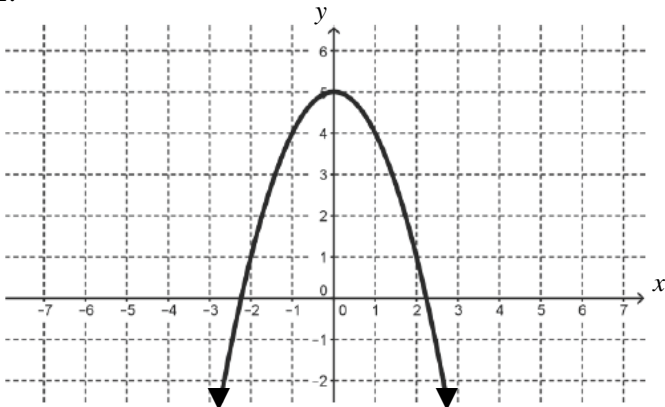
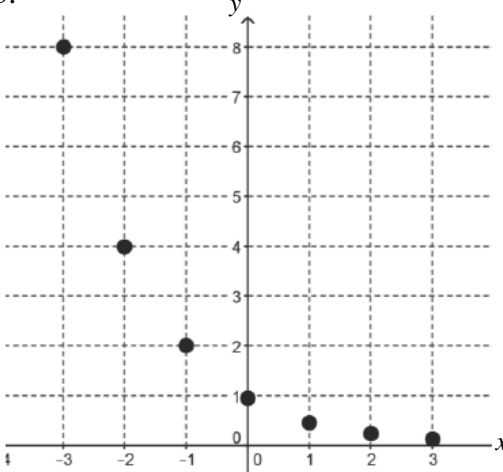


**Task 1.7: How Does It Grow?**

For each given relation, determine the listed characteristics.

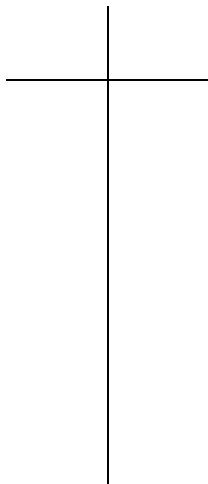
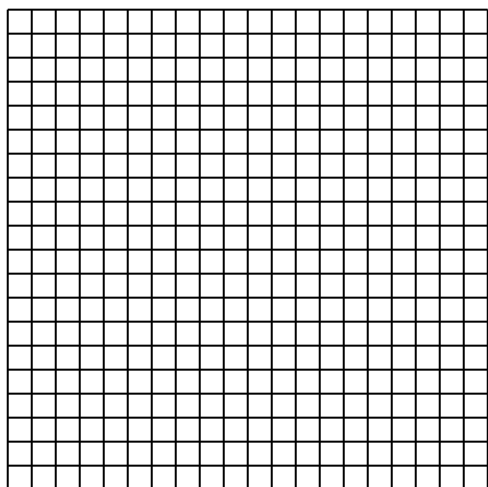
1. A plumber charges a base fee of \$55 for a service call plus \$35 per hour for each hour worked during the service call. The relationship between the total price of the service call and the number of hours worked.
- a) Function: YES or NO      d) Explicit function:
- b) Linear, Exponential, Quadratic or Neither:
- c) Describe the type of growth:      e) Recursive function:

- 2.
- 
- a) Function: YES or NO      d) Domain:
- b) Linear, Exponential, Quadratic or Neither:      e) Range:
- c) Describe the type of growth:      f) Explicit function:
- g) Recursive function:

- 3.
- 
- a) Function: YES or NO      d) Domain:
- b) Linear, Exponential, Quadratic or Neither:      e) Range:
- c) Describe the type of growth:      f) Explicit function:
- g) Recursive function:

4.  $y = \frac{1}{3}(x-2)^2 + 4$

a) Graph & Table:



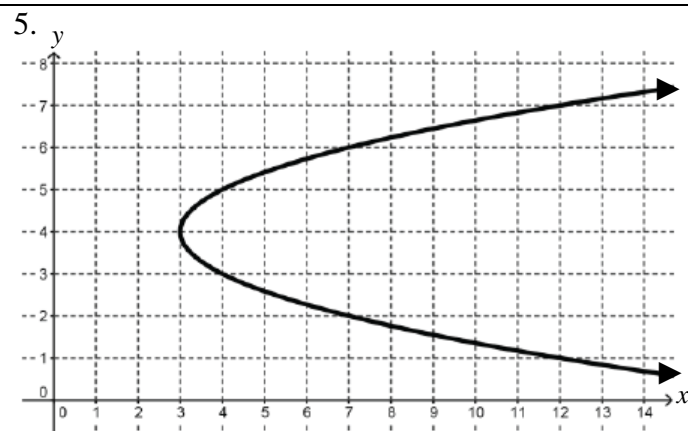
b) Function: YES or NO

c) Linear, Exponential, Quadratic or Neither:

d) Describe the type of growth:

e) Domain:

f) Range:



a) Function: YES or NO

d) Domain:

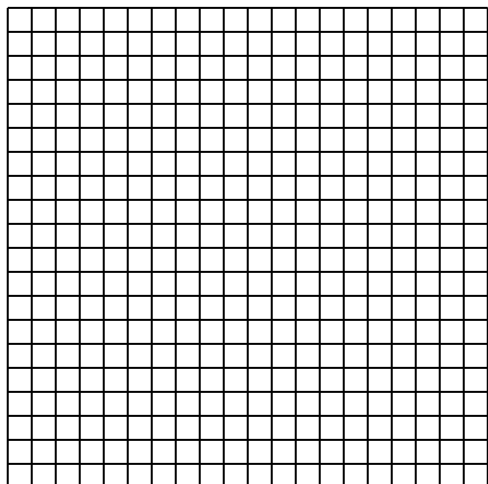
b) Linear, Exponential, Quadratic or Neither:

e) Range:

c) Describe the type of growth:

6.  $y = \frac{1}{3}(x-2)+4$

a) Graph:



b) Function: YES or NO

e) Domain:

c) Linear, Exponential, Quadratic or Neither:

f) Range:

d) Describe the type of growth:

h) Recursive function:

7. The relationship between the speed of a car and the distance it takes to stop when traveling at that speed.

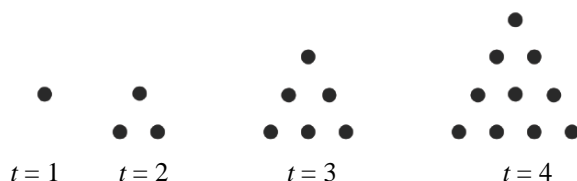
$x$	$f(x)$
10	13.5
20	36.0
30	69.5
40	114.0
50	169.5
60	236
70	313.5

- a) Function: YES or NO  
b) Linear, Exponential, Quadratic or Neither:

c) Describe the type of growth:

d) Recursive function:

8. The relationship between the number of dots in the figure and time,  $t$ .



- a) Function: YES or NO  
b) Linear, Exponential, Quadratic or Neither:

c) Describe the type of growth:

d) Domain:

e) Range:

f) Recursive function:

9. The rate at which caffeine is eliminated from the bloodstream of an adult is about 15% per hour. The relationship between the amount of caffeine in the bloodstream and the number of hours from the time the adult drinks the caffeinated beverage.

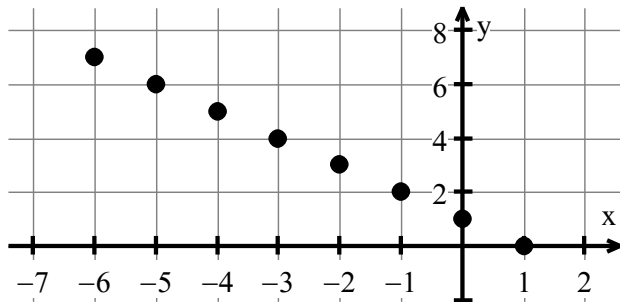
d) Table & Graph:

# of hours	% of caffeine left



- a) Function: YES or NO  
b) Linear, Exponential, Quadratic or Neither:  
c) Describe the type of growth:

10.



a) Function: YES or NO      d) Domain:

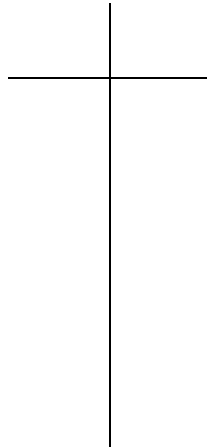
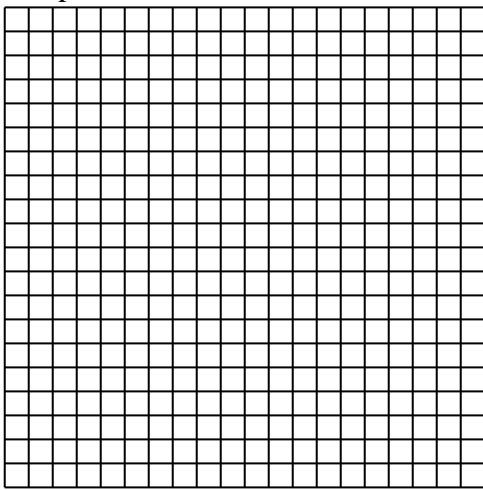
b) Linear, Exponential, Quadratic or Neither:      e) Range:

c) Describe the type of growth:      f) Explicit function:

g) Recursive function:

11.  $y = (4x + 3)(x - 6)$

a) Graph & Table:



b) Function: YES or NO

c) Linear, Exponential, Quadratic or Neither:

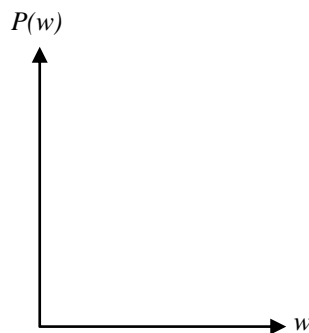
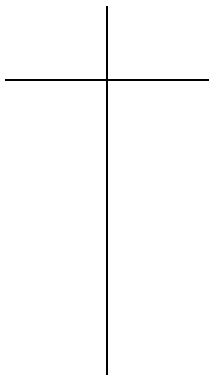
d) Describe the type of growth:

e) Domain:

f) Recursive function:

12. Mary Contrary wants to build a rectangular garden surrounded by a walkway 4 meters wide. The flower garden will be 6 meters longer than it is wide. The relationship between the width of the garden and the perimeter of the walkway.

a) Table & Graph:



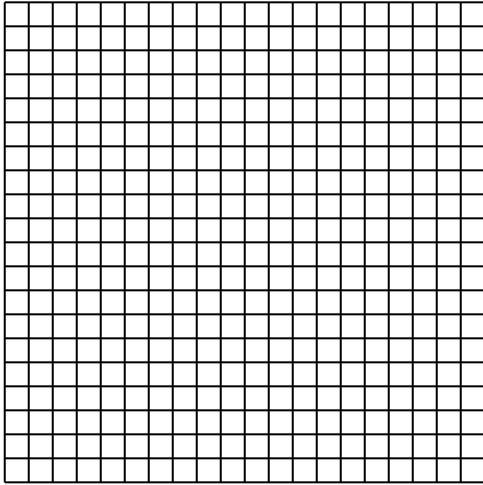
a) Function: YES or NO      d) Domain:

b) Linear, Exponential, Quadratic or Neither:      e) Range:

c) Describe the type of growth:      f) Explicit function:

13.  $y = \left(\frac{1}{3}\right)^{x-2} + 4$

a) Graph:



b) Function: YES or NO

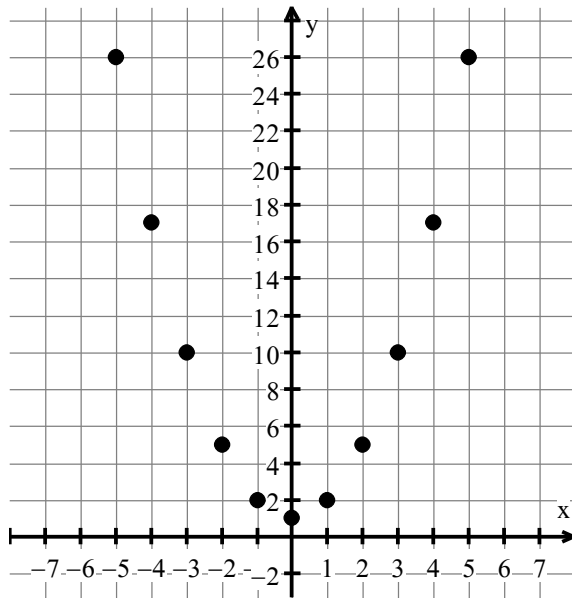
e) Domain:

c) Linear, Exponential, Quadratic or Neither:

f) Range:

d) Describe the type of growth:

14.



a) Function: YES or NO

d) Domain:

b) Linear, Exponential, Quadratic or Neither:

e) Range:

c) Describe the type of growth:

f) Explicit function:

g) Recursive function: