

Key

1. The Jolly Green Giant is tracking the progress of his bean's growth. Today the plant is 5 ft high. The plant grows 1.5 feet per day.

a) What is the rate of change?

1.5

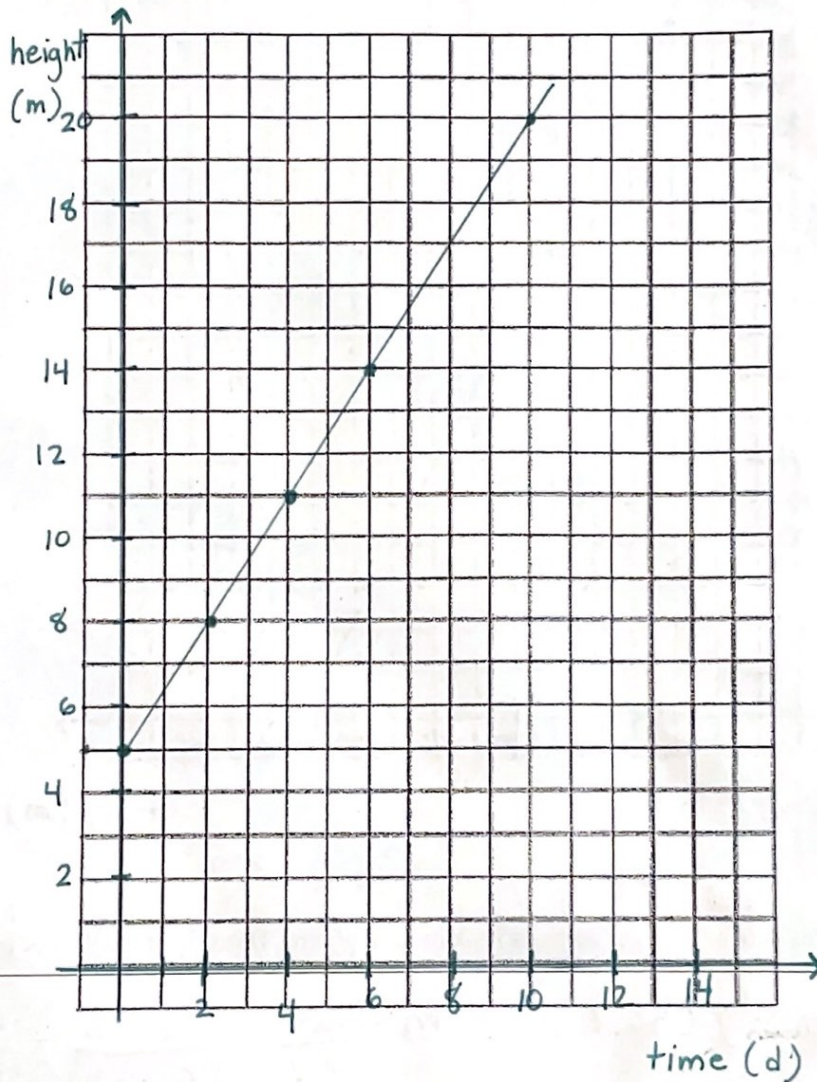
b) What is the dependent variable?

height

c) Using  $h$ , for height in feet, and  $d$  for day, what equation represents this?

$$h = 1.5d + 5$$

d) Graph this for at least 10 days of growth. (hint.....labels, independent, even spacing, the majority of the graph.....)



d	h
0	5
1	6.5
2	8
⋮	
10	20

slope:  $1.5 = \frac{3}{2}$

$$\frac{3 \uparrow}{2 \rightarrow}$$

e) What day is the plant 54.5 cm high? Show work.

$$\begin{aligned} h &= 1.5d + 5 \\ 54.5 &= 1.5d + 5 \\ - 5 & \quad - 5 \\ \hline & 49.5 = 1.5d \\ & \frac{49.5}{1.5} = \frac{1.5d}{1.5} \\ & 33 = d \end{aligned}$$

$d = 33$   
The plant is 54.5 high after 33 days