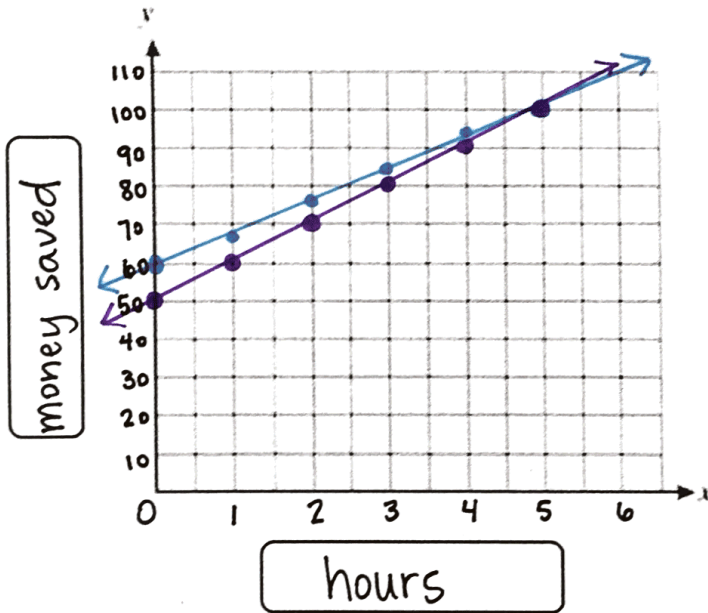


Maggie has \$50 in her savings account and makes \$10 per hour babysitting. Sophia has \$60 in her savings account and makes \$8 per hour lifeguarding. Write the equation for each person that would allow you to find the amount of money saved as a function of hours worked. (Identify the variables first)

$y =$  money saved       $x =$  hours worked

Maggie's equation:  $y = 10x + 50$  (graph on the coordinate plane below)

Sophia's equation:  $y = 8x + 60$  (graph on the coordinate plane below)



Maggie	
x	y
0	50
1	60
2	70
3	80
4	90
5	100

Sophia	
x	y
0	60
1	68
2	76
3	84
4	92
5	100

On your own... answer the following questions:

- 1) After how many hours will the girls have the same amount of money in their savings?

5

- 2) How does your graph show this?

The lines cross/intersect at 5 hours

- 3) At what point did your lines cross? (Give the coordinates)

(5, 100)

- 4) What do those numbers represent (in words)?

After 5 hours of work, Sophia and Maggie have saved the same amount of money (\$100)

- 5) Who would have more money at 7 hours?

Maggie

- 6) How do you know?

Maggie's line is steeper and her graph is above Sophia's after the point of intersection.