

*** Homework ***

The number of hours a waitress worked and the tips collected were recorded for a 5-day period.

Hours	4	8	3	2	11
Tips (\$)	12	20	7	7	26

smallest x

largest x

A) Create a scatterplot of the data using the graph below

B) Calculate the equation for the line of best fit

$(2, 7)$ $(11, 26)$
 $x_1 y_1$ $x_2 y_2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$ $m = \frac{26 - 7}{11 - 2}$ $m = \frac{19}{9}$ $m = 2.11$

$(2, 7)$ $m = 2.11$

$y = mx + b$
 $7 = (2.11)(2) + b$
 $7 = 4.22 + b$
 $-4.22 \quad -4.22$

 $2.78 = b$

C) Draw the line of best fit

D) Use your line of best fit to determine how much a waitress can earn in tips in 10 hours.

\$25

$y = mx + b$
 $m = 2.11$

$b = 2.78$
(5m)

$y = 2.11x + 2.78$

Start here

1st + last coordinate

$(4, 12)$ & $(11, 26)$
 $x_1 y_1$ $x_2 y_2$

$y = mx + b$
 $m = 2$
 $b = 4$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$(4, 12)$ $m = 2$
 $x y$

$m = \frac{26 - 12}{11 - 4}$

$y = mx + b$
 $12 = (2)(4) + b$

$m = \frac{14}{7}$

$12 = 8 + b$
 $-8 \quad -8$

$m = 2$

$4 = b$

$y = 2x + 4$

