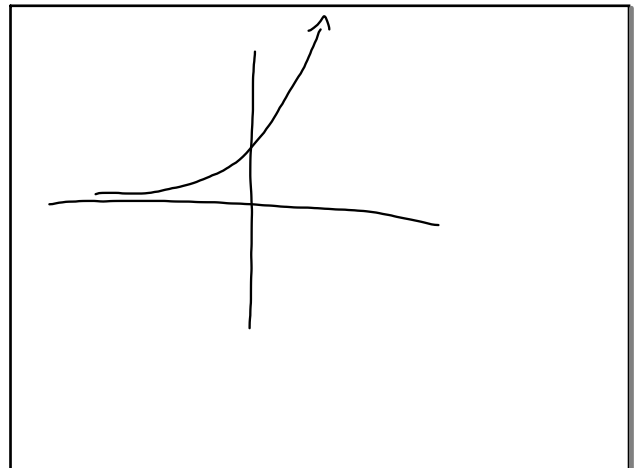
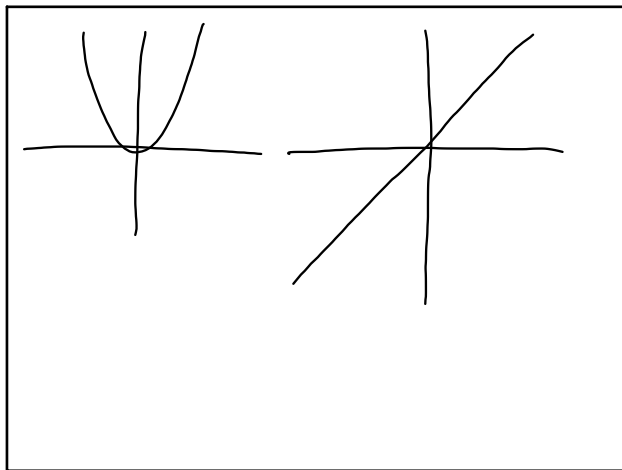


Starter #5 Domain and Range  
 Calendar Math  
 3.1 Part 1 Homework Questions  
 3.2 Part 2 Domain/Range, X/Y Intercepts, Max/Min  
 Objective: Show and understanding of finding domain/range, x/y intercepts, and max/min by completing the exit ticket and a 3 out of 5 on the 3.1 quiz next class period.

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Oct 12-11:55 AM

Calendar Math

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Homework Questions  
 (20)  

$$\frac{195}{5} = \frac{5x}{5}$$
 cars 39  $39 = x$   
 Students 195  
 $D: [0, 195] \{x \in \mathbb{Z} \mid 0 \leq x \leq 195\}$   
 $R: [0, 39] \{y \in \mathbb{Z} \mid 0 \leq y \leq 39\}$

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(26)  
 $P = r - c$   
 $P = (.04x^2 + 60x + 85) - (.22x + 25)$   

$$-.04x^2 + 59.78x + 60$$

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Video

[https://www.youtube.com/watch?v=RGNv3e\\_48Oc](https://www.youtube.com/watch?v=RGNv3e_48Oc)

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3.1 Part 2 Domain/Range, X/Y intercepts,  
Maximum and Minimum

Domain and Range

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X and Y intercepts

X-intercept: point on the graph  
where  $y = 0$   
- crosses the x-axis.

Y-intercept: point on the graph  
where  $x = 0$   
- crosses the y-axis.

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ex 4

$$X = 4 \quad \begin{matrix} (0, 4) \\ X \quad Y \end{matrix} \quad [4, 0]$$

$$Y = 2 \quad \begin{matrix} (2, 0) \\ X \quad Y \end{matrix} \quad [0, 2]$$

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ex 5

$$y = 3 \quad [0, 3]$$


$$X = -1.5, 2 \quad [-1.5, 0] \cup [2, 0]$$

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Maximum and Minimum

maximum: highest point  
(mountain)



min: none

minimum: lowest point  
(valley)



min

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max: none

min:  $[-1, -7]$   
 $[-1, -7]$

ex 7  
max:  $[2, 4]$   
min: none

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$y = x^2 - 4$

$y' = x^2 - 4$

$y^2 = 0$

graph


2.

Oct 12-12:36 PM

**Bunny Rabbit Population Problem:**

The observed bunny rabbit population on an island is given by the function below, where  $t$  is the time in months since they began observing the rabbits. (a) When is the maximum population attained, (b) what is the maximum population, and (c) when does the bunny rabbit population disappear from the island?

$p = -.4t^2 + 130t + 1200$



Oct 9-2:46 PM