Ninth Grade - Interpreting Functions

1) Find the maximum or minimum value in the graph $x^2 + x + 1$

- Minimum value = 4 /8
- Minimum value = 4 / 5
- Maximum value = 4 / 3
- Minimum value = 3 / 4

2) Find the maximum or minimum value in the graph $- x^2 + 2x + 1$

- Maximum value = 2
- Maximum value = -2
- Minimum value = 2
- Minimum value = -2

3) Find the maximum or minimum value in the graph $4x^2 - x - 1$

- Minimum value = 17 / 16
- Maximum value = - 4 / 16
- Maximum value = -17 / 16
- Minimum value = -19/ 16

4) Find the maximum or minimum value in the graph $-5x^2 + 2x - 1$

- Maximum value = 4 / 5
- Maximum value = - 6 / 5
- Minimum value = -4 / 5
- Maximum value = - 4 / 5

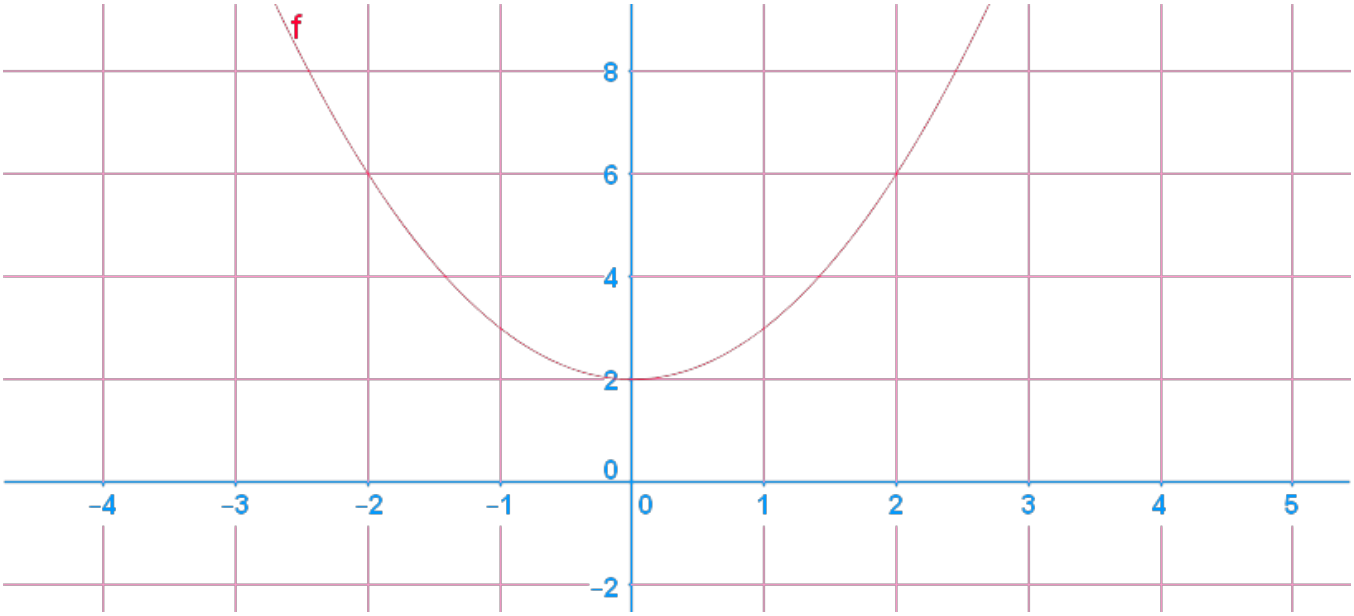
5) Find the maximum or minimum value in the graph $2(x-3)^2 + 3$

