of 9 and 10

**(MFA.EI.1) Solve each equation.**

5)  $18 + n = 34$

6)  $-14 + n = -17$

7)  $-19k = -228$

8)  $b - 2 = 7$

9)  $2(-3 + x) = -24$

10)  $-7 - 7x = -35$

11)  $10(-1 + v) = -100$

12)  $\frac{r}{9} - 5 = -3$

13)  $r + 6r = -14$

14)  $r + 5r = -24$

15)  $-3 - 6v = 2 - 6v + v$

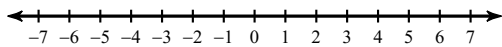
16)  $8 + 6a - a = -a + 2a$

17)  $-4x + 7(x - 4) = -40 - x$

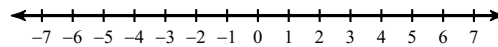
18)  $-21 + x = -2x - 2(7 - x)$

(MFA.EI.1.d) Draw a graph for each inequality.

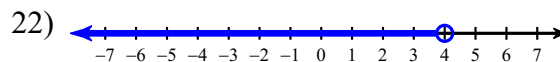
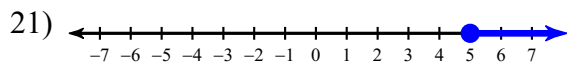
19)  $n > -2$



20)  $p \leq -6$

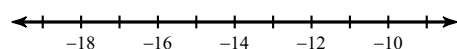


Write an inequality for each graph.

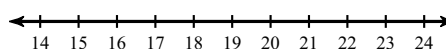


(MFA.EI.1) Solve each inequality and graph its solution.

