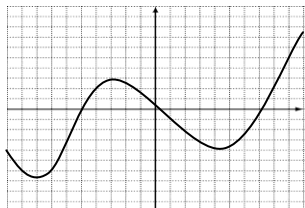


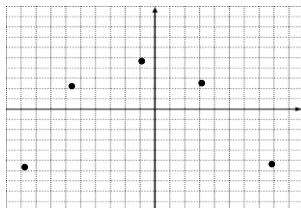
## Section 1.1, 1.2

1. Is it a function? Circle “Yes” or “No” for each of the following.

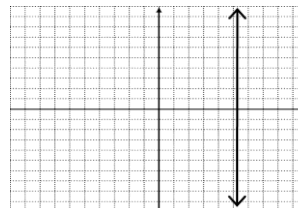
a. Yes or No



b. Yes or No



c. Yes or No



d. Yes or No

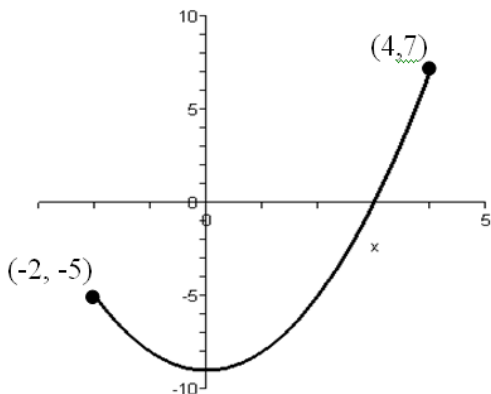
Input	Output
-4	54
-1	2
5	-1
22	9

e. Yes or No

Input	Output
4	12
6	12
8	12
10	12

f. Yes or No  
(2, -3), (-5, 2), (-3, 1)

2. The graph of  $f(x)$  is given below.



- $f(0) = \underline{\hspace{2cm}}$
- $f(x) = 0$  when  $x = \underline{\hspace{2cm}}$
- Rewrite the ordered pair (2, -5) using function notation.  $\underline{\hspace{2cm}}$
- Determine the Average Rate of change of  $f(x)$  from  $(-2, f(-2))$  to  $(4, f(4))$

3. The stopping distance,  $D(s)$ , in feet of a car is a function of the speed,  $s$ , in miles per hour at which the car was traveling when the brakes were applied.

Identify the input variable, include units: \_\_\_\_\_

Identify the output variable, include units: \_\_\_\_\_

Interpret  $D(30)=55$  using complete sentences. Your answer must include units.

4. The functions  $g(x)$  is defined by the following table

$x$	-2	-1	0	1	2	3	4
$g(x)$	9	6	2	35	5	8	11

a)  $g(4) = \underline{\hspace{2cm}}$

b.  $g(x) = 2$  when  $x = \underline{\hspace{2cm}}$

c)  $g(-1) - g(3) =$

d)  $\frac{g(4) - g(1)}{4 - 1} =$

b) Determine the average rate of change from  $(-1, g(-1))$  to  $(2, g(2))$

5. Let  $f(x) = 5 - x^2$  and  $g(x) = 2 - 3x$ . Simplify your answers.

a. Determine  $f(-2)$ .

b. Determine  $x$  when  $f(x) = 0$ .

c. Determine  $g(a)$ .

d. Determine  $f(x+h)$

d. Determine the average rate of change of  $f(x)$  from  $(-2, f(-2))$  to  $(0, f(0))$ .

e. Determine the average rate of change of  $g(x)$  from  $(a, g(a))$  to  $(b, g(b))$ .

f. Determine the average rate of change of  $g(x)$  from  $(x, g(x))$  to  $(x+h, g(x+h))$ .