- Maximum value = 3
- Maximum value = -3
- Minimum value = 9
- Minimum value = 3

6) Find the maximum or minimum value in the graph $-3(x - 4)^2 - 4$

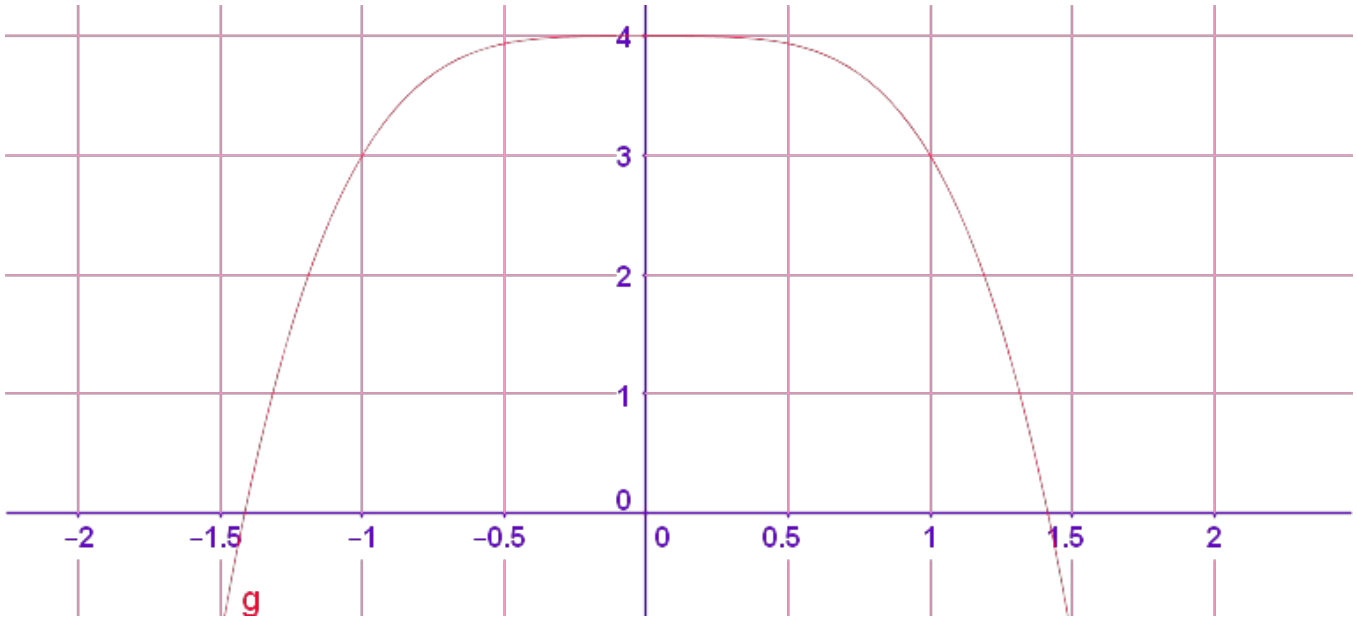
- Minimum value = 4
- Maximum value = -4
- Maximum value = -6
- Minimum value = -4

7) Determine the range of function for the graph?



