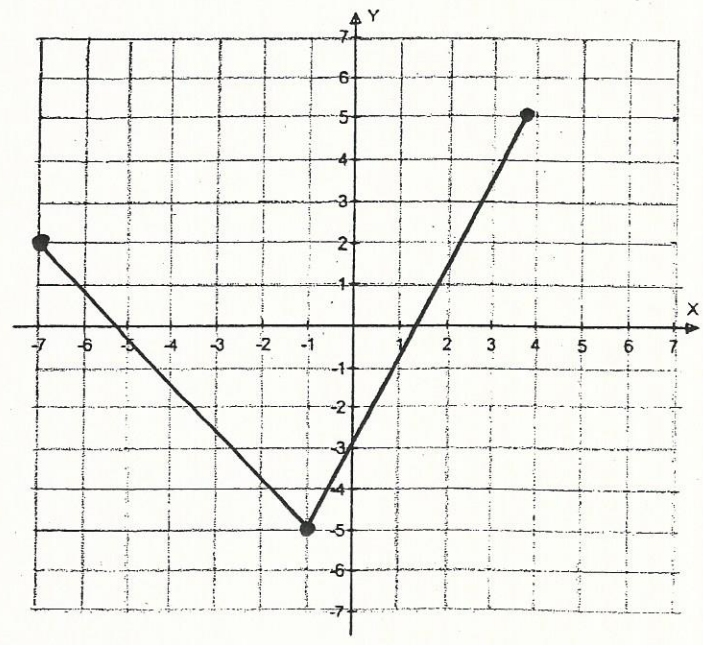


Functions Problem Type **B**

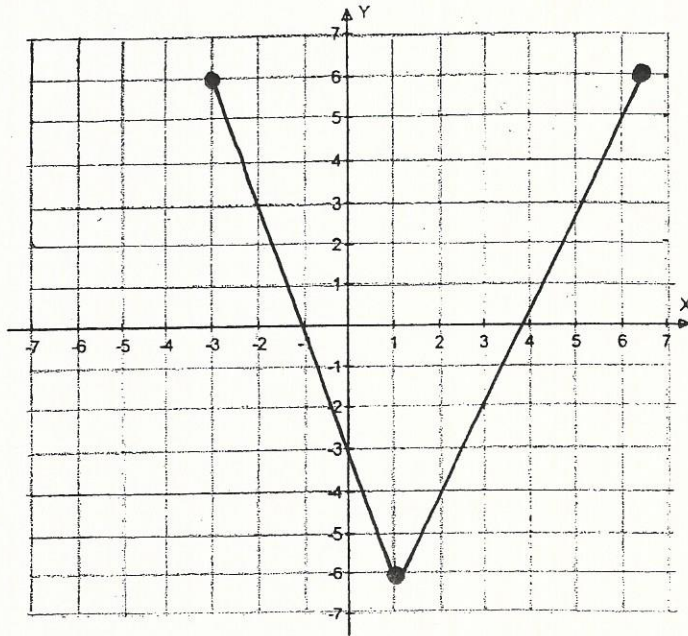
e.g. The following graph represents functional situation  $f$ .



Indicate whether each of the following statements is true or false.

- a) The function has a minimum and two maximums.     T
- b) The domain is  $[-5, 5]$ .     F
- c) The function has no axis of symmetry.     T
- d) The y-intercept is  $-5$ .     F

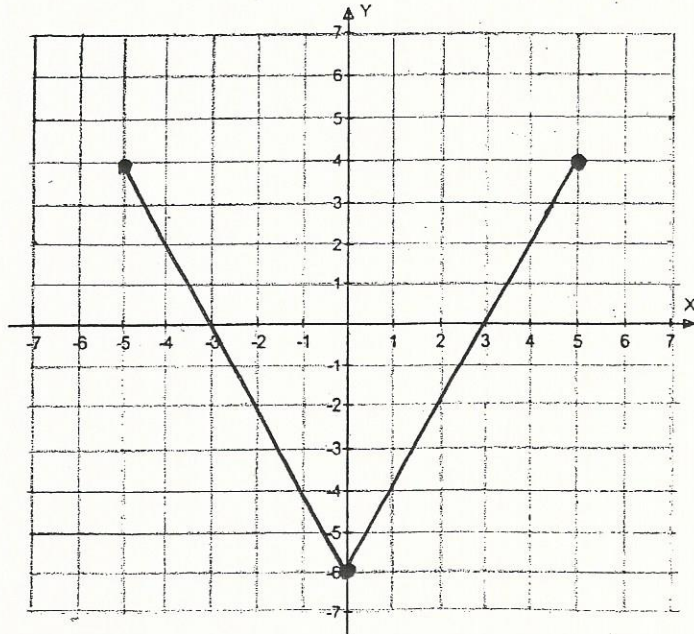
3 1. The following graph represents functional situation f.



Indicate whether each of the following statements is true or false.

- a) The function has a minimum and two maximums.         F
- b) The domain is  $[-6, 6]$ .         F
- c) The function has no axis of symmetry.         T
- d) The y-intercept is  $-3$ .         T

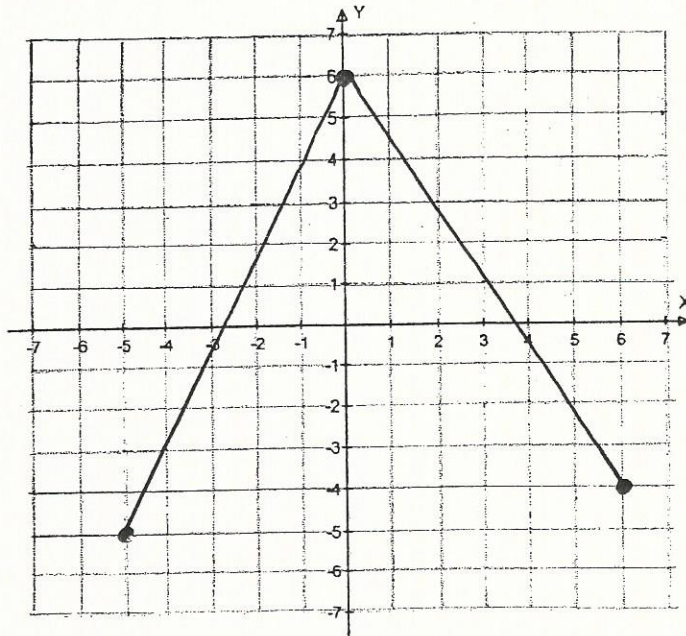
2. The following graph represents functional situation  $f$ .



Indicate whether each of the following statements is true or false.

- a) The function has a minimum and two maximums.           F
- b) The domain is  $[-5, 5]$ .           T
- c) The function has no axis of symmetry.           F
- d) The  $y$ -intercept is  $3$ .           F

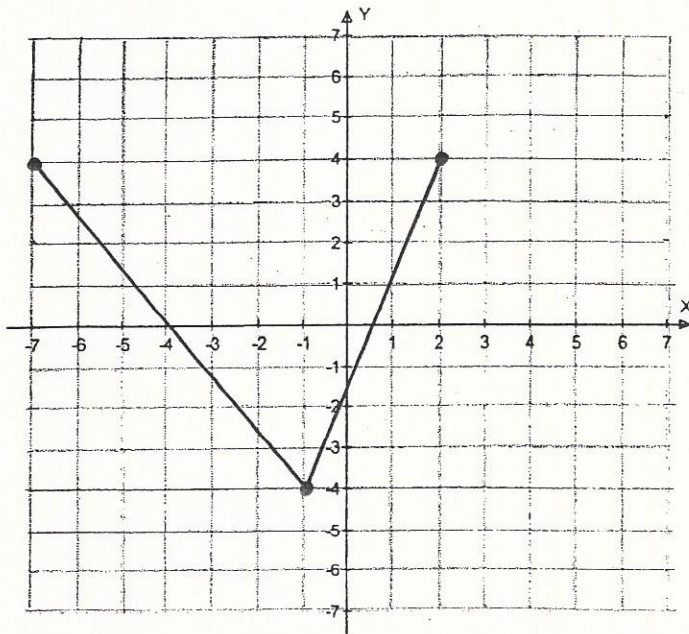
3. The following graph represents functional situation  $f$ .



Indicate whether each of the following statements is true or false.

- a) The function has a minimum and two maximums.         F
- b) The domain is  $[-3, 4]$ .         F
- c) The function has no axis of symmetry.         T
- d) The y-intercept is 6 :         T

4. The following graph represents functional situation  $f$ .

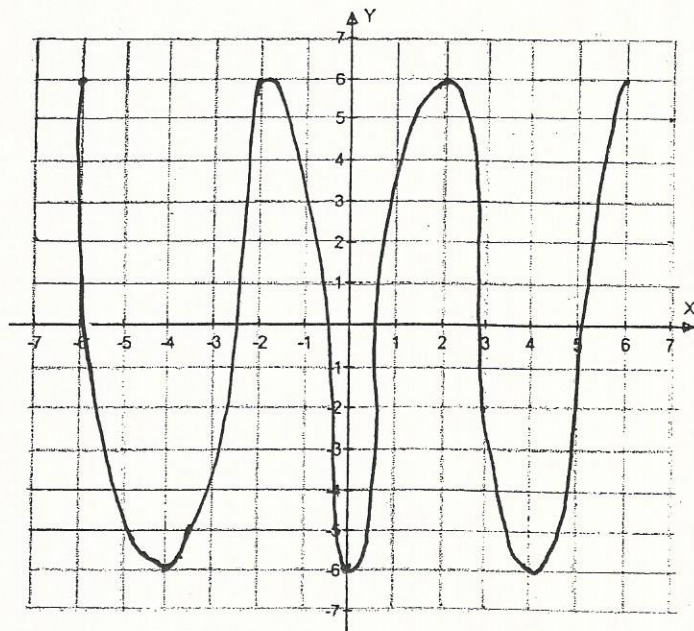


Indicate whether each of the following statements is true or false.

- a) The function has a minimum and two maximums.           F
- b) The domain is  $[-4, 4]$ .           F
- c) The function has no axis of symmetry.           T
- d) The y-intercept is  $-4$ .           F

Functions Problem Type C

e.g. The following graph represents functional situation g.



Indicate whether each of the following statements is true or false.

a) Function g is both decreasing and positive over the interval  $[-2, -0.5]$ .

F

b)  $g(0) = g(2) = g(4)$

F

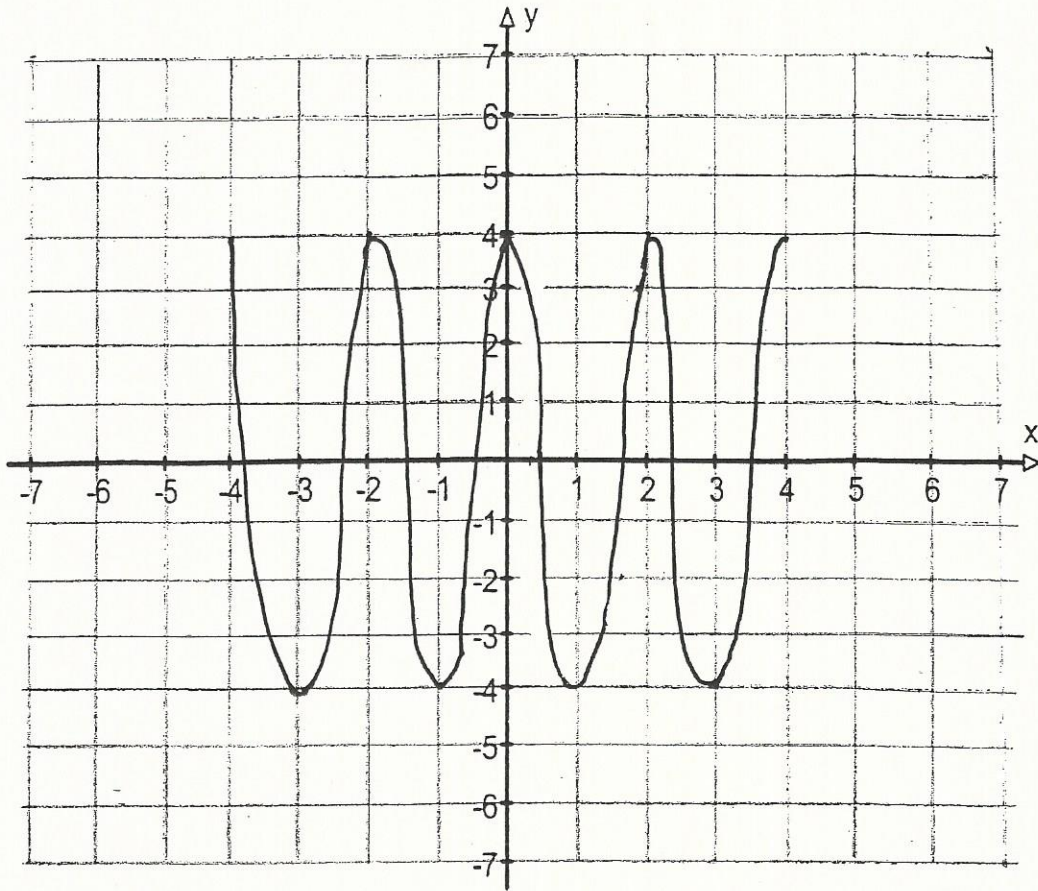
c) The range and the domain of the function are  $[-6, 6]$ .

F

d) The values  $x = 0$  and  $x = -6$  are the x-intercepts of this function.

F

C- 1. The following graph represents functional situation g.



Indicate whether each of the following statements is true or false.

a) Function g is both decreasing and positive over the interval  $[0, 0.5]$ .

T

b)  $g(0) = g(3) = g(-2)$

F

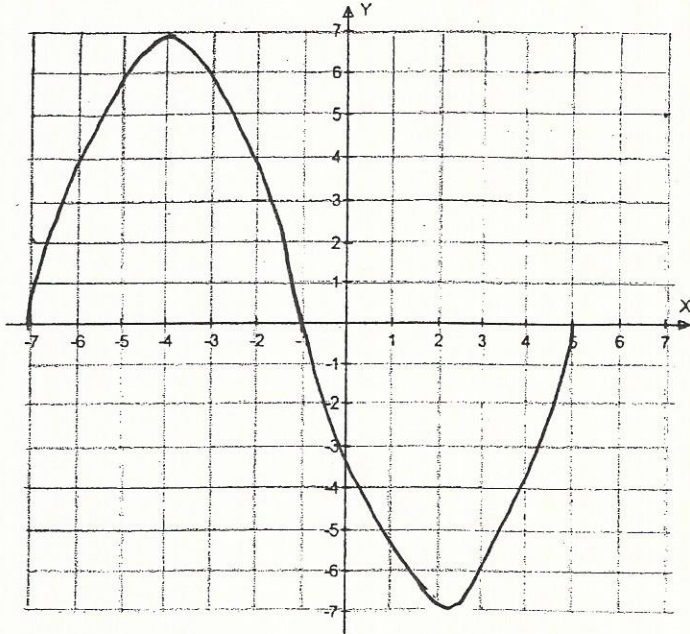
c) The range and the domain of the function are  $[-4, 4]$ .

T

d) The values  $x = 0$  and  $x = 3.5$  are the x-intercepts of this function.

F

C-2. The following graph represents functional situation g.

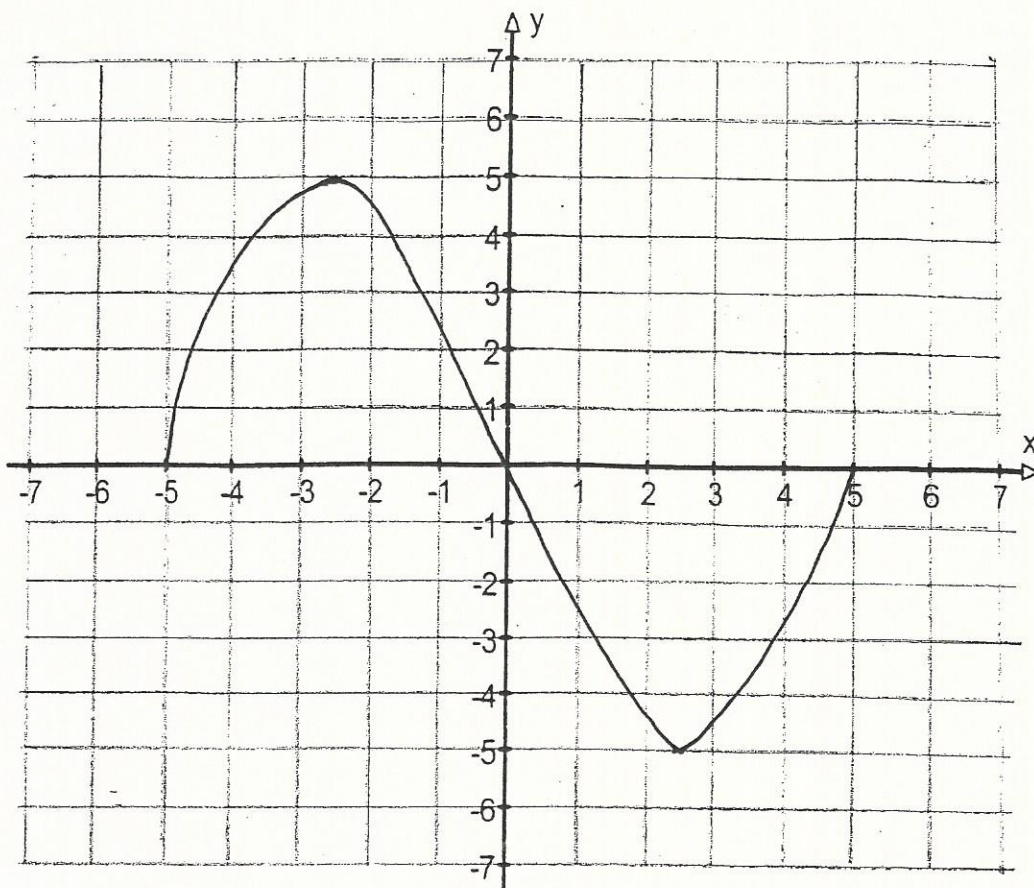


Indicate whether each of the following statements is true or false.

- a) Function g is both decreasing and positive over the interval  $[-4, 0]$ . F
- b)  $g(-7) = g(-1) = g(2)$  F
- c) The range and the domain of the function are  $[-7, 5]$ . F
- d) The values  $x = -1$  and  $x = 0$  are the x-intercepts of this function. F



C-3. The following graph represents functional situation g.



Indicate whether each of the following statements is true or false.

a) Function g is both decreasing and positive over the interval  $[-5, -2.5]$ .

F

b)  $g(-5) = g(0) = g(5)$

F

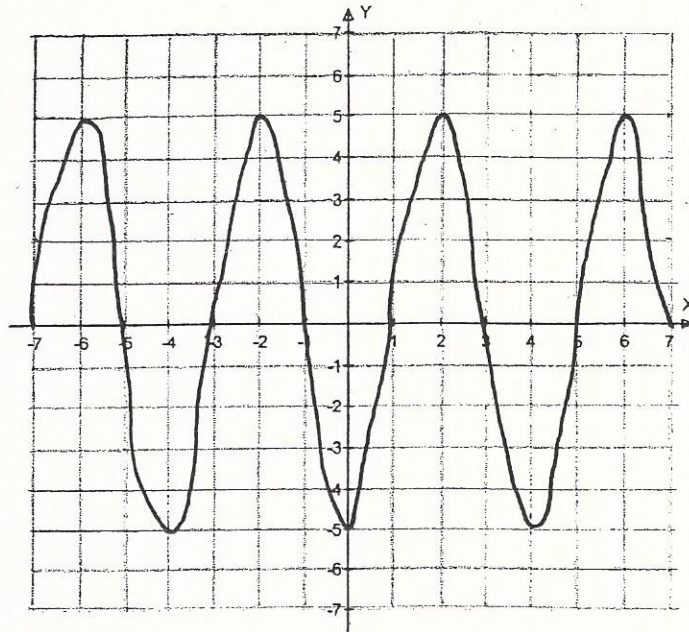
c) The range and the domain of the function are  $[-5, 5]$ .

F

d) The values  $x = 0$  and  $x = 5$  are the x-intercepts of this function.

F

C-4. The following graph represents functional situation g.



Indicate whether each of the following statements is true or false.

a) Function g is both decreasing and positive over the interval  $[6, 7]$ .

T

b)  $g(-2) = g(2) = g(6)$

T

c) The range and the domain of the function are  $[-7, 7]$ .

F

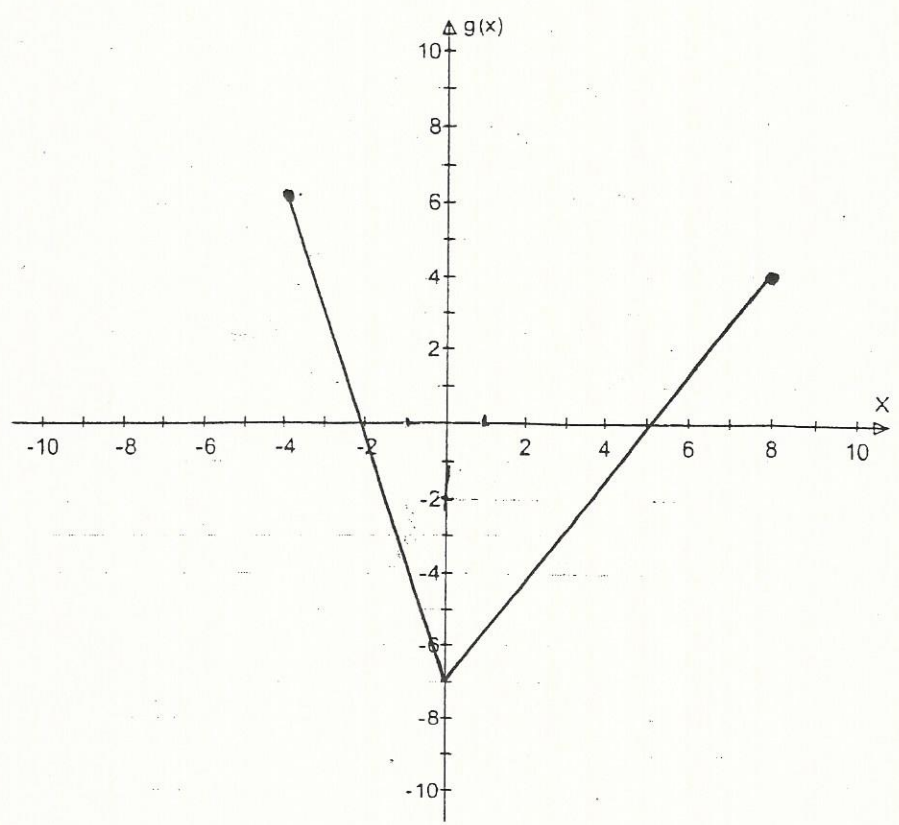
d) The values  $x = -5$  and  $x = 0$  are the x-intercepts of this function.

F

Functions Problem Type D

The following graph represents functional situation g.

e.g.



Determine the following characteristics of this function.

a) Domain: [-4, 8]

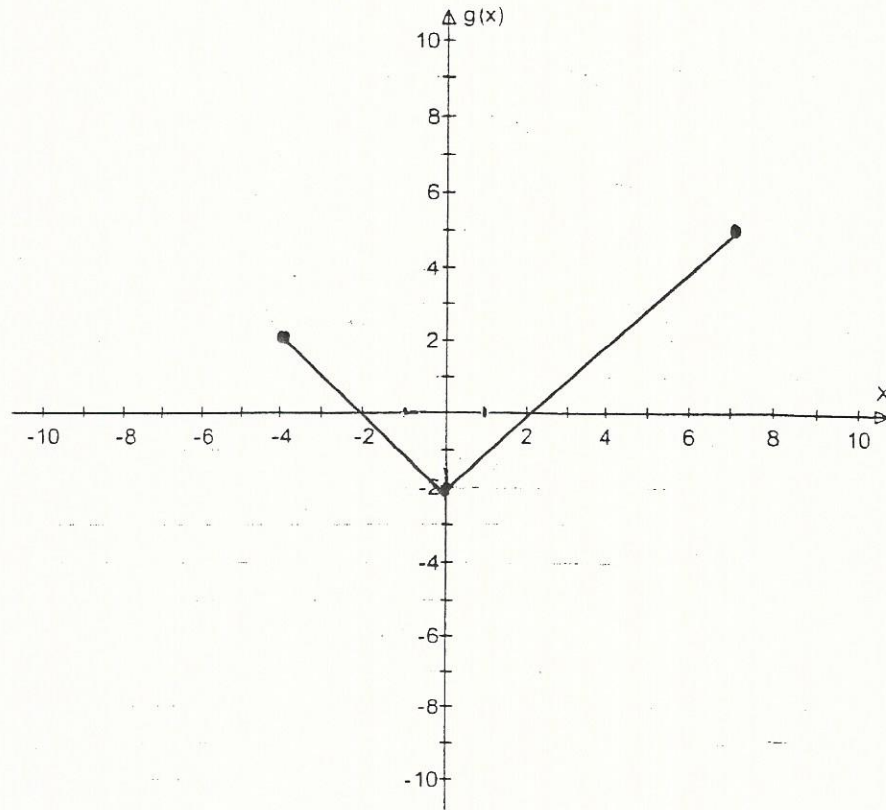
b) Range: [-7, 6]

c) Zero(s): -2 and 5

d) The minimum of g: -7

e) The interval over which the function is both increasing and negative:  
[0, 5]

1. The following graph represents functional situation g.



Determine the following characteristics of this function.

a) Domain:  $[-4, 7]$

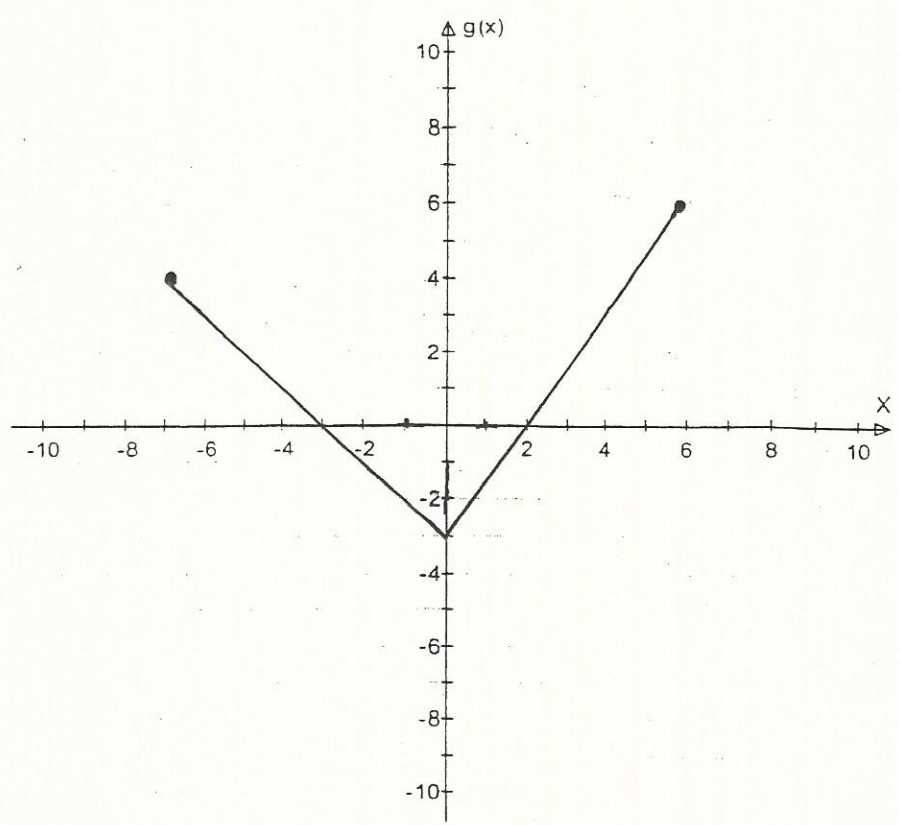
b) Range:  $[-2, 5]$

c) Zero(s):  $-2$  and  $2$

d) The minimum of g:  $-2$

e) The interval over which the function is both increasing and negative:  
 $(0, 2]$

D-2. The following graph represents functional situation g.



Determine the following characteristics of this function.

a) Domain:  $[-7, 6]$

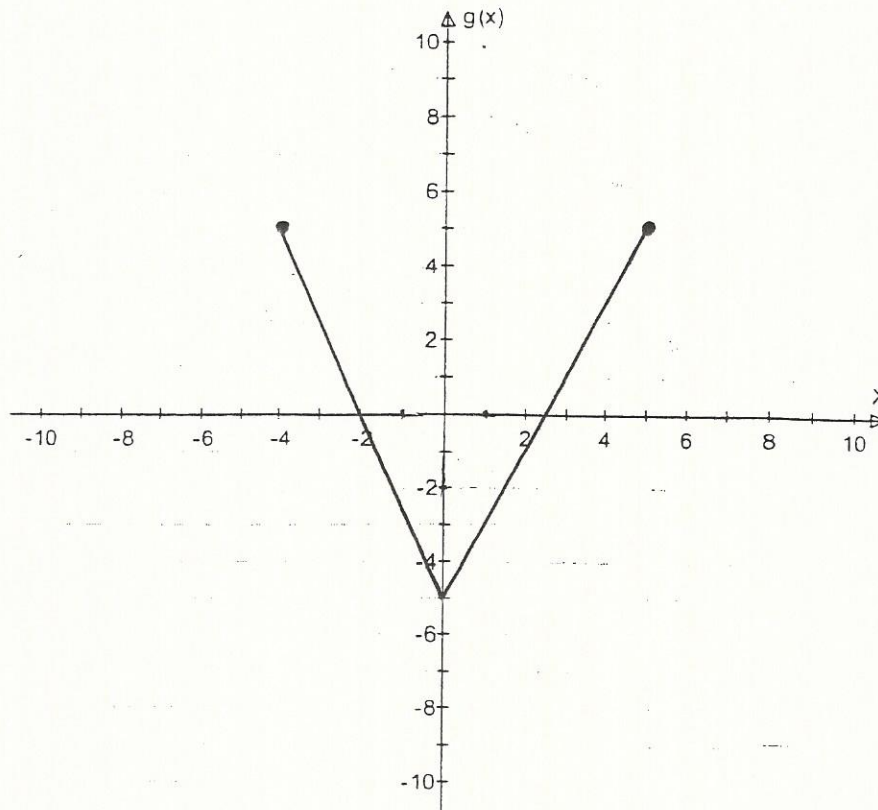
b) Range:  $[-3, 6]$

c) Zero(s):  $-3$  and  $2$

d) The minimum of g:  $-3$

e) The interval over which the function is both increasing and negative:  
 $[0, 2)$

D-3. The following graph represents functional situation g.



Determine the following characteristics of this function.

a) Domain:  $[-4, 5]$

b) Range:  $[-5, 5]$

c) Zero(s):  $-2$  and  $2.5$

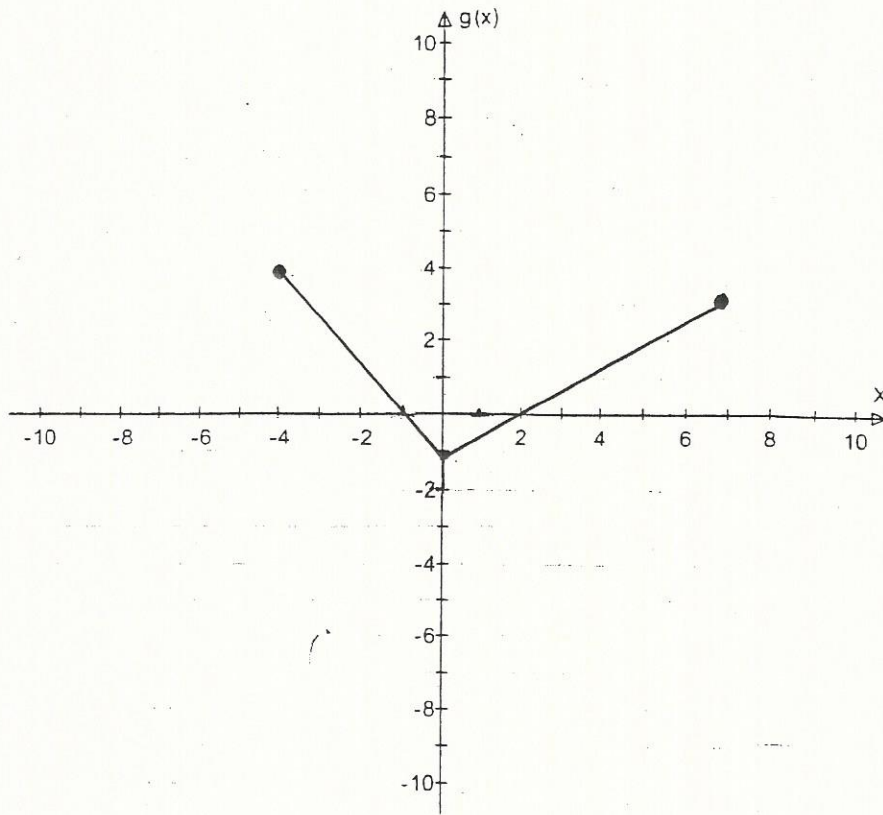
d) The minimum of g:  $-5$

e) The interval over which the function is both increasing and negative:

$[0, 2.5]$

15

D- 4. The following graph represents functional situation  $g$ .



Determine the following characteristics of this function.

a) Domain:  $[-4, 7]$

b) Range:  $[-1, 4]$

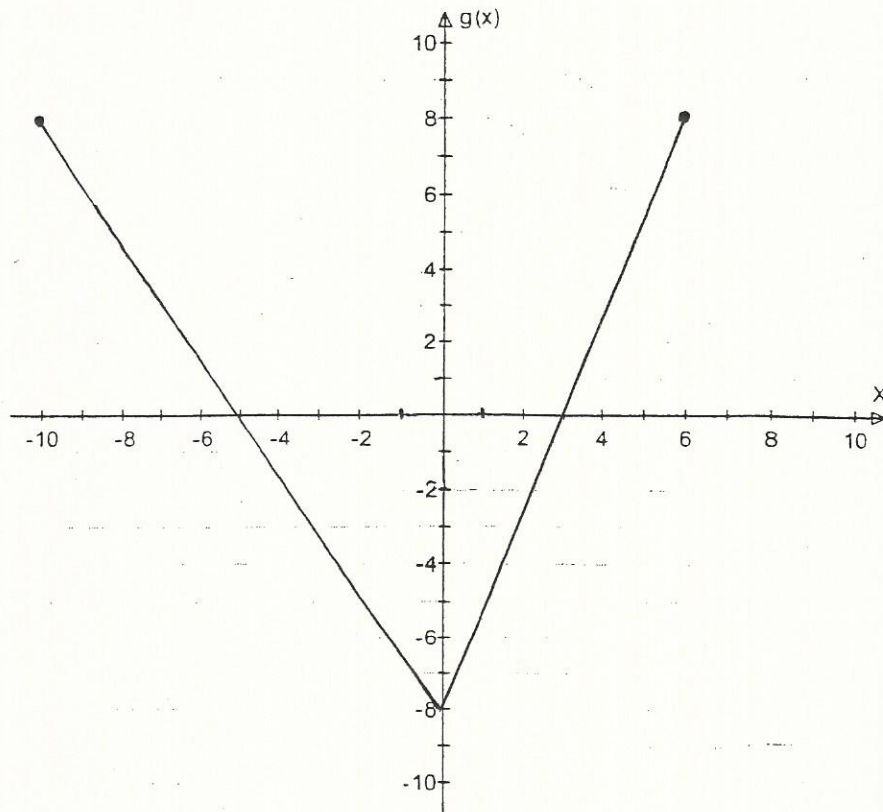
c) Zero(s):  $-1$  and  $2$

d) The minimum of  $g$ :  $-1$

e) The interval over which the function is both increasing and negative:  
 $[0, 2]$

14  
16

D-5. The following graph represents functional situation g.



Determine the following characteristics of this function.

a) Domain:  $[-10, 6]$

b) Range:  $[-8, 8]$

c) Zero(s):  $-5$  and  $3$

d) The minimum of g:  $-8$

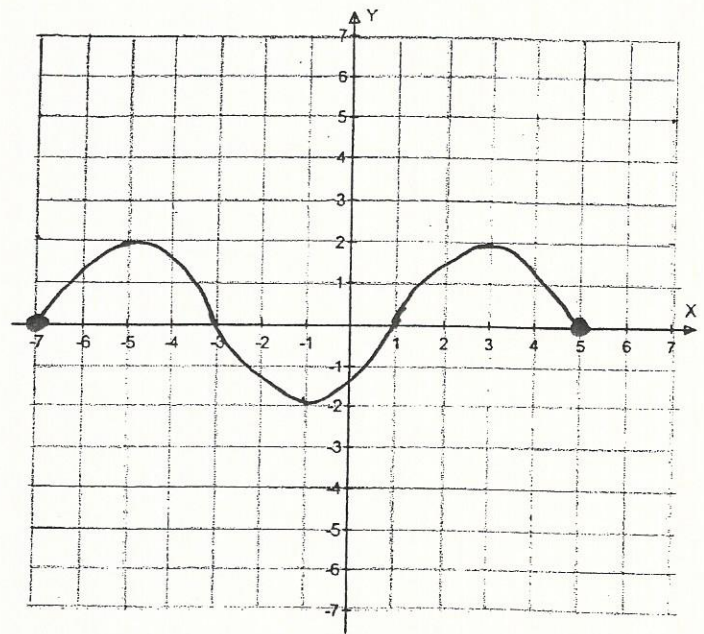
e) The interval over which the function is both increasing and negative:

$(0, 3]$



Functions Problem Type **A E**

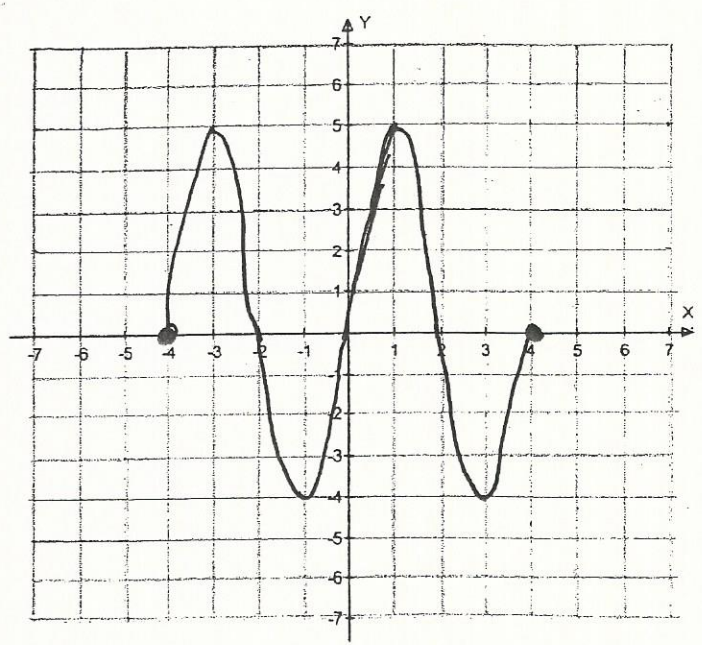
e.g. The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



- a) Domain:  $[-7, 5]$
- b) Range:  $[-2, 2]$
- c) An interval over which the function is both decreasing and positive:  $[-5, -3]$  or  $[3, 5]$
- d)  $f(3) =$   $2$
- e) The maximum of  $f(x)$ :  $2$

1.

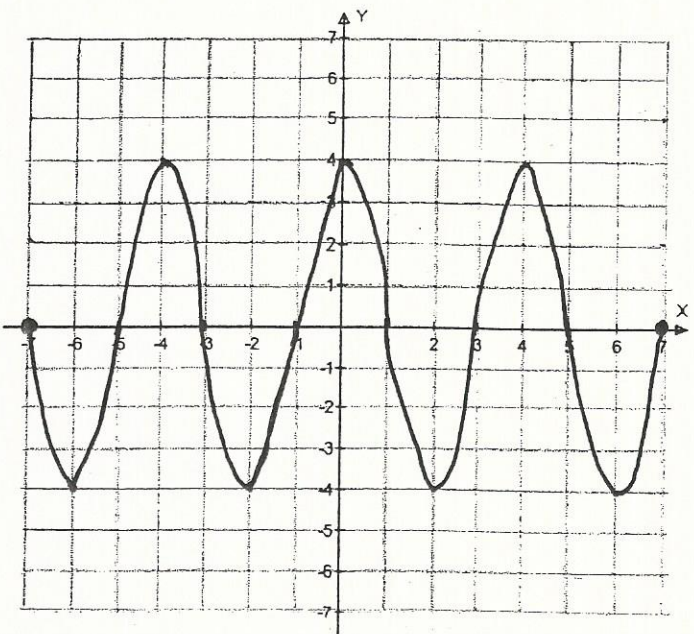
The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



- a) Domain:  $[-4, 4]$
- b) Range:  $[-4, 5]$
- c) An interval over which the function is both decreasing and positive:  $[-3, -2]$  or  $[1, 2]$
- d)  $f(0) =$   $0$
- e) The maximum of  $f(x)$  :  $5$

2.

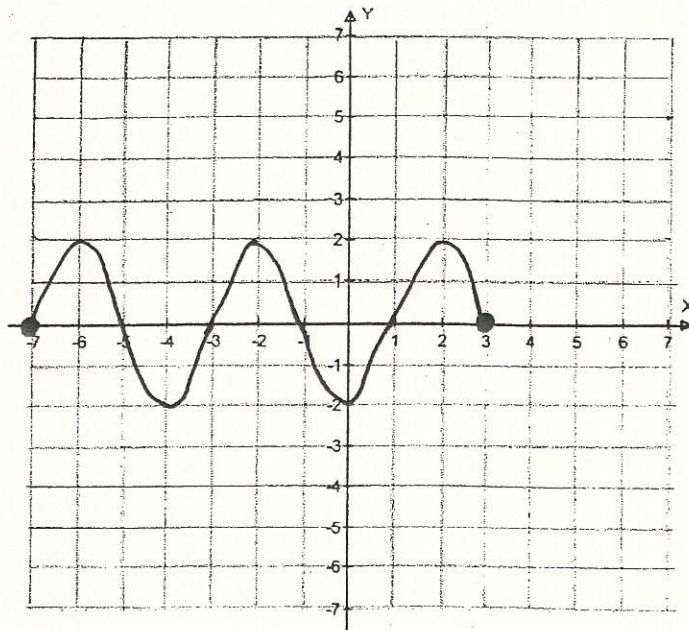
The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



- a) Domain:  $[-7, 7]$
- b) Range:  $[-4, 4]$
- c) An interval over which the function is both decreasing and positive:  $[-4, -3]$  or  $[4, 5]$
- d)  $f(1) =$  0
- e) The maximum of  $f(x)$ : 4

3.

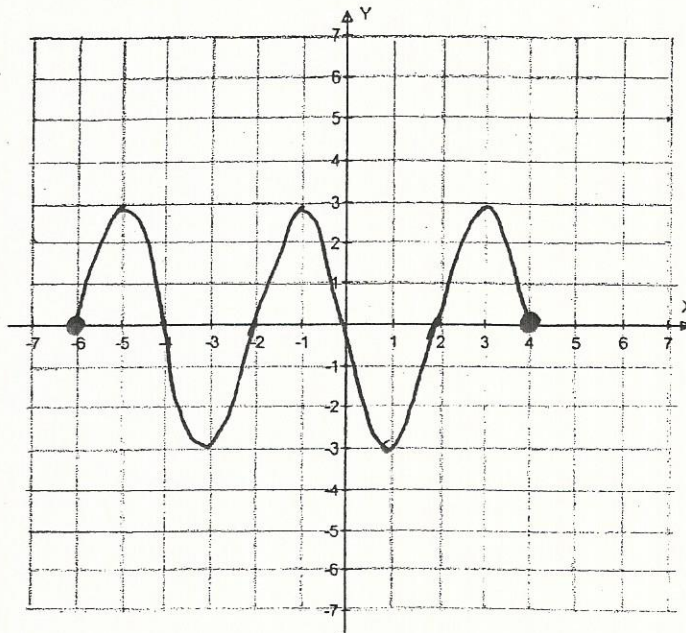
The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



- a) Domain:  $[-7, 3]$
- b) Range:  $[-2, 2]$
- c) An interval over which the function is both decreasing and positive:  $[-6, -5]$  or  $[-2, -1]$
- d)  $f(0) =$   $-2$
- e) The maximum of  $f(x)$  :  $2$

4.

The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



a) Domain:  $[-6, 4]$

b) Range:  $[-3, 3]$

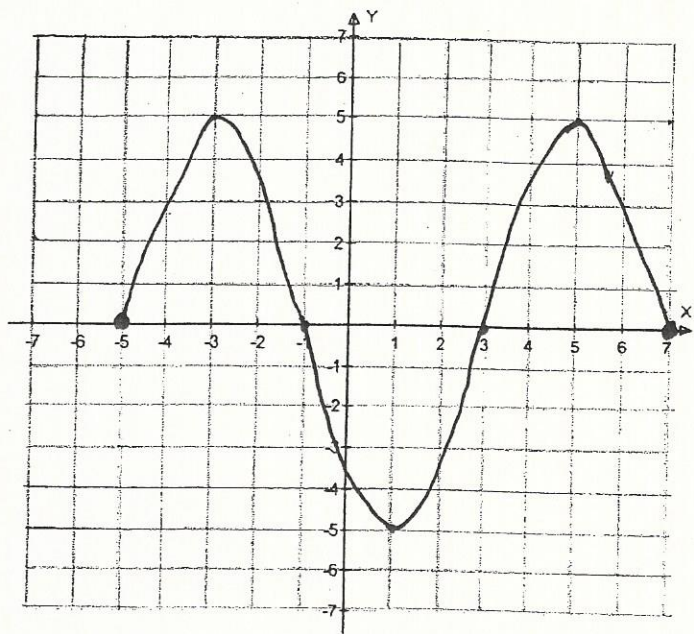
c) An interval over which the function is both decreasing and positive:  $[-5, -4]$  or  $[-1, 0]$  or  $[3, 4]$

d)  $f(1) =$   $-3$

e) The maximum of  $f(x)$  :  $3$

5.

The graph below represents functional situation  $f(x)$ . Determine the following characteristics of this function.



- a) Domain:  $[-5, 7]$
- b) Range:  $[-5, 5]$
- c) An interval over which the function is both decreasing and positive:  $[-3, -1]$  or  $[5, 7]$
- d)  $f(-3) =$  5
- e) The maximum of  $f(x)$ : 5