

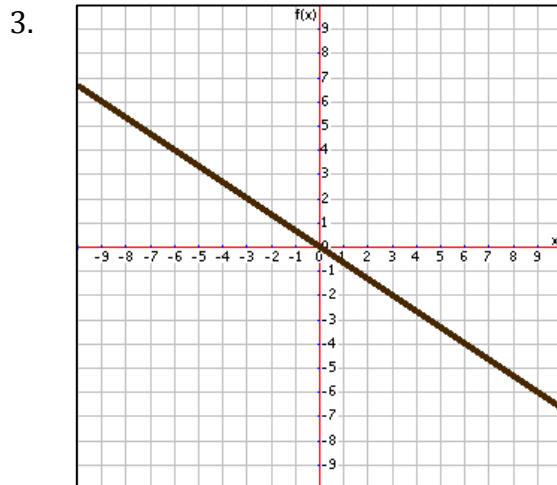
Proportional Relationships and Slope Pre-Test

For #1 – 6, identify the unit rate, or slope in each question.

1.

x	-2	-1	0	1	2
y	-4	-2	0	2	4

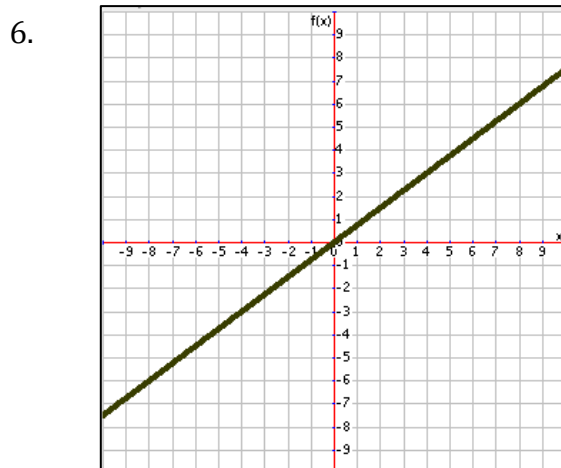
2. $y = \frac{3}{7}x$



4.

hours, x	0	1	2	3	4
miles, y	0	10	20	30	40

5. $y = -4x$

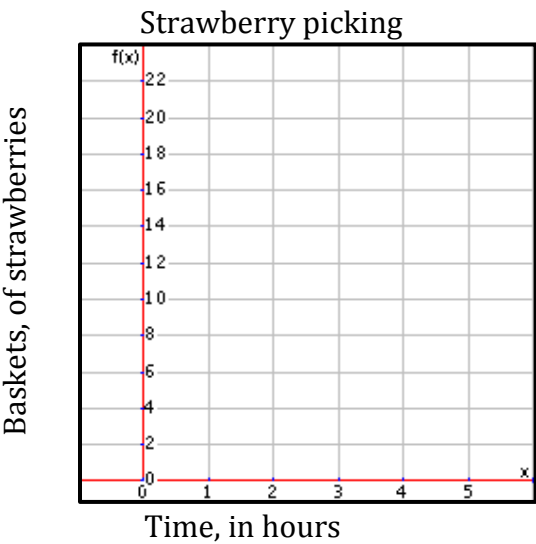


8.EE.5-6

7. Paloma can pick 2 baskets of strawberries every hour. Make a table for the number of baskets of strawberries that Paloma can pick for the following hours: 0, 1, 2, 3, 4.

hours	0	1	2	3	4
baskets of strawberries					

Graph the number of baskets of strawberries that Paloma can pick each hour.



State the slope and explain it's meaning.

8. Matias can pick 3 baskets of strawberries every hour. Make a table for the number of baskets of strawberries that Matias can pick for the following hours: 0, 1, 2, 3, 4.

hours	0	1	2	3	4
baskets of strawberries					

On the graph above, graph the number of strawberries that Matias can pick.

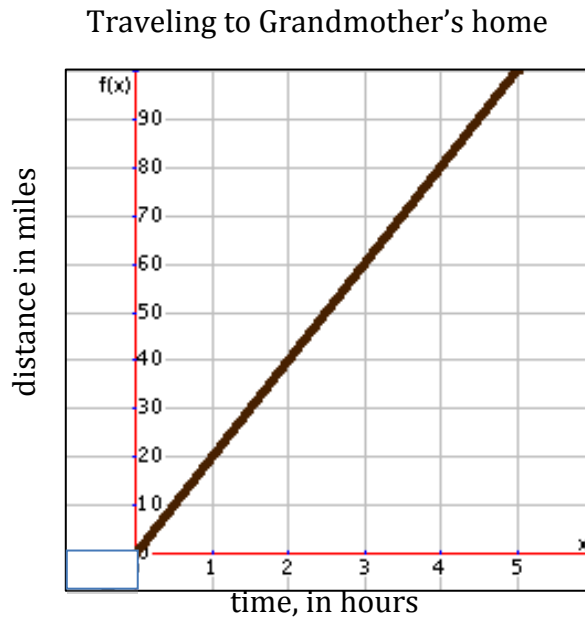
Based on the lines on the graph above, how can you determine who can pick strawberries faster? Explain your answer.

8.EE.5-6

9. Allise is driving to her grandmother's home. Her trip is represented in the table below:

time in hours, x	0	1	2	3
distance in miles, y	0	22	44	66

Maya is also driving to her grandmother's home. Her trip is represented in the graph below.



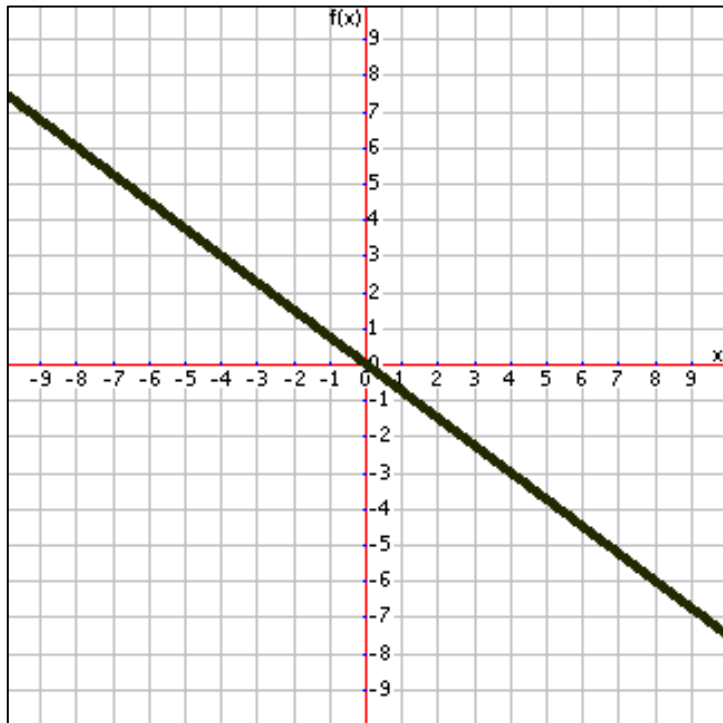
What is the speed at which Allise is traveling? _____

What is the speed at which Maya is traveling? _____

Who is traveling faster? Explain your reasoning.

8.EE.5-6

10. Using the graph below, explain why the slope between $(0,0)$ and $(-4,3)$ is the same as the slope between points $(-8,6)$ and $(4,-3)$.



Proportional Relationships and Slope Pre-Test - **ANSWERS**

For #1 – 6, identify the unit rate, or slope in each question.

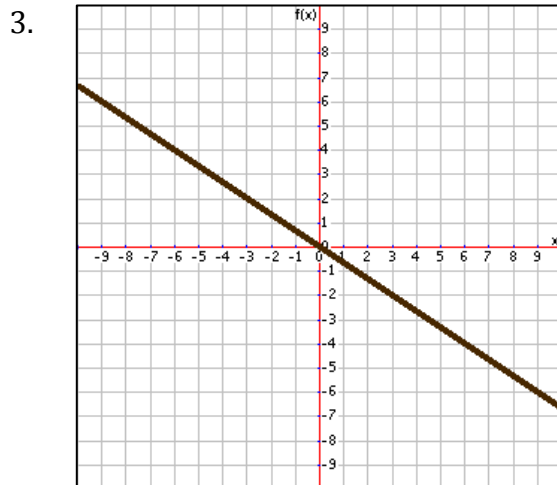
1.

x	-2	-1	0	1	2
y	-4	-2	0	2	4

slope = $2/1$

2. $y = \frac{3}{7}x$

slope = $3/7$



slope = $-1/1$

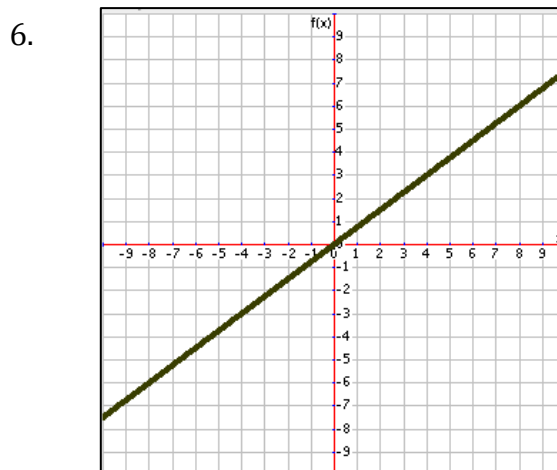
4.

hours, x	0	1	2	3	4
miles, y	0	10	20	30	40

unit rate = 10 mph

5. $y = -4x$

slope = $-4/1$



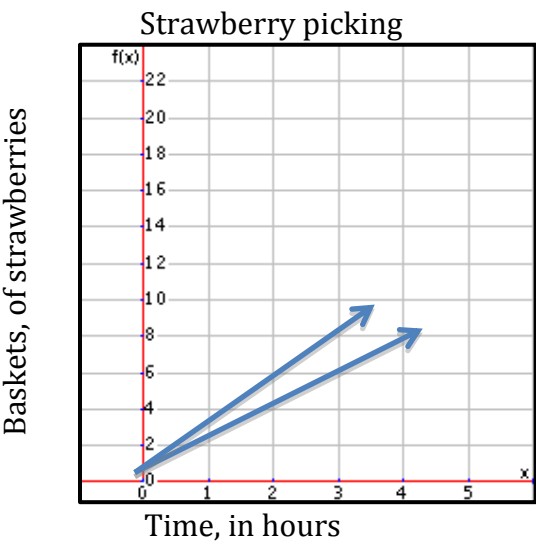
slope = $1/1$

8.EE.5-6

7. Paloma can pick 2 baskets of strawberries every hour. Make a table for the number of baskets of strawberries that Paloma can pick for the following hours: 0, 1, 2, 3, 4.

hours	0	1	2	3	4
baskets of strawberries	0	2	4	6	8

Graph the number of baskets of strawberries that Paloma can pick each hour.



State the slope and explain it's meaning.

The slope is $2/1$. This means that Paloma can pick 2 baskets of strawberries each hour.

8. Matias can pick 3 baskets of strawberries every hour. Make a table for the number of baskets of strawberries that Matias can pick for the following hours: 0, 1, 2, 3, 4.

hours	0	1	2	3	4
baskets of strawberries	0	3	6	9	12

On the graph above, graph the number of strawberries that Matias can pick.

Based on the lines on the graph above, how can you determine who can pick strawberries faster? Explain your answer.

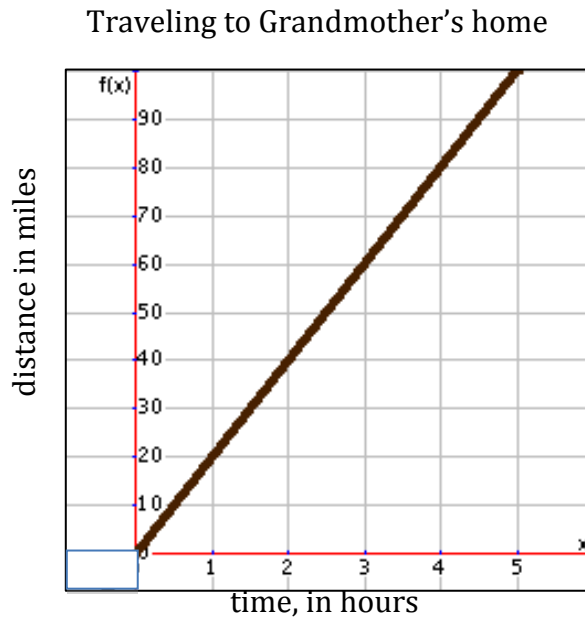
Matias' graph is steeper, so he is picking more baskets of strawberries per hour.

8.EE.5-6

9. Allise is driving to her grandmother's home. Her trip is represented in the table below:

time in hours, x	0	1	2	3
distance in miles, y	0	22	44	66

Maya is also driving to her grandmother's home. Her trip is represented in the graph below.



What is the speed at which Allise is traveling? 22 miles per hour

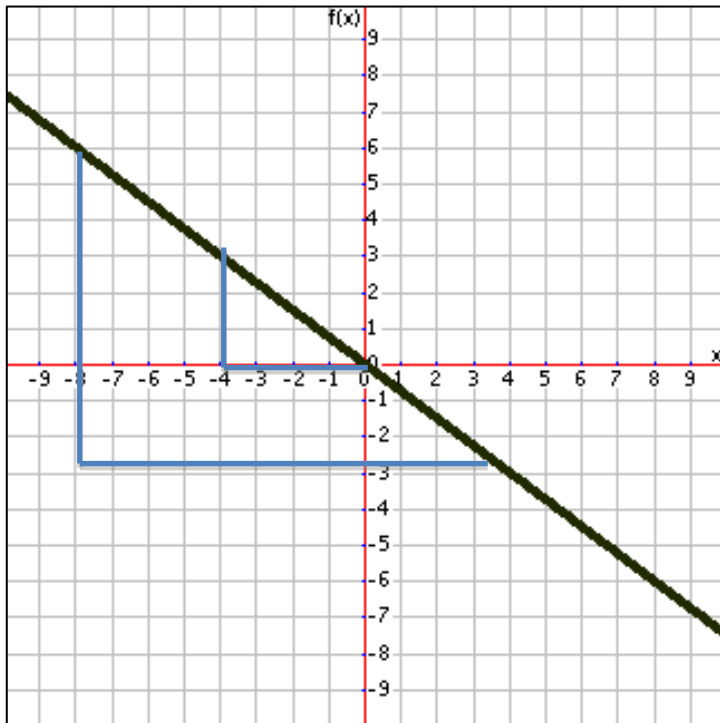
What is the speed at which Maya is traveling? 20 miles per hour

Who is traveling faster? Explain your reasoning.

Allise is traveling faster as she is traveling at 22 miles per hour, while Maya is traveling 20 mph. I figured this out by finding the slope from Allise's chart and reading the graph for Maya.

8.EE.5-6

10. Using the graph below, explain why the slope between $(0,0)$ and $(-4,3)$ is the same as the slope between points $(-8,6)$ and $(4,-3)$.



Draw the triangle from $(0,0)$ to $(-4,3)$. This triangle has a leg of 4 and 3. The slope is $3/-4$. Then draw the triangle from $(-8,6)$ to $(4,-3)$. This triangle has a leg of 8 and 6. The triangles drawn are similar. A slope of $3/-4$ is the same as a slope of $6/-8$.