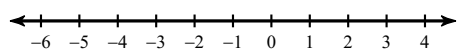
23)  $-3 + b < -18$



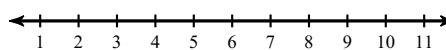
24)  $p - 20 \geq 0$



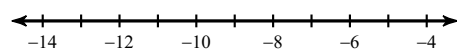
25)  $n - 8 > -12$



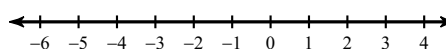
26)  $b - 6 > 1$



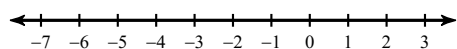
27)  $\frac{x}{2} + 4 \leq -1$



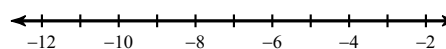
28)  $7 + 4k > -1$



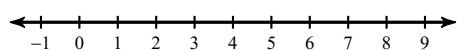
29)  $2x + 4(1 + 8x) \geq -98$



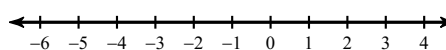
30)  $-6(1 + 6x) > 210$



31)  $20 + 8n \geq 5 + 5(n + 6)$

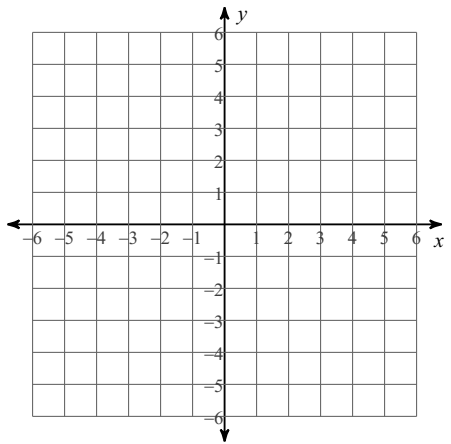


32)  $-6n + 19 \geq 5 - 4(1 + 3n)$

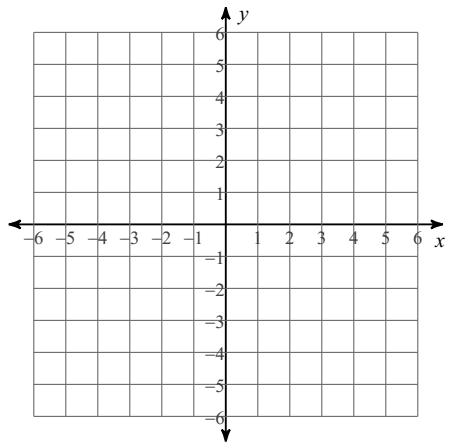


**(MFA.QR.2.e) Find the x and y intercepts, then graph the line.**

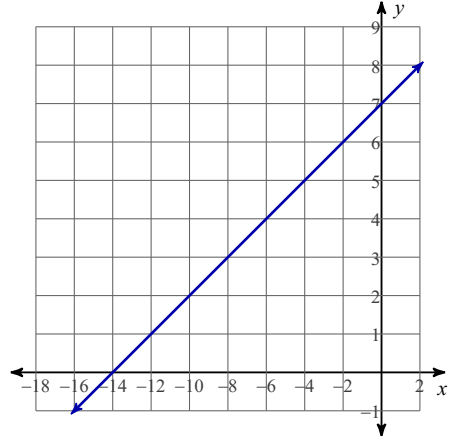
33)  $7x - 4y = 8$



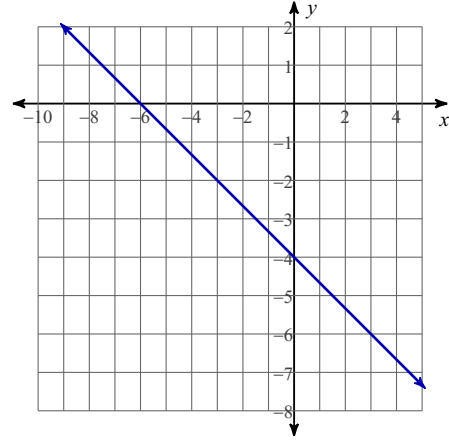
34)  $x + y = 5$



35) Identify the x and y-intercepts.

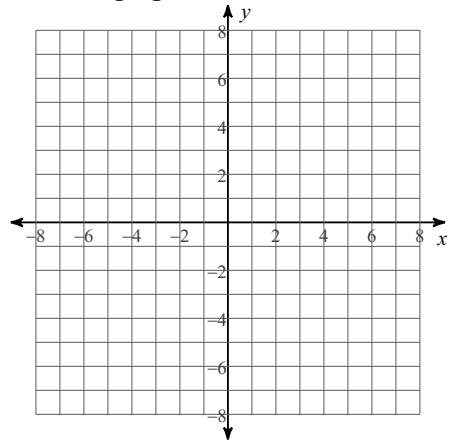


36) Identify the x and y intercepts.

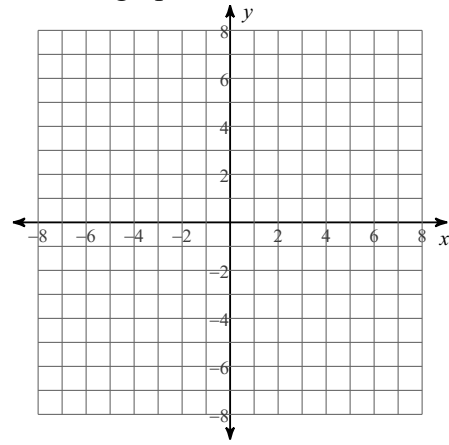


**MFA.QR.1.a**

37) Draw a graph that is not a function.



38) Draw a graph that is a function.



**MFA.QR.1.b.**

39) What is the domain of the following relation?  
 $\{(1,3), (-8, 2), (7, 5)\}$

40) What is the domain of the following relation?  
 $\{(0, 9) (-2, 7) (4, 8) (3, 1) (-12, -12)\}$

**MFA.QR.1.b**

41) What is the range of the following relation?  
 $\{(-2,12), (3, 11), (7, -10)\}$

42) What is the range of the following relation?  
 $\{(5, -5) (15, 4) (3, 21) (10, 6) (10, 17)\}$

**MFA.QR.1.a**

43) Is the following relation a function?  
 $\{(2, 4) (3, 4) (-3, 6) (2, 5) (7, 10)\}$

**MFAQR.3.c**

44) Given the following functions:

$$f(x) = 5x - 3 \quad g(x) = x^2 + 6 \quad h(x) = \frac{2x + 1}{4}$$

Find  $f(8)$ , then write as an ordered pair.

45) Find  $h(-2)$ , then write as an ordered pair.