M10 - 6/7.0 - Graphing Review

1) Find Slope

$a)\ (1,1)\ \ \&\ \ (2,4) =$

$b)\ (-4,2)\ \ \&\ \ (2,-14) =$

$c)\ (3,0)\ \ \&\ \ (5,1) =$

2) Find n

$a)\ (2,4)\ \&\ \ (1,n),\quad m = 3$

$b)\ (n,2)\ \&\ \ (2,3),\quad m = 1$

$c)\ (1,1)\ \&\ \ (5,n),\quad m = \frac{1}{2}$

3) Is the following a function or a relation?

a) (1,2), (2,3), (3,4), (4,5)

b) (2,2), (2,3), (3,4), (4,5)

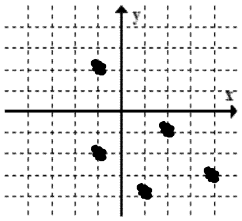
c)

x	y
2	2
2	3
3	4
4	5

d)

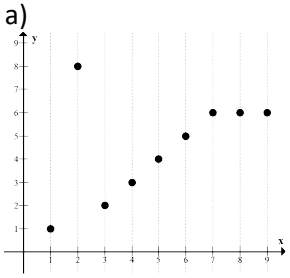
x	y
1	2
2	3
3	4
4	5

e)

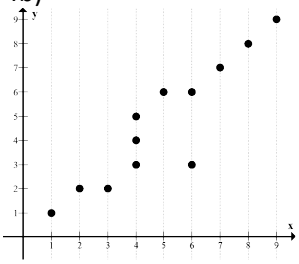


4) Are the following Discrete or Continuous?

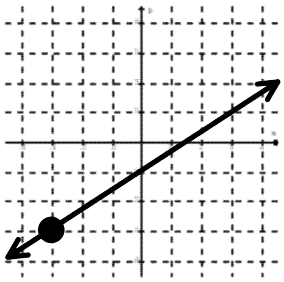
a)



4b)

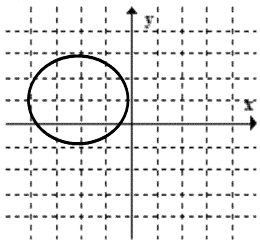


c)



5) Are the following Linear?

a)



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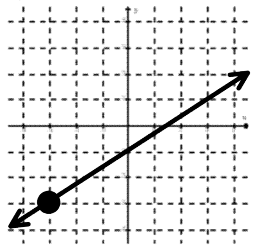
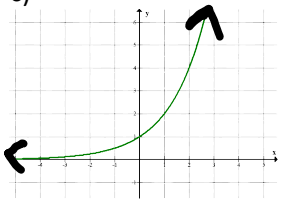


c)

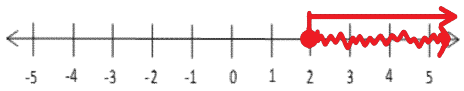


d)

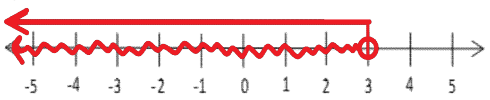
x	y
-4	0
-2	3
0	6
4	12
8	18

6) Find the Domain in Set & Interval Notation.

a)



b)



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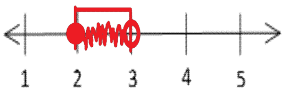
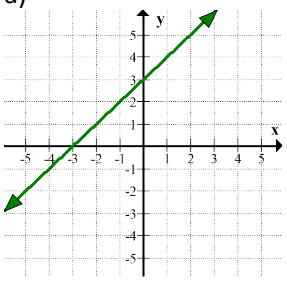
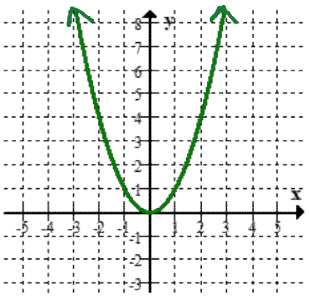


7) Find Domain and Range in words, on a number line, set, interval and list notation where necessary. Is it a Function?

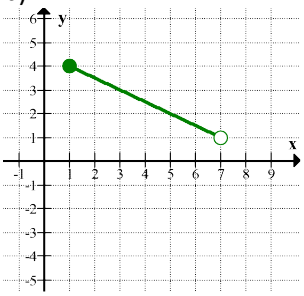
a)



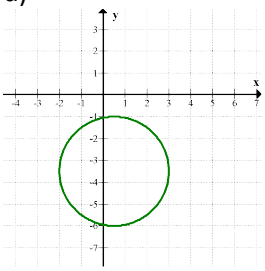
c)



b)



d)



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8) Write in $y = mx + b$.

$a)\ Slope = 4, y - int = -1$

$b)\ Slope = \frac{3}{2}, y - int = 2$

$c)\ Slope = -1, y - int = \frac{1}{2}$

$d)\ Slope = 0, y - int = 2$

$e)\ Slope = 0, y - int = 0$

$f)\ Slope = undefined, x - int = -3$

$h)\ Slope = \frac{1}{2}, x - intercept = 1$

9) Identify slope and y-intercept.

$a)\ y = -3x - 4$

$b)\ y = \frac{3}{2}x - 2$

$c)\ y = 0.02x$

$d)\ y = x$

$e)\ y = 4$

$f)\ x = 2$

$g)\ x = 0$

10) Write in slope-point form.

