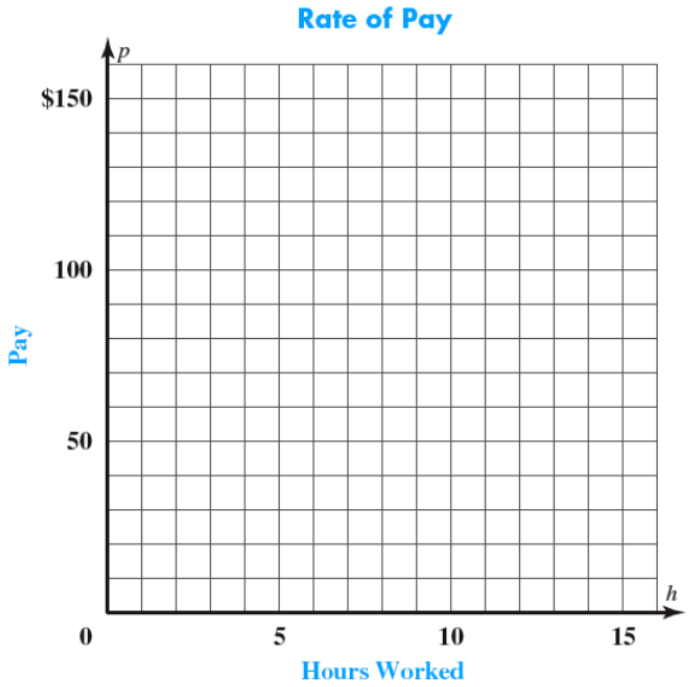
Name: _____ Date: _____

Rate of Pay

Mario is a repairman that charges $10 an hour for his service. Alec is in the same line of work and charges $7 an hour. Tamsin charges a service fee of $40 and an additional $10 an hour. Complete the table below so show the total amount of money charged for *h* hours of service.

Time (h)	0	1	2	3	4	5	6	10	15
Mario									
Alec									
Tamsin									

Graph Mario, Alec, and Tamsin's rate of pay. Include a key.



Write a rule for each worker for the cost *c* after *h* hours of service.

Mario: $c =$

Alec: $c =$

Tamsin: $c =$

Which worker has a greater rate of pay, Mario or Alec?_____

How do you know from the graph? _____

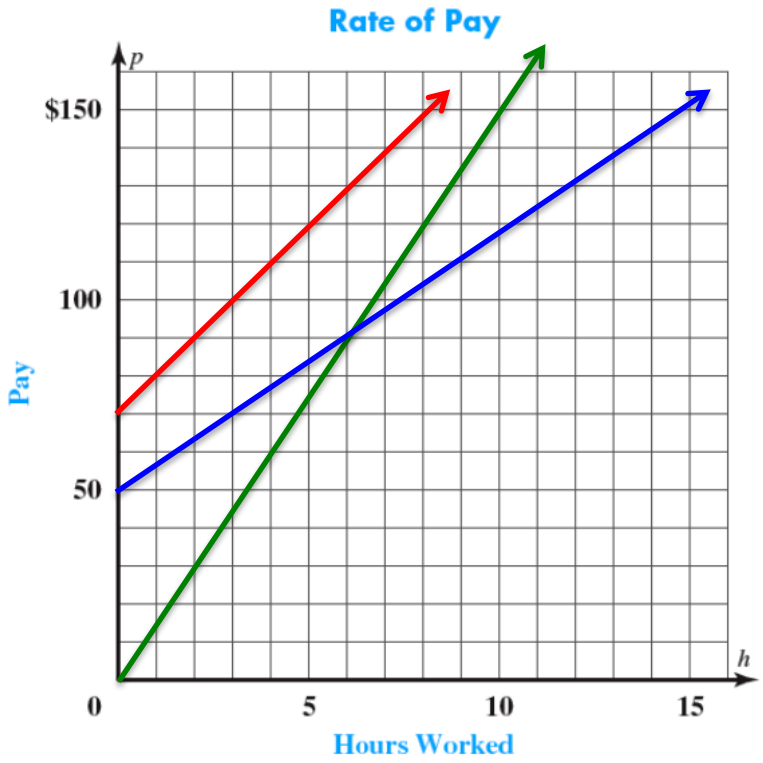
Which workers charge the same rate of pay? _____ _____

How do you know from the graph? _____

How can you tell that Tamsin has a service fee from the graph? _____

_____

The graph below shows the rate of pay for three other workers in the same line of work. Use the graph to answer the questions below.



Sarah

Frankie

Benny

Which worker has the highest rate of pay? _____

Which worker has the lowest rate of pay? _____

Which workers charge a service fee? _____ _____

Which worker charges the higher service charge? _____

Which worker does not charge a service charge? _____

Would you hire Frankie, Sarah, or Benny? _____

Why? _____

_____

Slope: Steepness of the line y-intercept: Where the line crosses the y-axis

Circle the correct term.

The rate of pay is also known as the (slope, y-intercept).

