

Walt understand a problem and create a rule and draw graphs on a complex problem  
 Success Criteria I know how to create a rule and draw a linear graph

## ● EXAMPLE 2

The cost of hiring a car is a \$10 booking fee plus \$4 per kilometre.


**a** Complete this table of values for the car hire.

<b>Distance (km)</b>	0	10	20	30	40
<b>Cost (\$)</b>					

**b** Sketch the graph of cost per kilometre.

**c** Find the cost of a journey of 25 km.

**d** How far can you travel for \$70?

Remember to label the axes and use equal divisions on the scale. 

**a** For a journey of 10 kilometres, cost =  $\$10 + \$4 \times 10 = \$50$

For a journey of 20 kilometres, cost =  $\$10 + \$4 \times 20 = \$90$

For a journey of 30 kilometres, cost =  $\$10 + \$4 \times 30 = \$130$

For a journey of 40 kilometres, cost =  $\$10 + \$4 \times 40 = \$170$

The table of values for hiring a car is:

<b>Distance (km)</b>	0	10	20	30	40
<b>Cost (\$)</b>	10	50	90	130	170

**b** Plot these points and draw a straight line through them.

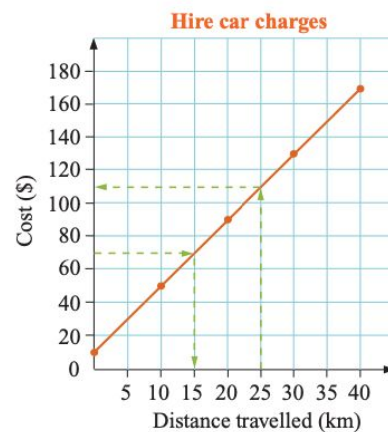
**c** Draw a line up from 25 on the  $x$ -axis to the graph.

Draw a line across to the  $y$ -axis. From the graph, the cost of a 25 km journey is about \$110.

**d** Draw a line across at 70 on the  $y$ -axis to the graph.

Draw a line down from the graph to the  $x$ -axis.

From the graph, you can travel about 15 km for \$70.



**7** The cost of hiring a taxi is \$5.00 flagfall and \$2.50 per kilometre travelled.

**a** Complete the table of values of taxi hire.

<b>Distance (km)</b>	0	10	20	30	40
<b>Cost (\$)</b>					

**b** Draw a graph showing the cost of hiring the taxi.

**c** How much does it cost to travel 15 km?

**d** How far can you travel for \$85?

**8** The cost of hiring a taxi at night is \$8.00 flagfall and \$3 per kilometre travelled.

**a** Complete the table of costs of taxi hire.

<b>Kilometres</b>	0	10	20	30	40
<b>Cost (\$)</b>					

**b** Draw a graph showing the cost of hiring the taxi.

**c** How much does it cost to travel 35 km?

**d** How far can you travel for \$50?