Linear Review

For the following data, find the following:

(a) slope

(b) y intercept

(c) equation

(d) y value when x = 45

(e) x intercept

x	y
1	5
3	9
4	11

What two items are needed to find the equation of a line?

Find the equation of the line that:

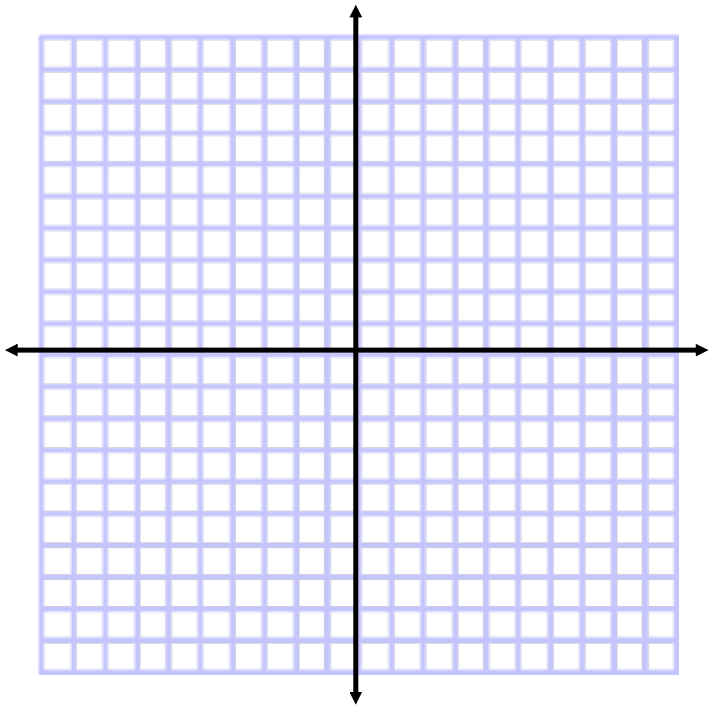
passes through (4,6) **and** is parallel to y=-2x-7

Graph the three lines below using the slope and y intercept form (y=mx+b) of the line (state the slope and y int)

y=3x - 5

-2x - y = -8

x = 6



Linear Review

Luisa chooses a cellphone plan that charges a flat fee of $20 per month and $0.25 for each text message sent.

Which equation best represents the cost of Luisa's cellphone plan, C, in dollars, where n is the number of text messages sent?

a $C = 20.25n$

b $C = 20(0.25n)$

c $C = 20n + 0.25$

d $C = 0.25n + 20$

There is a linear relationship between the total cost of renting a costume and the number of hours the costume is rented.

- For 3 hours, the total cost is $60.
- For 5 hours, the total cost is $80.

What type of variation is this relationship, and what is its initial value?

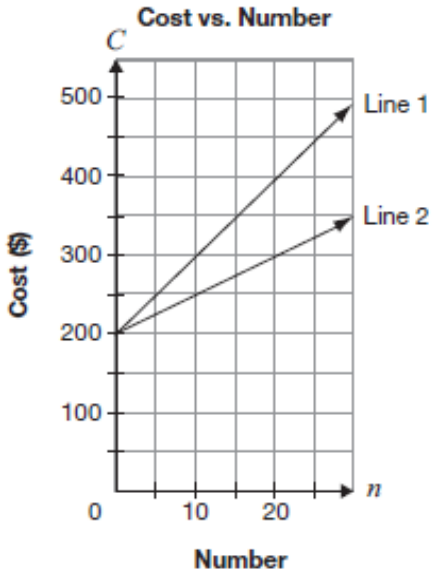
a a partial variation with an initial value of $30

b a partial variation with an initial value of $20

c a direct variation with an initial value of $30

d a direct variation with an initial value of $20

Two lines are shown below.



Which of the following describes a difference between Line 1 and Line 2?

a Line 2 has a larger initial cost.

b Line 1 has a larger initial cost.

c Line 2 has a greater rate of change.

d Line 1 has a greater rate of change.

Which of the following equations is equivalent to $3x - 5y = 45$?

a $y = \frac{3}{5}x - 9$

b $y = -\frac{3}{5}x + 9$

c $y = 3x - 45$

d $y = -3x + 45$

Which equation below represents a line that is perpendicular to the line represented by $y = 3x - 5$?

a $y = 3x + \frac{1}{5}$

b $y = -3x - \frac{1}{5}$

c $y = -\frac{1}{3}x + 7$

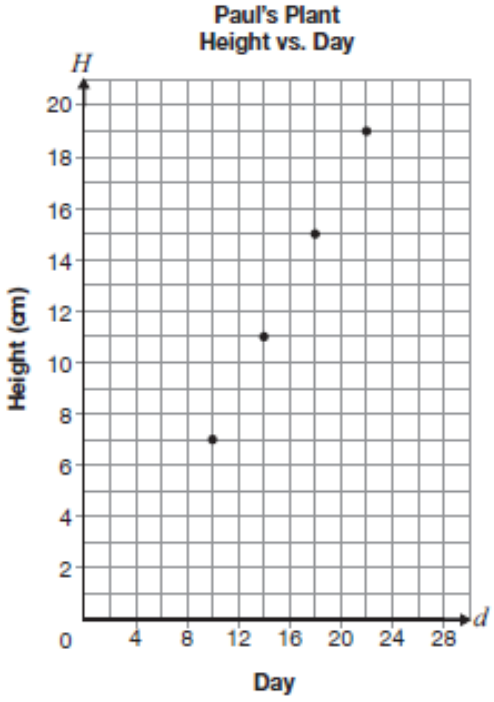
d $y = \frac{1}{3}x - 7$

Lucia and Paul each have a plant. Both plants grow at a constant rate.

Lucia records information about the height of her plant in a table, and Paul graphs his results as shown below.

Lucia's Plant

Day	Height (cm)
4	8
7	10
10	12
13	14



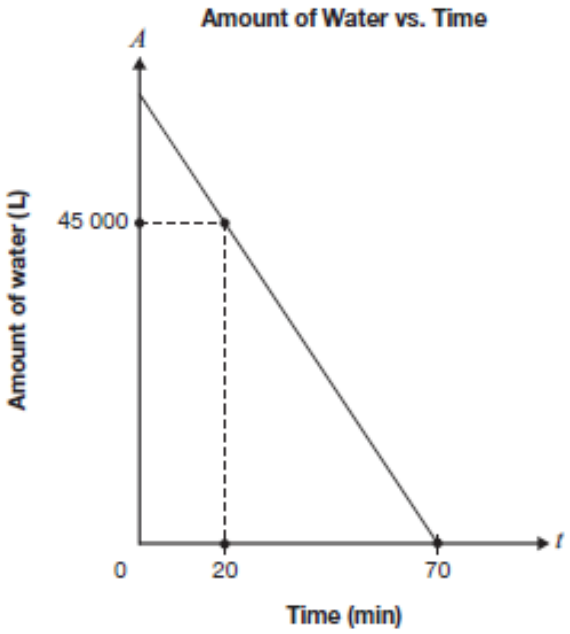
Whose plant is growing faster?

Circle one: Lucia's Paul's

Justify your answer.

Water in a Pool

The graph below represents the relationship between the amount of water, A, in a pool as it drains and time, t.



Determine the initial amount of water in the pool and the rate of change of this relation.

Show your work.