I can:
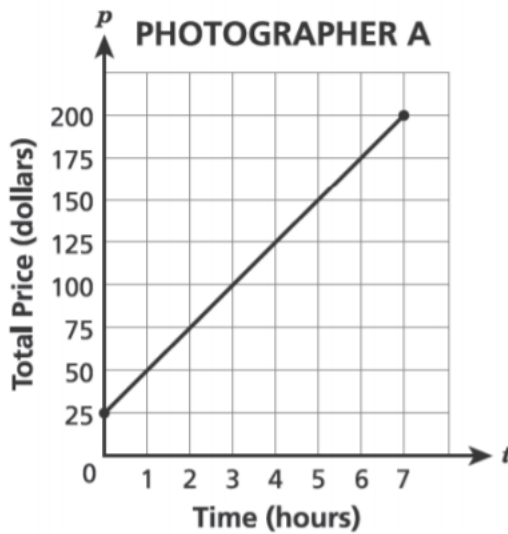
Do Now (3 minutes to complete):

Two photographers offer different pricing plans for their services. The graph below models the prices Photographer A charges. The table below shows the prices Photographer B charges. Each photographer charges a one-time equipment fee and an hourly rate.

PHOTOGRAPHER A

PHOTOGRAPHER B

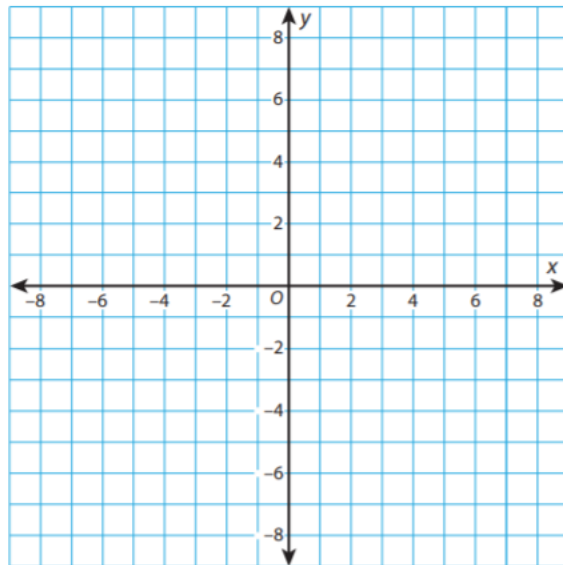| Time (hours)	2	4
Total Price	$80	$110

Which statement about the two pricing plans is true?

A Photographer A charges $15 per hour more than Photographer B.

B Photographer B charges $15 per hour more than Photographer A.

C Photographer A's equipment fee is $25 less than Photographer B's.

D Photographer B's equipment fee is $25 less than Photographer A's.

Model (10 minutes) You Watch, Listen, Copy:

Part A Show how to find the slope of a line that passes through the points in the table.

x	−3	0	3	6
y	5	1	−3	−7

_____

_____

Part B Graph the data in the table. Using the graph, show how to find the slope in a different way than you did in part A.

_____

_____

_____

_____

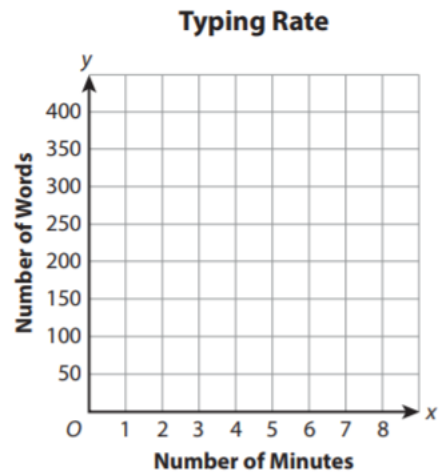**Part C** Show how to write an equation for the table and graph. Verify that the equation works with the table and the graph.

_____

_____

_____

_____

Check for Understanding- Did you understand the Model? (2 minutes) Teacher will check!
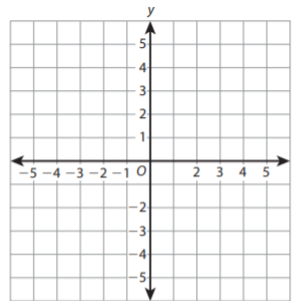
The table shows how many words Julian can type if he types at a steady rate. Use the information in the table to make a graph. Find the slope of the graph and explain what it means in this situation.

Typing Rate

Number of Minutes	2	4	6	8
Number of Words	80	160	240	320

Typing Rate

We Do Together (10 minutes):

Explain how you can write an equation for a line with slope $\frac{1}{2}$ that crosses the y-axis at the point (0, –1). Graph the line for your equation.

_____

_____

_____

_____

_____

Final Check for Understanding before I send you to Independent Practice! Teacher will Check (4 minutes):

