Foundations of Algebra Name _____

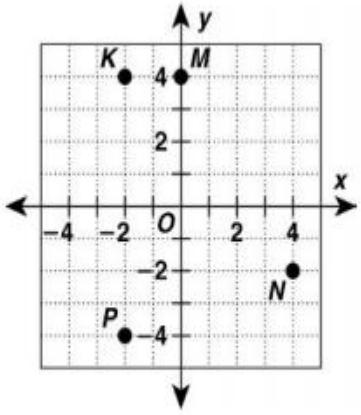
Write the equation for each table.

1) What is a relation?

2. What is a function?

3.

What are the coordinates of point *P*?



F (–2, –4) H (2, –4)

G (–2, 4) J (2, 4)

4. In what quadrant is point N located?

5. Is point M on the x-axis or the y-axis?

6. Is the relation a function?

7. What is the domain and range?

8. In what quadrant is point K located?

4.

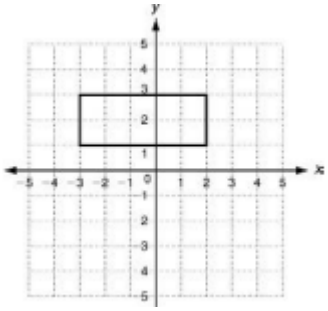
x	y
–9	5
–5	10
–1	15

Domain _____

Range _____

Is it a function? _____

5.

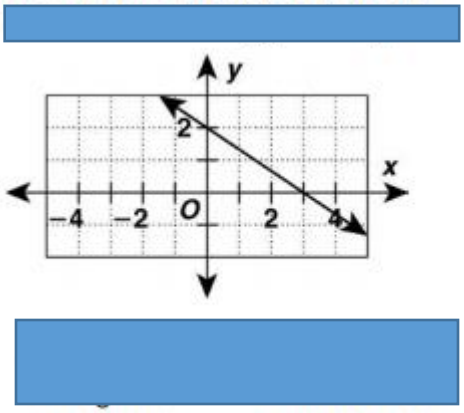


Does this graph have an x-intercept? If yes, what is it?

Does it have a y-intercept? If yes, what is it?

Is this relation a function?

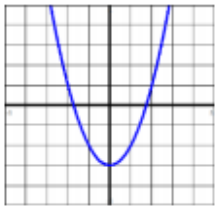
6.

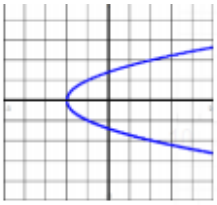


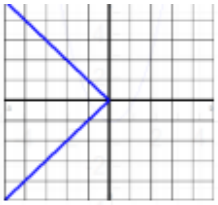
What is the x-intercept? Label it on the picture and write the ordered pair.

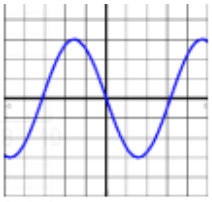
What is the y-intercept? Label it on the picture and write the ordered pair.

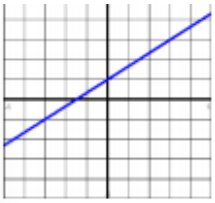
7. Circle the relations that are functions.

6) 

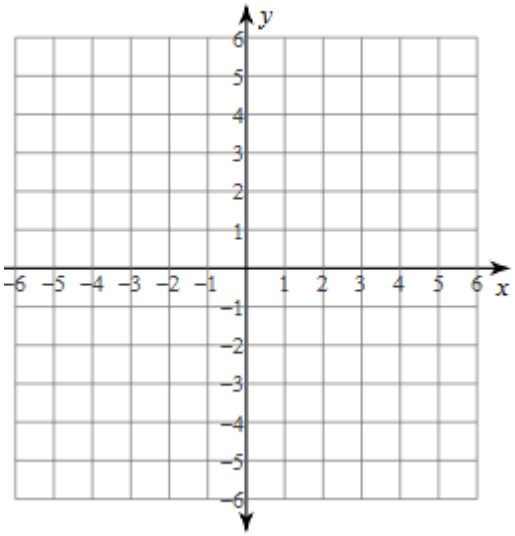
7) 

