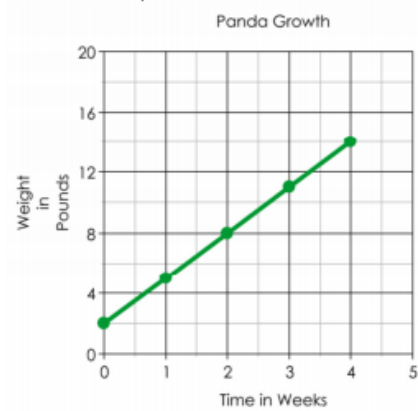


1. The Metropolis Zoo recently celebrated the birth of two new baby pandas!

Mochi the panda cub has been measured and weighed each week since she was born.

Weeks	Weight
0	1
1	5
2	9
3	13

Mochi's brother is **Kappa**. His weight has been charted on the graph below.



Write a linear equation to represent each panda cub's weight (y) after x weeks.

Mochi:

Kappa:

Which panda was heavier when they were born? Explain how you know.

Which panda grows at a faster rate? Explain how you know.

Which panda will weigh more at 5 weeks?



2. Two contestants on Biggest Loser are Valerie and Oscar. Their weight loss progress is shown below.

Valerie's weight loss is shown by this function, where W is her weight in pounds and t is the time in weeks. $W = 235 - 2.5t$	Oscar's weight loss is tracked in the table below. <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">Weeks</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">5</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">Weight</td> <td style="padding: 5px;">247</td> <td style="padding: 5px;">243</td> <td style="padding: 5px;">237</td> <td style="padding: 5px;">235</td> </tr> </table>	Weeks	0	2	5	6	Weight	247	243	237	235
Weeks	0	2	5	6							
Weight	247	243	237	235							

What is the slope and what does it mean for each contestant?

Valerie-

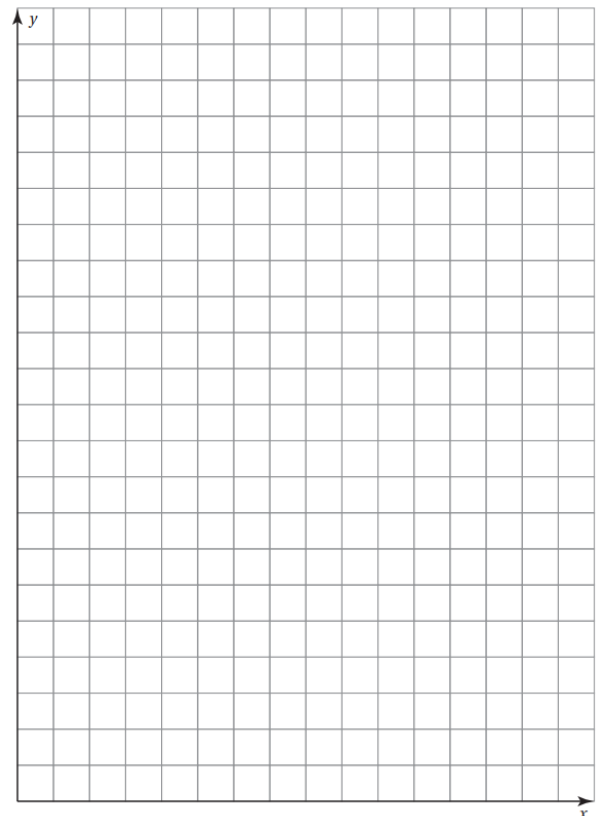


Oscar-

What does the y-intercept represent in this scenario?

Who will reach 200 pounds first?

Graph the weight loss for both people.



3. Mr. Rich recently planted a crop of money trees in his garden.

A.

The first tree was five inches tall when planted. It has grown four inches every month since being planted.

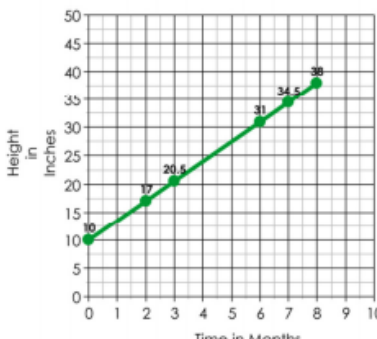
B.

Measurements were taken of the second tree and given below:

Months		2	3	5
Height		12	16.5	25.5

C.

Money Tree Growth



Time in Months	Height in Inches
0	10
2	17
3	20.5
6	31
7	34.5
8	38

Which of the trees is growing the fastest? Justify.

Which tree was the tallest when it was first planted?

Write an equation to represent each tree.

Tree A: _____

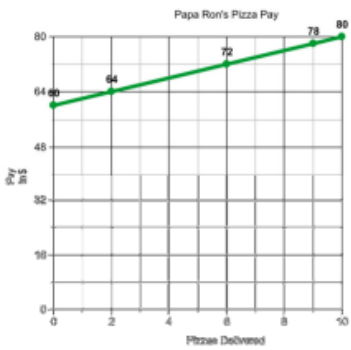
Tree B: _____

Tree C: _____

Which tree is the tallest after 6 months? Show proof.



4. Tony is the best pizza deliveryman in the city. He has been offered jobs by all the best pizza places.

<p>Bombinoes' Pizza is offering \$56 per shift and \$2.50 in commission for each pizza delivered.</p>	<p>Papa Ron's made their offer in the form of this graph.</p>										
<p>Little Squeezer's showed Tony a table of salaries.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">Pizzas</td> <td style="padding: 5px;">0</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">10</td> </tr> <tr> <td style="padding: 5px;">Salary</td> <td style="padding: 5px;">48</td> <td style="padding: 5px;">54</td> <td style="padding: 5px;">60</td> <td style="padding: 5px;">78</td> </tr> </table>	Pizzas	0	2	4	10	Salary	48	54	60	78	
Pizzas	0	2	4	10							
Salary	48	54	60	78							
<p>Pizza Tent has given Tony his pay options in the following function. S represents Tony's salary, and p represents the number of pizzas he delivers.</p> $S = 2.75p + 52$											

Which company pays the best pay per shift?

Which company pays the most per pizza?

If Tony is going to deliver at least 20 pizzas every night, which company should he work for?

