Representations of a Line
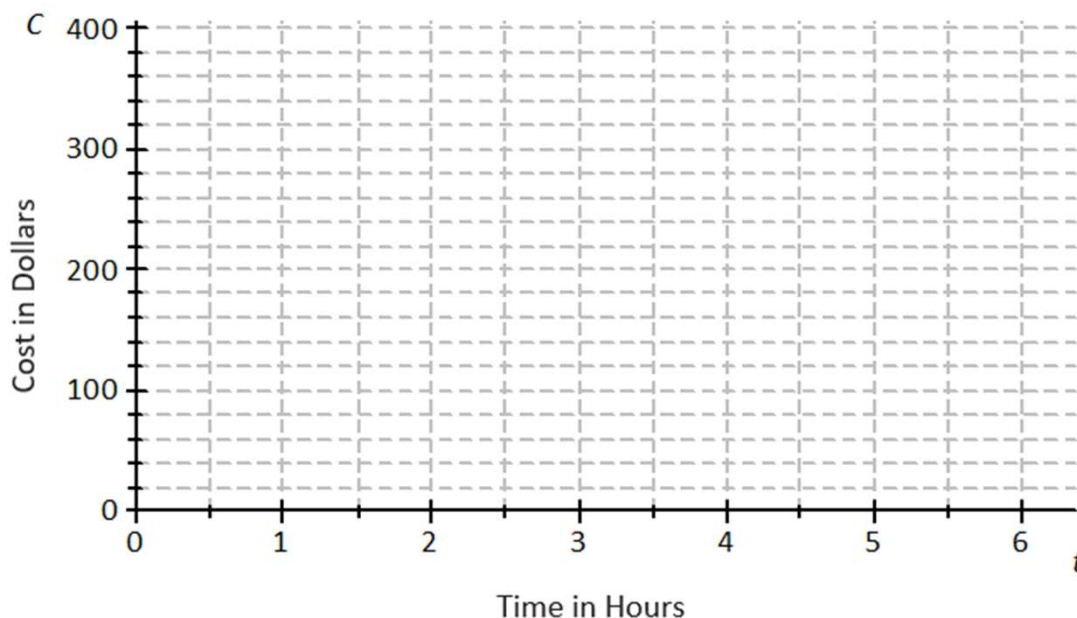
1. A plumbing company charges a service fee of $120, plus $40 for each hour worked. Sketch the graph of the linear function relating the cost to the customer (in dollars), C, to the time worked by the plumber (in hours), t, on the axes below.

a) If the plumber works for 0 hours, what is the cost to the customer? How is this shown on the graph?

b) What is the rate of change that relates cost to time?

c) Write a linear function that models the relationship between the hours worked and the cost to the customer.

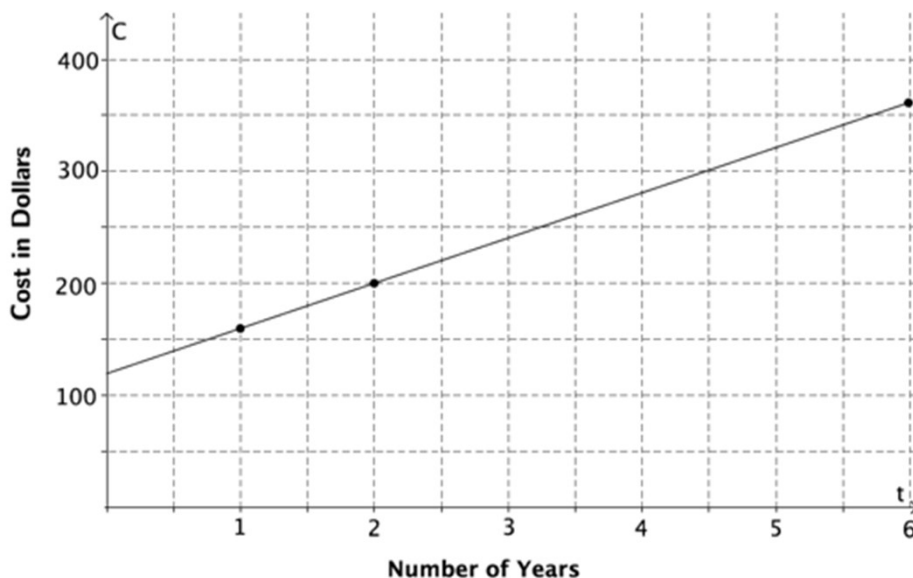d) Find the cost to the customer if the plumber works for each of the following number of hours.

     i.   1 hour

     ii. 2 hours

     iii. 6 hours

e) Plot the points for these times on the coordinate plane, and draw the line through the points.

Representations of a Line

1. A plumbing company charges a service fee of $120, plus $40 for each hour worked. Sketch the graph of the linear function relating the cost to the customer (in dollars), C, to the time worked by the plumber (in hours), t, on the axes below.

a) If the plumber works for 0 hours, what is the cost to the customer? How is this shown on the graph?

$120 *This is shown on the graph by the point* $(0, 120)$.

b) What is the rate of change that relates cost to time?

40

c) Write a linear function that models the relationship between the hours worked and the cost to the customer.

$C = 40t + 120$

d) Find the cost to the customer if the plumber works for each of the following number of hours.

i. 1 hour $160

ii. 2 hours $200

iii. 6 hours $360

e) Plot the points for these times on the coordinate plane, and draw the line through the points.

See the graph above.

Go to onlinemathlearning.com for more free math resources