8) 

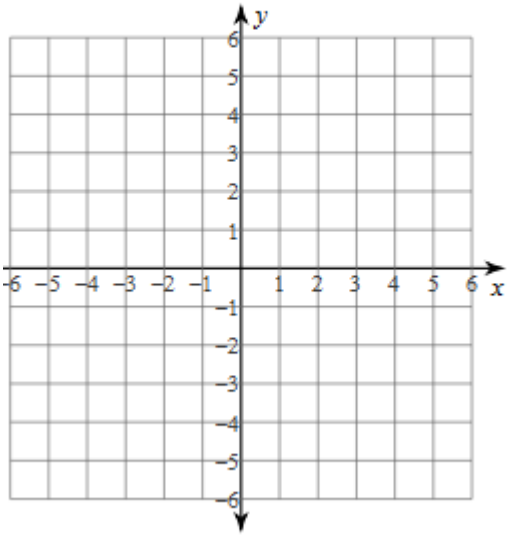
9) 

10) 

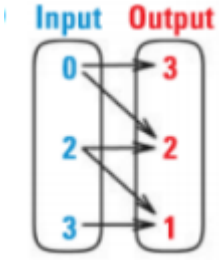
x-intercept $= -1$, y-intercept $= -4$



x-intercept $= -5$, y-intercept $= -1$



9. Is the following relation a function? Explain.



8

Which of the following relations is a function?

F {(1, –6), (3, –5), (1, 0)}

G {(0, 5), (5, –1), (5, 9)}

H {(6, 1), (6, 2), (6, 3)}

J {(0, 8), (1, 7), (2, 6)}

10.Find the x and y intercept

2x + 3y = 12

11) Draw the coordinate plane and label the quadrants, the origin, and the x and y axis.

12) Write the steps on how to find the x-intercept.

13) Write in your own words how to find the y-intercept.

A(2,7) B(5,0) C(7,9) D(0, 1) E(-9,0) F(8, -9) G (0, 8) H(4, 8) J (4,0) K(9, 0) L(0, 9) M (12, 0) N(-8, 0) K(0,-6)

14) Which of the ordered pairs above are x- intercepts?

15) Which of the ordered pairs above are y-intercepts.

$g(x) = -8x + 3$	$h(x) = x^2 - 4$	$f(x) = x^3 + x$

Evaluate the following functions.

16) g(5) ordered pair	17) h(-4) ordered pair	18) h(4) ordered pair
19) f(-5) ordered pair	20) g(-6) ordered pair	21) f(-2) ordered pair

22) Find the following:

f(-1) = ordered pair_____

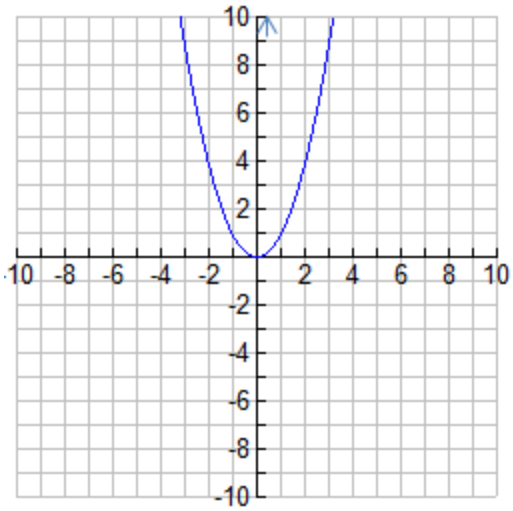
f(-2)= ordered pair_____

f(-3)= ordered pair_____

f(1) = ordered pair_____

f(2)= ordered pair_____

f(3)= ordered pair_____



23) Find the following.

x =____ when f(x) = 9

x=_____ when f(x) = 4

24) What is the x – intercept?

25) What is the y-intercept?