

$y = mx + b$   
 ↙ rate (per)      ↘ y-int (start)

**Review Writing Systems of Equations & Solving by Graphing**

#1

**Heather's Bunny**  
 Heather has a bunny that weighs 5 pounds and gains 3 pounds per year.



Y = weight and X = time

Equation:

$y = 3x + 5$

x	y
0	5
3	14

**Heather's Cat**  
 Heather has a cat that weighs 15 pounds and gains 1 pound per year.

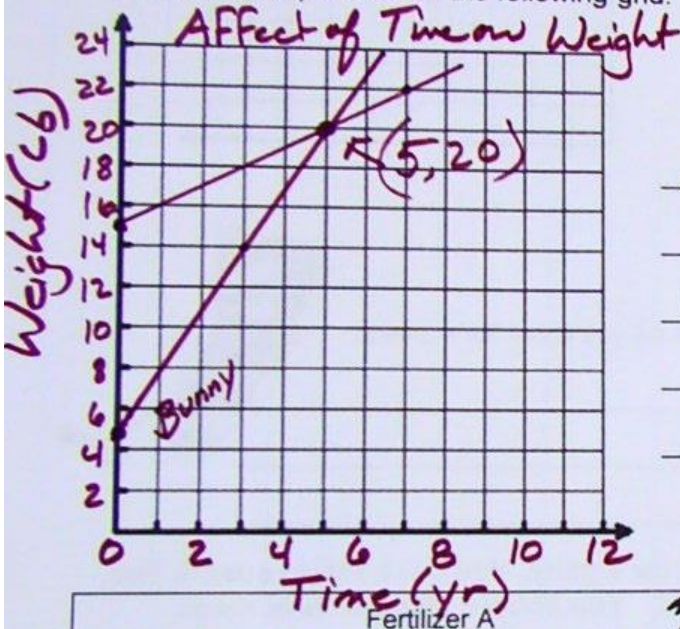


Equation:

$y = 1x + 15$

x	y
0	15
7	22

Graph both equations on the following grid. Use an interval of 1 on the x-axis and 2 on the y-axis.



1) Name the point of intersection:  $(5, 20)$

2) What does the point of intersection mean to the situation?

In 5 years, both pets weigh 20 Lbs. The bunny weighs less before 5 years.

#2

**Fertilizer A**  
 You are testing two fertilizers on palm trees. Palm tree A is 8 cm tall growing at a rate of 6cm/day.



\_\_\_\_\_ = height      \_\_\_\_\_ = # of days

Equation:

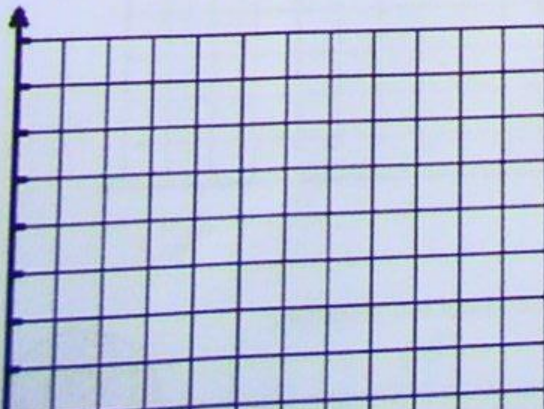
x	y
0	
4	

**Fertilizer B**  
 You are testing two fertilizers on palm trees. Palm tree B is 20 cm tall growing at a rate of 4cm/day.

Equation:

x	y
0	
4	

Graph both equations on the following grid. Use an interval of 1 on the x-axis and 4 on the y-axis.



1) Name the point of intersection: \_\_\_\_\_

2) What does the point of intersection mean to the situation?

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**DISH TV**  
Jonathan is getting Dish TV installed. It costs \$200 for the installation and \$30 per month for the channels he wants.

\_\_\_\_\_ = cost \_\_\_\_\_ = # of months

Equation:

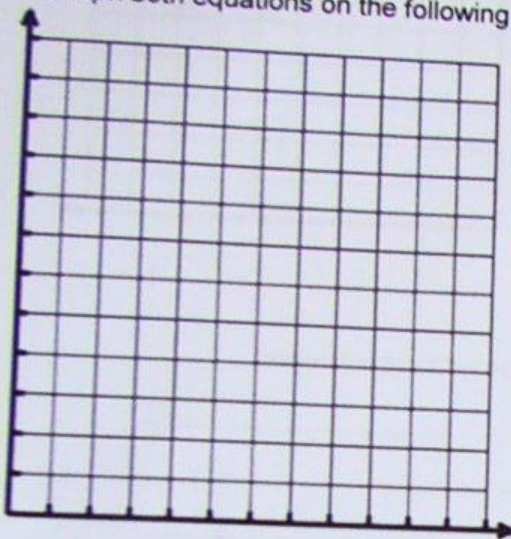
x	y
0	
5	

**Cable TV**  
Anthony is getting cable TV. There is no installation fee and he will have to pay \$50 per month for the channels he wants.

Equation:

x	y
0	
5	

Graph both equations on the following grid. Use an interval of 1 on the x-axis and 50 on the y-axis.



- 1) Name the point of intersection: \_\_\_\_\_
- 2) What does the point of intersection mean to the situation?

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#4 A class of 270 students went on a field trip. They took 8 vehicles, some buses and vans. Find the number of buses and the number of vans they took if each bus holds 45 students and each van holds 15 students.

Define your variables:  $x$ : # of Buses  $y$ : # of Vans

Write a system of equations:  
 $x + y = 8$   
 $45x + 15y = 270$

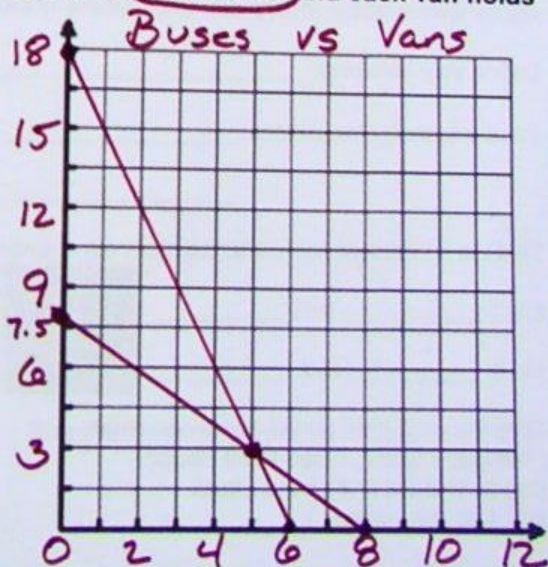
Find the x-intercept and y intercept for both equations.

Eq 1:  $(0, 8)$  and  $(8, 0)$   $270 \div 45$

Eq 2:  $(0, 18)$  and  $(6, 0)$

Graph your system on the same coordinate grid.

(Buses, Vans) Use an interval of 1 on the x-axis and 1.5 on the y-axis



State the coordinates of intersection. Explain what these coordinates tell you about the situation.

$(5, 3)$  5 Buses & 3 vans total  
8 vehicles & hold 270 students.

