

Name Key

Per A B C D E F Date _____

Scenario:

One of your neighbors, **Mr. Jones**, is interested in hiring you on a part-time basis to help with yard work such as raking, weeding, and shoveling in the winter. However, he **wants to pay you \$10 to come to his house to work and then \$8 for each hour you are working.** $y = 8x + 10$

A different neighbor, **Mrs. Smith**, wants to pay you **\$12 an hour for each hour you are working.** $y = 12x$

Your parents are encouraging you to take Mr. Jones's offer. You are not so sure... Which offer is better? Why?

Table:

Mr. Jones

Hours	\$
0	10
1	18
2	26
3	34
4	42
5	50
6	58
7	66
8	74
9	82
10	90

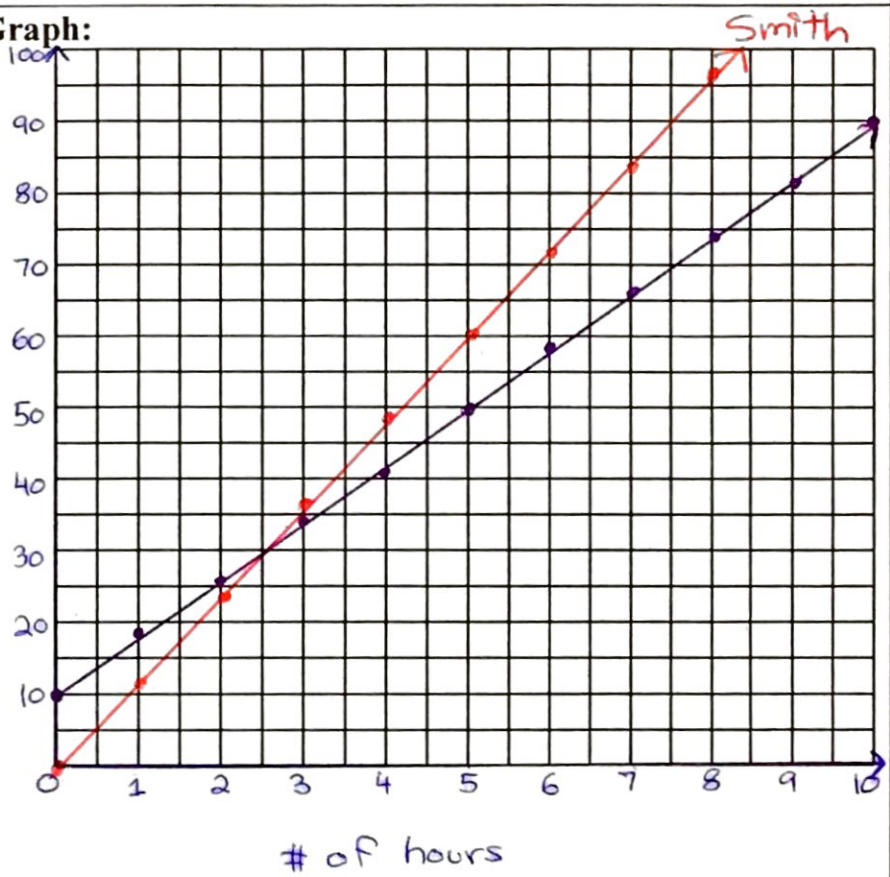
$y = 8x + 10$

Mrs. Smith

Hours	\$
0	0
1	12
2	24
3	36
4	48
5	60
6	72
7	84
8	96
9	108
10	120

$y = 12x$

Graph:



Equation: (in slope intercept form - $y = mx + b$)

Mr. Jones: $y = 8x + 10$

Mrs. Smith: $y = 12x$

Your parents are encouraging you to take Mr. Jones's offer. You're not so sure...Which offer is better? Why?

It depends on how many hours worked.

Is there a certain amount of hours you could work where the offers would be the same? 2.5 hours

When (which hours) would it be better to take Mr. Jones offer? More than 2.5 hours

When (which hours) would it be better to take Mrs. Smith's offer? Less than 2.5 hours