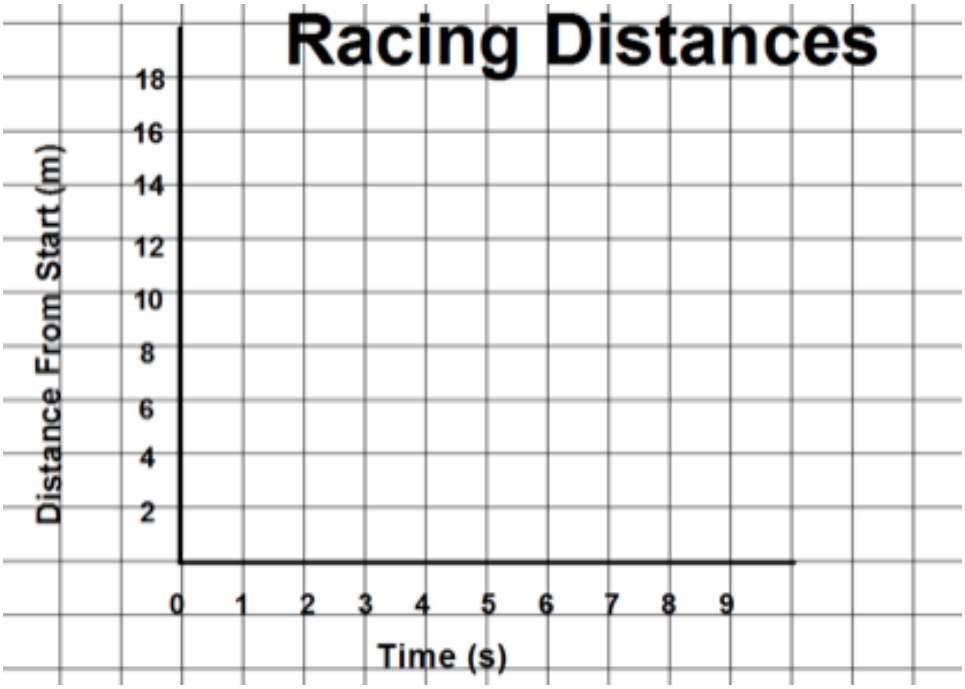
The service fee is also known as the (slope, y-intercept).

Sisters Racing

Alita and Olivia are sisters. They are having a race. Alita runs at a rate of 3 meters per second. Olivia runs at a rate of 2 meters per second. Since Alita runs faster, she gives her sister a 4 meter head start. Complete the table below.

Time (*s*)	0	1	2	3	4	5	6	10
Alita's Distance from Start (*m*)								
Olivia Distance from Start (*m*)								

Complete the graph. Include a key.



Write a rule relating the distance *d* after *s* seconds.

Alita:

Olivia:

How can you tell from the graph which sister runs at a faster speed? _____

_____

How can you tell from the graph which sister had a head start? _____

_____

Circle the correct term.

The speed is also known as the (slope, y-intercept).

The head start is also known as the (slope, y-intercept).

Five brothers ran a race. Use the clues below to answer the questions below.

Clues:

The twins began at the starting line.

Their older brother began behind the starting line.

Their two younger brothers began at difference distances ahead of the starting line.

Each boy ran at a fairly uniform speed.

Rules:

Adam: $d = 6t$

Brett: $d = 4t + 7$

Caleb: $d = 5t + 4$

David: $d = 5t$

Eric: $d = 7t - 5$

Complete the table to show how fast each boy was running and how far they are from the starting line when the race began.

Brother	Adam	Brett	Caleb	David	Eric
Distance from Start					
Speed					

1) Which brothers are the twins? _____ _____

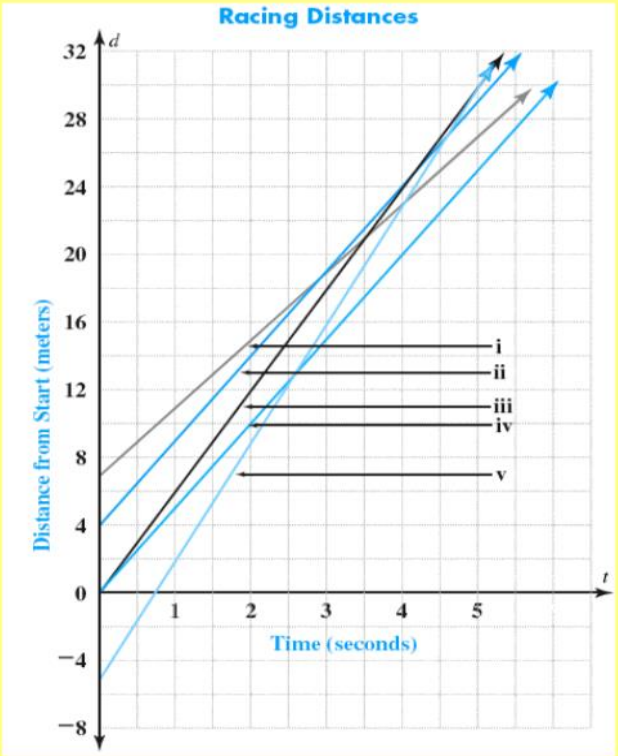
2) Which brothers got the head starts? _____ _____

3) Which brother runs the fastest? _____

4) Which two brothers run at the same rate? _____ _____

5) Which brother started behind the starting line? _____

Below is the graph of the race between the brothers. Match each graph with the correct brother.



i: _____

ii: _____

iii: _____

iv: _____

v: _____

1) What is happening in the race when two lines are intersecting? _____

_____

2) Which two brothers stay the same distance apart throughout the race?

_____ _____

How do you know? _____

_____

3) If the finish line was 30 meters from the starting line, who won? _____

4) Using the equations, how can you check your answer to #3? _____

_____

5) Check your answer using your strategy above.