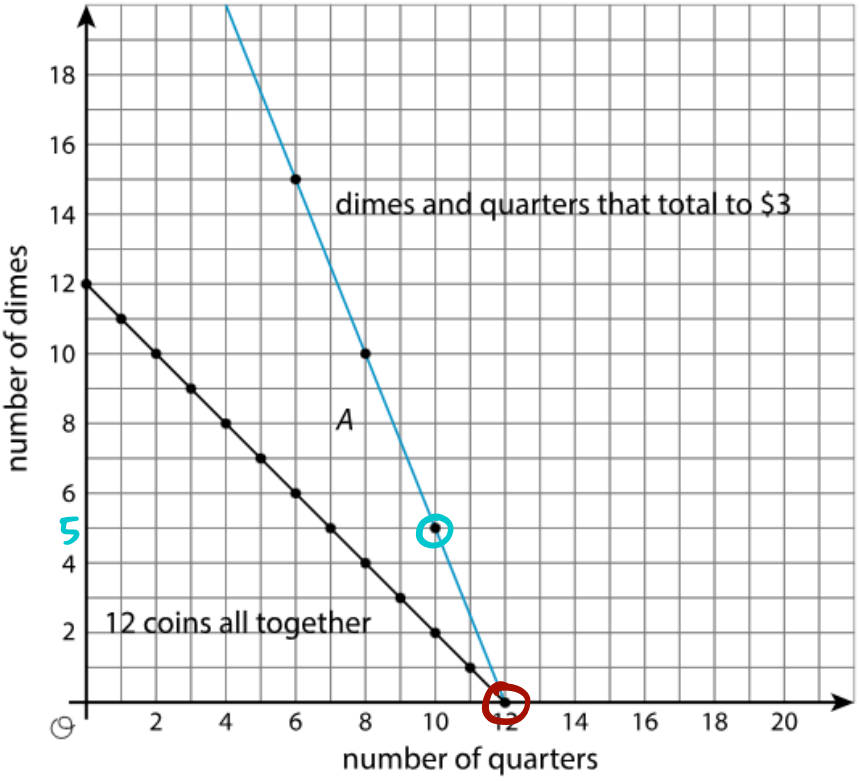
Day 14/15 Homework

Name: Key  Date: _____

1. On the coordinate plane below, one line shows the combinations of dimes and quarters that are worth $3. The other line shows the combinations of dimes and quarters that total up to 12 coins.



a. Name one combination of 12 coins shown on the graph.

Answers will vary but to list a few: (10, 2), (6, 6), (4, 8), or (2, 10)

b. Name one combination of coins shown on the graph that total to $3.

(10, 5)

c. What is the coordinate for the point where the two lines intersect?

(12, 0)

d. How many quarters and dimes would you need to have both 12 coins and $3 at the same time?

12 quarters and 0 dimes

Day 14/15 Homework

2. Mai earns $7 per hour mowing her neighbors' lawns. She also already has $14 from her savings.Priya babysits her neighbor's children. She earns $8.40 an hour.
   a. Complete the Table for each Mai and Priya for the number of hours(***h***) they work and the amount of money(***m***) they get.

Mai's Earnings		Priya's Earnings	
Hours Worked	Amount of Money	Hours Worked	Amount of Money
0	14	0	0
1	21	1	8.40
2	28	2	16.80
5	49	5	42
8	70	8	67.20
$\frac{50}{7} = 7.143$	64	10	84

Below is a space if you need to show calculation work:

h = hours worked

Mai : $7h + 14$

1 : $7(1) + 14 = 21$

2 : $7(2) + 14 = 28$

$49 = 7h + 14$

$35 = 7h$

$h = 5$ hours

Priya : $8.4h$

(1) : $8.4(1) = 8.4$

(2) : $8.4(2) = 16.8$

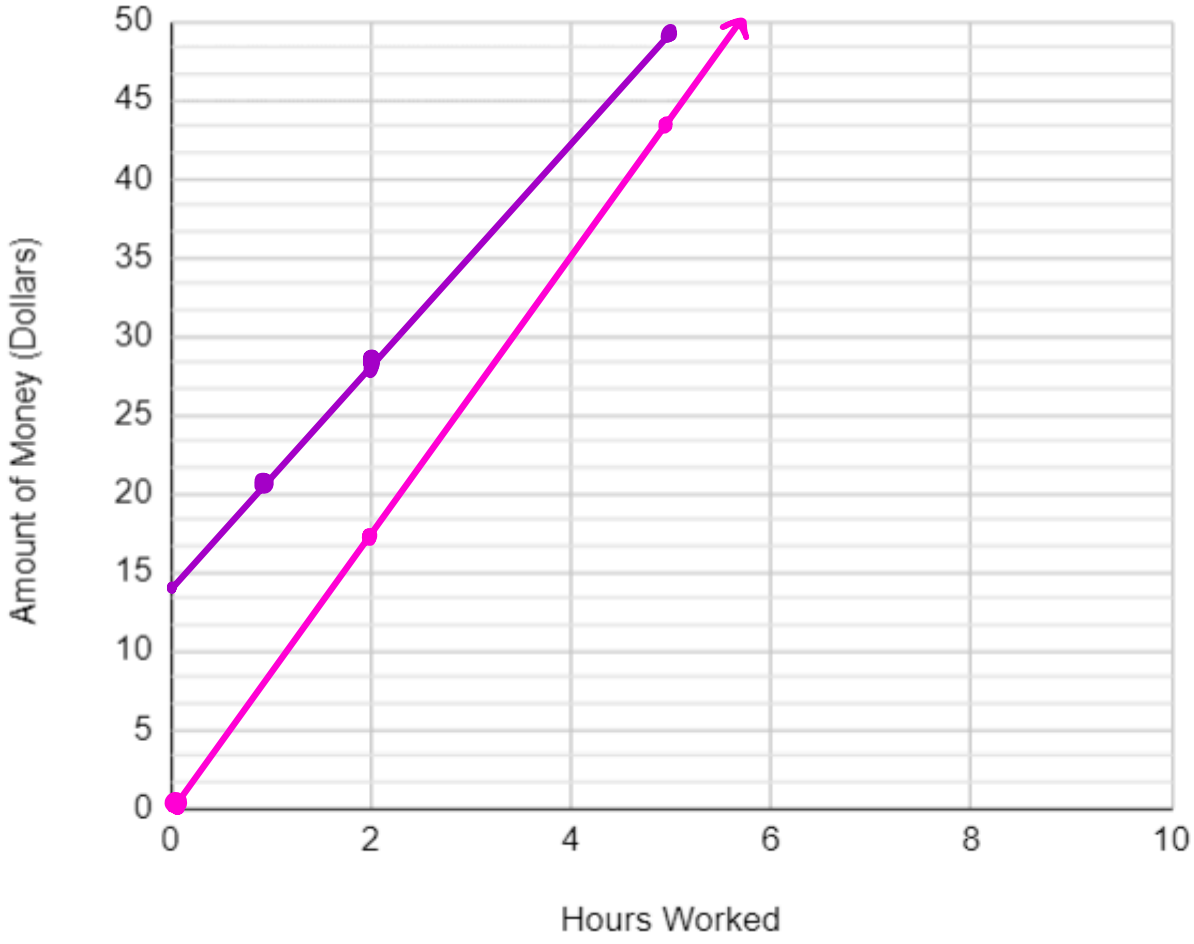
(5) : $8.4(5) = 42$

$67.20 = 8.4x$

$x = 8$

Day 14/15 Homework

For each of them, graph the amount of money (y) for the number of hours (x) they work by plotting points from the table.



Priya and Mai have agreed to go to the movies the weekend after they have earned the **same amount of money** for the **same number of work hours**.

a. How many hours do they each have to work before they go to the movies?

$$7x + 14 = 8.4x$$
$$14 = 1.4x$$
$$10 = x$$

Each have to work 10 hours before they go to the movies.

b. How much will each of them have earned?

Substitute 10 for x : $7(10) + 14 = \$84$

$8.4(10) = \$84$

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3. Benji and Greer are drinking boba. Benji starts with 12 ounces and drinks $\frac{1}{4}$ an ounce per second. Greer starts with 20 ounces and drinks $\frac{2}{3}$ an ounce per second.

a. How long will it take Benji and Greer to finish their boba?

s = second(s)

Benji: $12 + \frac{1}{4}s = 0$

$\frac{1}{4}s = -12$

$s = -30$

cannot have negative time so s = 30 seconds

Greer: $20 - \frac{2}{3}s = 0$

$-\frac{2}{3}s = 20$

$s = -30$

cannot have negative time so s = 30 seconds.

b. Now on the graph, do the following:

1. label your x-axis and y-axis
2. Highlight any intercepts and intersection points

Benji

s	oz
0	12
10	9.5
20	7
25	4.5
48	0

Greer

s	oz
0	20
5	16.67
10	13.33
20	6.67
30	0