Name: _____ Date:_____

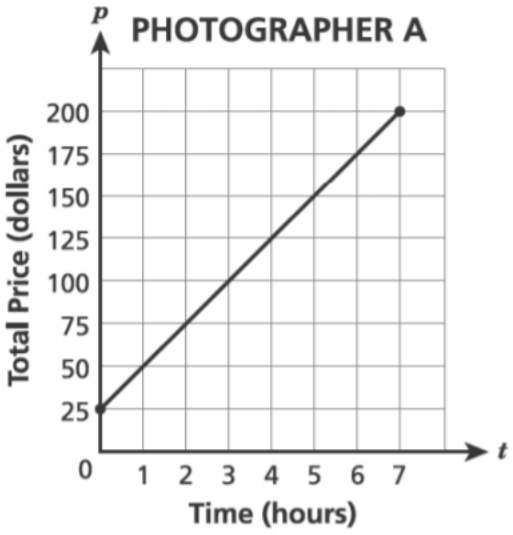
Ms. Streffacio Class: _____

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.

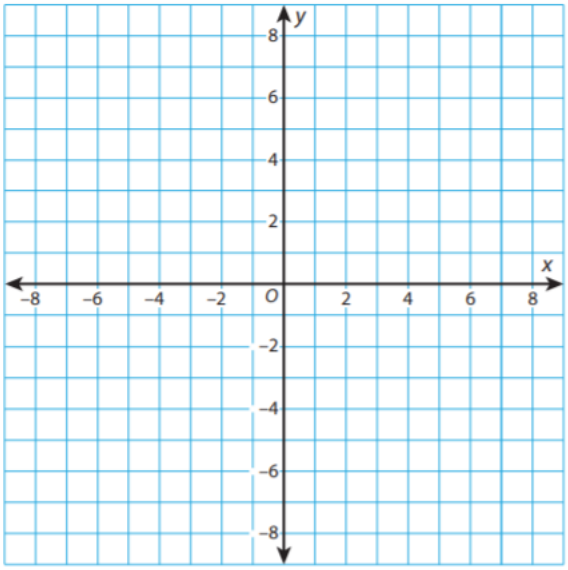
D Photographer B's equipment fee is $25 less than Photographer A's.

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.

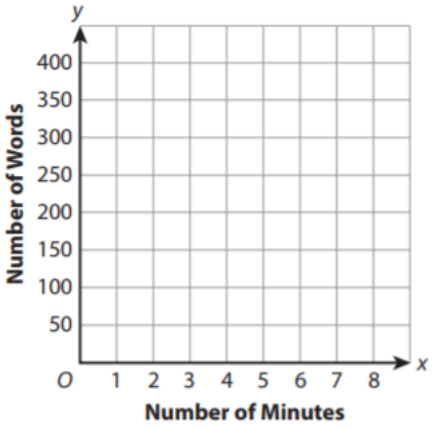
Check for Understanding- Did you understand the Model? (2 minutes) Teacher will check!

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

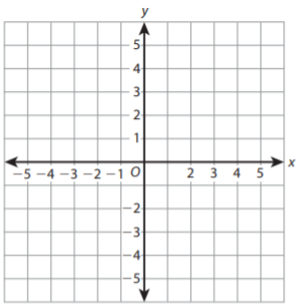
Number of Minutes	2	4	6	8
Number of Words	80	160	240	320

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.

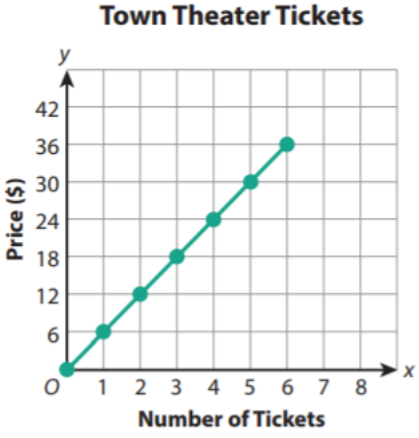
Point	*P*	*Q*	*R*	*S*
x	−3	−2	−1	1
y	5	2	−1	−3

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

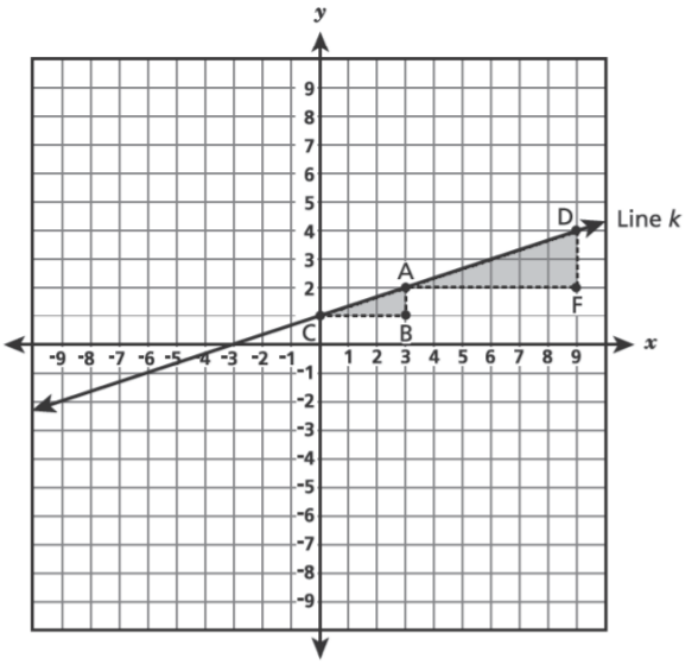
Show your work.

Independent Practice (on your own):

The 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?

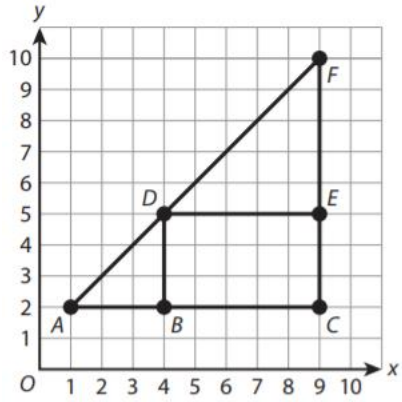


The hypotenuses of similar triangles ABC and DFA both lie on line k, as shown below.



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.

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*

B *A* and *B*; *A* and *C*

C *A* and *D*; *D* and *F*

D *B* and *C*; *A* and *B*

E *B* and *C*; *E* 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.

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

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.

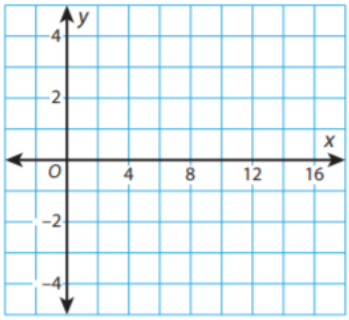
$y = 2x - 3$ | $y - 2 = x + 2$ | $3x = 9 + 3y$

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

$m = \frac{6-2}{6-4} = \frac{4}{2}$, 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.

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

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: _____