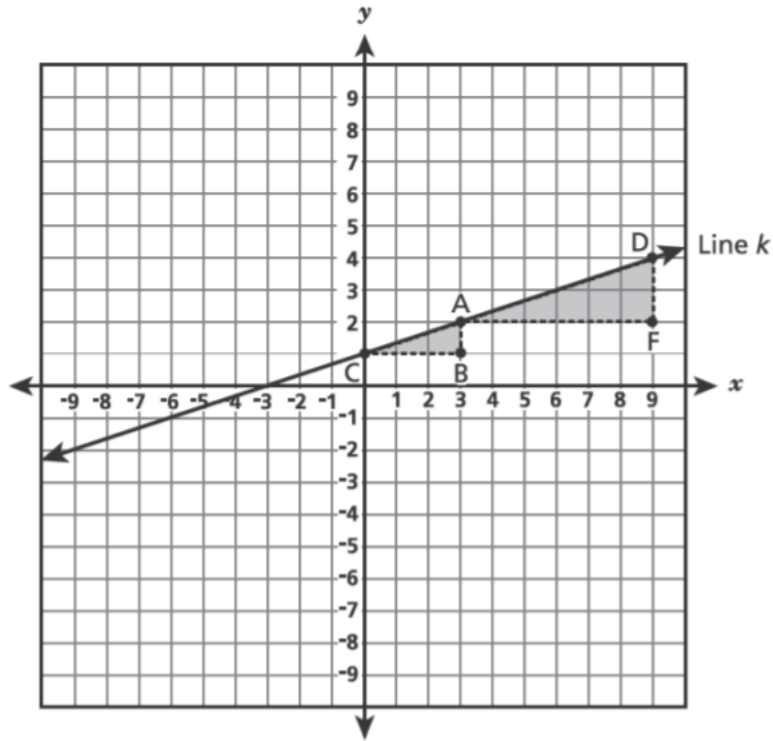The table shows values for points on the graph of a function.

Point	P	Q	R	S
x	−3	−2	−1	1
y	5	2	−1	−3

Can this function be represented by a straight line? Explain.

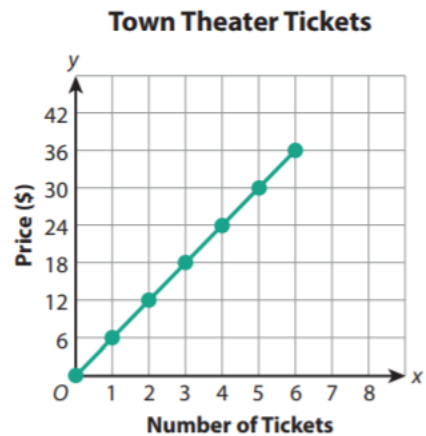**Show your work.**

_____

_____

_____

Independent Practice (on your own):

The hypotenuses of similar triangles ABC and DFA both lie on line k, as shown below.

Demonstrate whether the slope of line k is constant between points C and D. Use the leg lengths of triangles ABC and DFA in your answer.

_____

_____

_____

Town Theater Tickets

The price for movie tickets at Town Theater is shown in the graph. The price of 5 movie tickets at Center Theater is $3.75 greater than the price of 5 movie tickets at Town Theater. What is the price per ticket at each theater?

_____

Avery is programming her calculator to make a graph of the letter V. The points she uses for the left side of the letter are listed in the table below.

x	y
-4	6
-2	0
0	-6

Part A
What equation does Avery need to graph the left side of the letter V? **Show your work.**

Equation _____

Part B
What points can Avery use to graph the right side of the letter V?

x	y

Part C
What equation does Avery need to graph the right side of the letter V? Explain how you know.

Equation _____

_____

_____

_____

Compare Look at these equations. Do you think they are all linear equations? Can they all be written in the form $y = mx + b$? If so, show how.
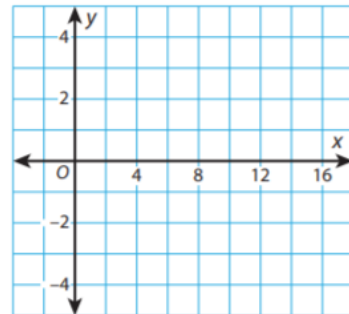
$y = 2x - 3$ $y - 2 = x + 2$ $3x = 9 + 3y$

Analyze Alana used the table of values to find the slope of the graph for this function. Analyze her work and explain why you do or don't agree with her.

x	2	4	6	8
y	4	5	6	7

$m = \dfrac{6 - 2}{6 - 4} = \dfrac{4}{2}$, or 2

Verify Explain how to find the slope and y-intercept by just looking at the equation $y = \frac{1}{3}x - 2$. Then graph the equation and verify your answers.

A hardware store buys 300 feet of nylon rope. The store sells the rope by the inch. A customer can purchase 40 inches of the rope for $1.60. The store sells all of the rope and makes a profit of $54. How much did the store pay for the rope in dollars per inch?

Show your work.

Andy uses the table below to write a linear equation.

x	−1	0	1	2
y	2	4	6	8

He says he can write an equation of the form $y = mx$ for the given values. Is he correct? Explain your reasoning.

_____

_____

Look at these equations. Write each equation in slope-intercept form. Are the equations the same or different? Explain.

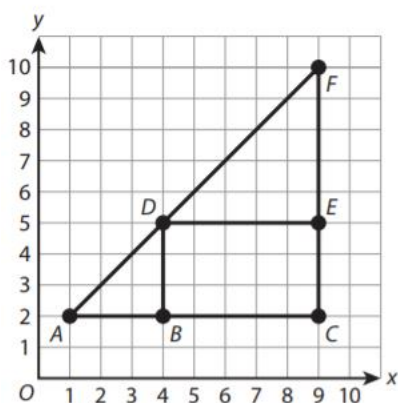$y + 1 = 2x - 3$ $2x - 3 = y + 1$ $2y + 2 = 4x - 6$

_____

_____

What is the equation of a line that passes through the points (0, 5) and (4, 8)? Write your answer in slope-intercept form.

Show your work.

Answer: _____

In the diagram below, triangle *ACF* is similar to triangle *ABD*.

Part A

Between which pairs of points are the slopes the same?

Choose all that apply.

A A and B; C and E

D B and C; A and B

B A and B; A and C

E B and C; E and F

C A and D; D and F

F D and F; A and F

Part B

The slope of line segment *AD* is the same as the slope of line segment *AF*.

Write the name of a segment in each box of the proportion to show this.

$$\frac{\boxed{}}{AB} = \frac{CF}{\boxed{}}$$