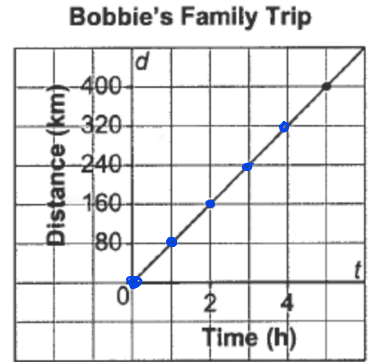


**UNIT 3 SUMMARY – Using Table of Values, Graphs, and Equations to Solve Problems**

**Example 1:**

The graph shows the distance travelled by Bobbie’s family on a trip from Burnaby to Penticton.

If the family continued through Penticton to Enderby, a total of 560 km, use a table of values to estimate how long it would take.



**Method 1** – Make a Table of Values, identify pattern, and continue to solve question.

x → t	0	1	2	3	4	5	6	7
y → d	0	80	160	240	320	400	480	560

*Handwritten notes: Red arrows above the table show a constant increase of +1 in time. Red arrows below the table show a constant increase of +80 in distance. The value 7 in the x-axis and 560 in the y-axis are highlighted in yellow.*

\* CONTINUE PATTERN TO FIND ANSWER

IT WOULD TAKE 7 HOURS.

**Example 2:** The graph shows the distance travelled by a tour bus over 5 hours.

**Method 2** – Use graph so you can extrapolate the answer. You may need to redraw the graph adjusting the axis in some instances.

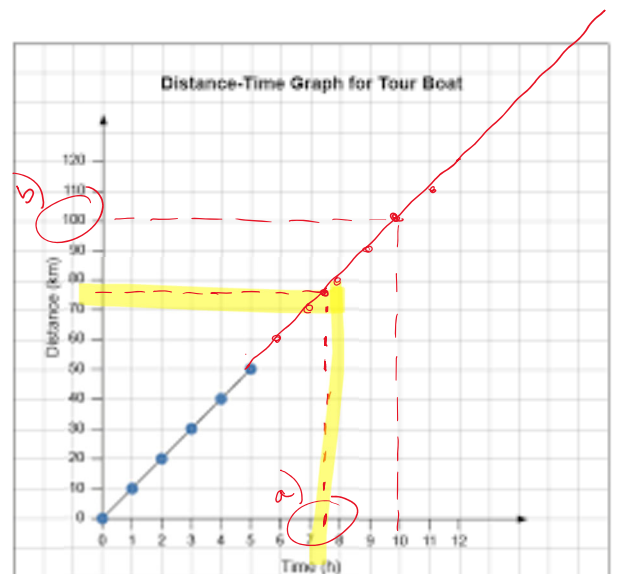
- Use a ruler to be as accurate as possible with your estimation.
- Show work on the graph.

a) Predict how far the boat will travel in 7.5 hours.

~ 75 km

b) Predict how long it will take the boat to travel 100 km.

~ 10 hours

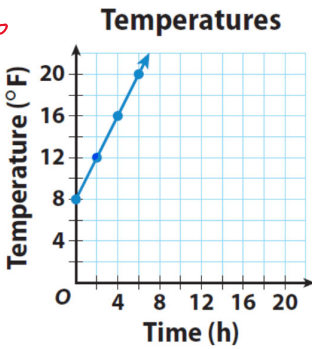


**Example 3:** This graph shows how temperature changes over time.

At what time do you expect the temperature to reach 26 °F?

Assumptions? GRAPH CONTINUES TO BE LINEAR (A STRAIGHT LINE)

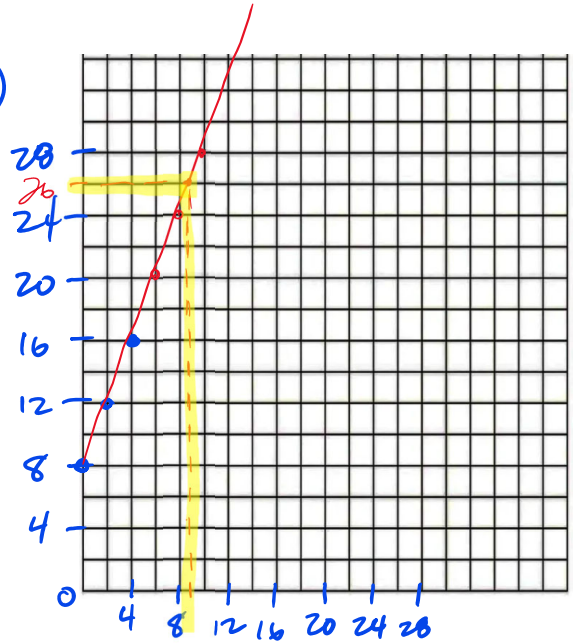
\*USE RULER!



(0, 8)  
(2, 12)  
(4, 16)

IT WOULD TAKE 9 HOURS.

\* NEED TO REDRAW!



**Example 4:** Maya jogs on a running track. This graph shows how far she jogs in 10 minutes.

Method 3 - Develop an equation then substitute and solve.

a) predict how far she will jog in 14 minutes.

b) predict how long it will take to jog 2040m.

$$y = mx + b$$

$$y = 120x + 0$$

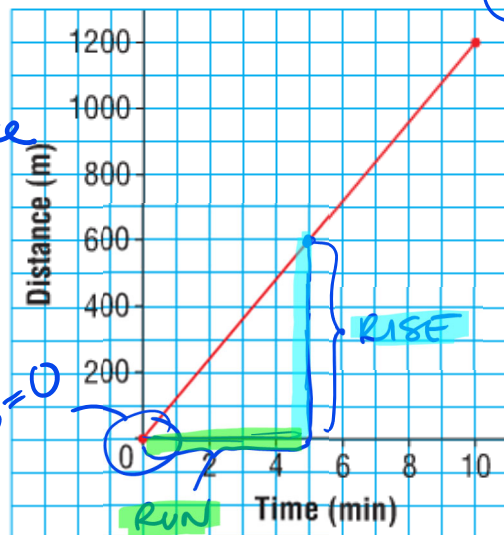
$$d = 120t$$

a)  $d = 120t$   
 $= 120(14)$   
 $= 1680 \text{ m}$

b)  $d = 120t$   
 $\frac{2040}{120} = \frac{120t}{120}$   
 $17 = t$   
 17 min

$$y = mx + b$$

Maya's Jog



$$m = \frac{\text{rise}}{\text{run}}$$

$$= \frac{+600 \text{ m}}{5 \text{ min}}$$

$$= 120 \frac{\text{m}}{\text{min}}$$