$a)\ (2, -3), \quad m = 4$

$b)\ (1, -3), \quad m = \frac{1}{2}$

$c)\ (0, -3), \quad m = 0$

$d)\ (0,0), \quad m = undefined$

$e)\ 2x + 3y = 6$

11) Identify slope and point.

$a)\ y + 3 = \frac{1}{3}(x - 2)$

$b)\ y - 4 = -(x + 2)$

$c)\ y + 2 = (x)$

$d)\ y = (x)$

$e)\ y + 1 = 0$

$f)\ x = 0$

12) Find the equation of the line through the following points $(4,1)$ & $(-2 - 2)$.

13) Write in $y = mx + b$.

$a)\ y + 3 = 1(x - 2)$

$b)\ y + 4 = \frac{2}{3}(x + 3)$

$c)\ y + 2 = -\frac{1}{2}(x - 3)$

$d)\ x + y + 4 = 0$

$e)\ 2x + \frac{1}{2}y - 4 = 0$

$f)\ \frac{1}{2}x - \frac{2}{3}y + 1 = 0$

14) Write in $ax + by = c$

$a)\ y = 1x - 8$

$b)\ y = \frac{1}{2}x - 5$

$c)\ y = 8x$

$d)\ \frac{y}{2} = -\frac{2}{3}x - 2$

$e)\ y - 4 = 2(x - 5)$

$f)\ y + 4 = \frac{2}{3}(x + 6)$

$g)\ y + \frac{2}{3} = -\frac{1}{2}(x - 3)$

15) Graph

$a)\ y = x + 1$

$b)\ y = -2x + 4$

$c)\ y = -\frac{3}{4}x + 2$

$d)\ y = \frac{1}{2}x - \frac{1}{2}$

$e)\ y = 5$

$f)\ y = 5$

$g)\ x = 2$

$h)\ x = 0$

16) Graph

$a)\ 3x + 2y = 6$

$b)\ 2y + 3x + 6 = 0$

$c)\ 2x + 5y = 10$

$d)\ 3x + 4y = 6$

17) Graph

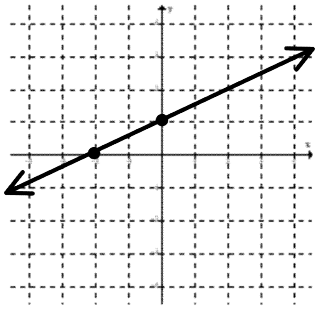
$a)\ y - 1 = 2(x - 2)$

$b)\ y + 1 = -\frac{1}{2}(x - 2)$

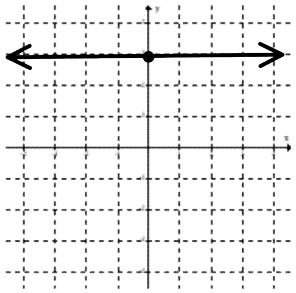
$c)\ y - 1 = x + 2$

18) Find Equations.

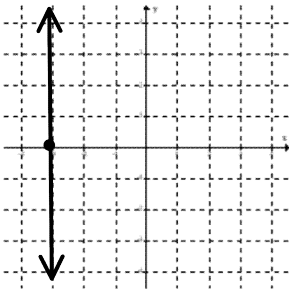
a)



b)



c)



d)

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19) Find the parallel and perpendicular slope to the following slopes.

$a)\ m = -2$

$b)\ m = \frac{3}{2}$

$c)\ m = 0$

20) Find the value of "p" if the lines are parallel, and if the lines are perpendicular.

$a)\ m = \frac{p}{5}, m = 2$

$b)\ m = \frac{8}{p}, m = \frac{-1}{2}$

21) Are the following parallel, perpendicular, or neither?

$a)\ y = -2x + 1 \quad \& \quad y = 2x + 4$

$b)\ 0 = 3x + 5 - y \quad \& \quad 3y = -1x - 6$

$c)\ y - x - 9 = 0 \quad \& \quad y = x + 2$

22) Find the equation of the line through $(6,0)$, perpendicular and parallel to the line through $(-4,9)$ & $(-7,10)$.

23) A line passes through $(1,7)$ and $(-3,-1)$. What is the slope of a line parallel and perpendicular to this line.

24) Find an equation parallel and a perpendicular to the following line, passing through the following point.

$y = 2x + 1, (3,5)$

25) $f(x) = x + 2$

$a)\ f(3) = ?$

$b)\ f(x) = 6, x = ?$

$c)\ f(x + 5) = ?$

$d)\ f(3x) = ?$

26) $f(x) = -x^2 + x$

$a)\ f(-1) = ?$

$b)\ f(x) = -2, x = ?$

27) Function Notation

a) $A(r) = \pi r^2$

Solve if $r = 5cm$

$b)\ C(x) = 100x - 500$

Find $x\ if\ C(x) = 500$

28) Find the Distance between two points.

$a)\ (1,3)$ & $(5,6)$

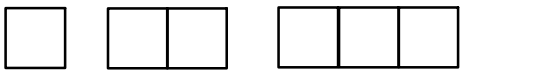
$b)\ (0,-1)$ & $(3,1)$

29) Find the Midpoint between two points.

$a)\ (1,1)$ & $(5,3)$

$b)\ (1,-3)$ & $(5,5)$

30) The following diagrams are made out of toothpicks.



a) Create a Table of Values & Find the Equation

b) Find the Number of Toothpicks in the 5th Diagram.

c) Find the Diagram number with 13 toothpicks.