

# FUNCTION graFUN

Complete the T-chart and graph for each function.

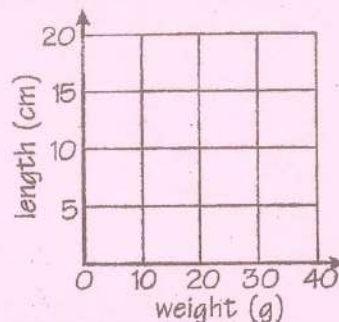
- Suppose you suspend weights from a spring.

The relationship between the length of the spring and the amount of weight suspended from it is given by the function:

$$L = 0.3w + 4$$

where  $L$  is length (cm), and  $w$  is weight (g)

$w$	$L$
0	
10	
20	
30	
40	



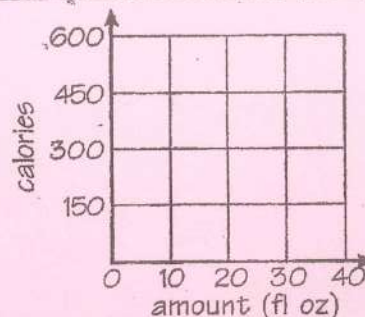
- Suppose you order a pitcher of root beer.

The relationship between the number of calories in the root beer and the amount of root beer is given by the function:

$$C = 14b$$

where  $C$  is calories, and  $b$  is amount (fl oz)

$b$	$C$
0	
10	
20	
30	
40	



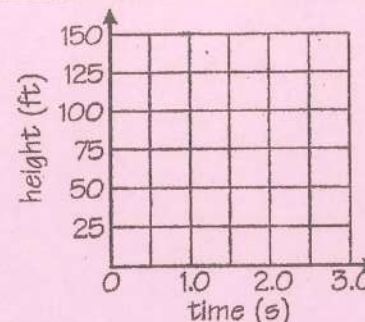
- Suppose you are standing on a cliff 144 feet above the ocean surface. You drop a rock.

The relationship between the height of the rock above the water and time since you dropped it is given by the function:

$$h = 144 - 16t^2$$

where  $h$  is height (ft), and  $t$  is time (s).

$t$	$h$
0	
0.5	
1.0	
1.5	
2.0	
2.5	
3.0	



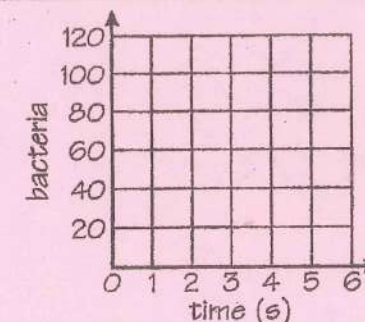
- Suppose you observe a colony of bacteria. At first there are 10 bacteria, but the number increases 150% every hour.

The relationship between the total number of bacteria and time is given by the function:

$$n = 10 \cdot 1.5^t$$

where  $n$  is number of bacteria, and  $t$  is time (h). (Round to the nearest whole number.)

$t$	$n$
0	
1	
2	
3	
4	
5	
6	



- Suppose you plan to ride a bike 36 miles.

The relationship between the time needed to complete the trip and your average speed is given by the function:

$$t = \frac{36}{r}$$

where  $t$  is time (h), and  $r$  is average speed (mph)

Can you name each type of function on this page?

$r$	$t$
2	
3	
4	
6	
9	
12	
18	