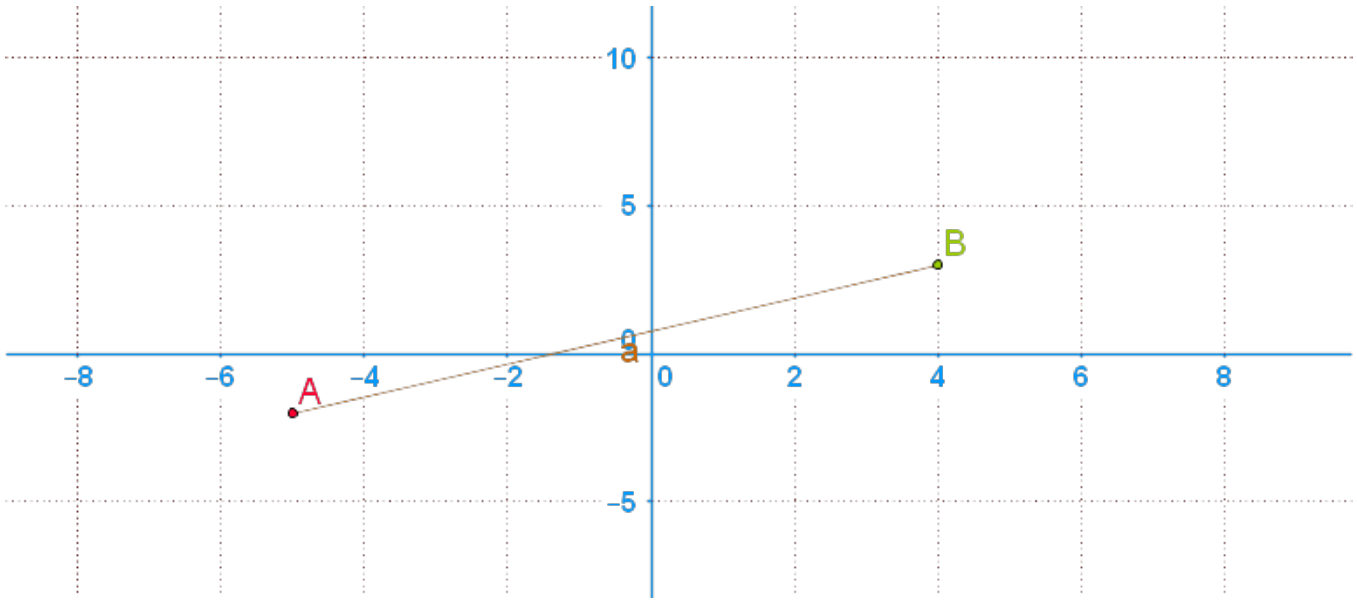
- y
- y ? 2
- y > 2
- y ? 2

8) Determine the domain of function for the graph?



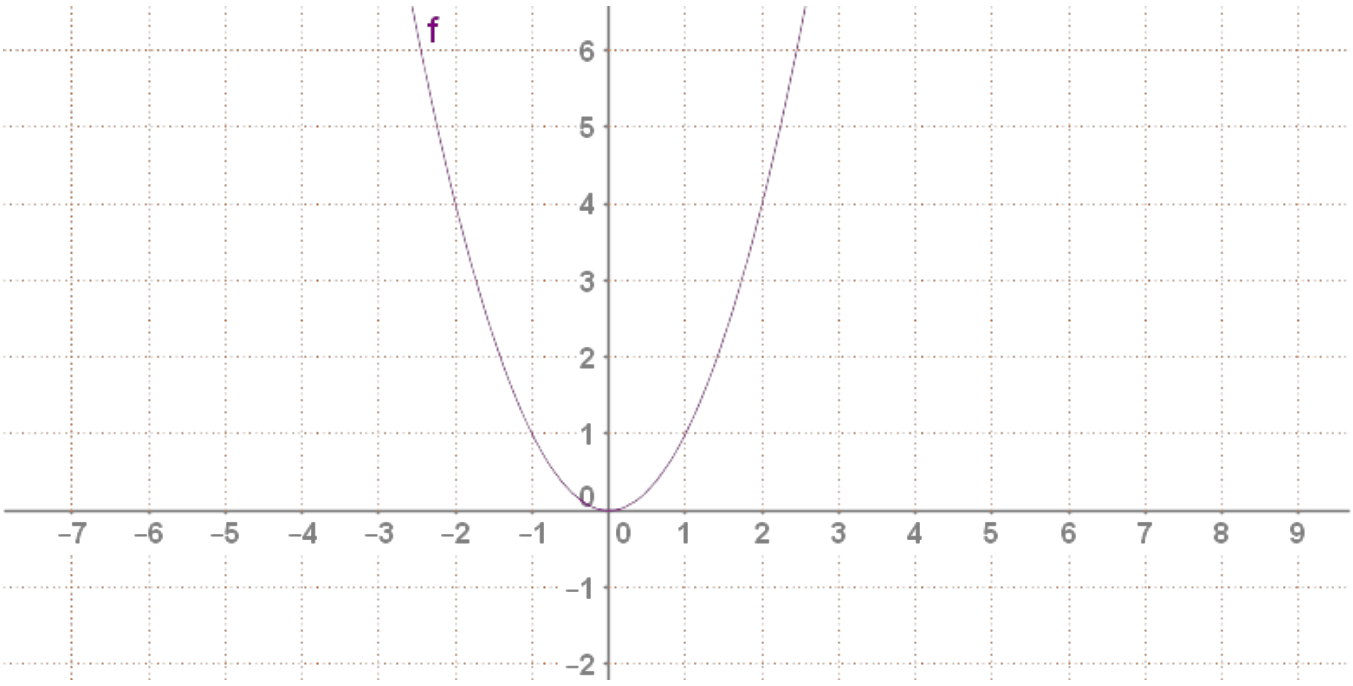
- - ?
- ?
- ?

10) Determine the domain of function for the graph?



- -5
- -5
- 9
- 5

11) Determine the range of function for the graph?



- 0
- 0 ? y
- 0 ? y
- 0 > y > ?

12) Convert point slope y – 3 = 5 (x – 4) to slope intercept form.

- y = 5x + 19
- y = 5x + 13
- y = 5x + 16
- y = 5x – 17

13) Convert point slope y – 4 = 2(x – 3) to slope intercept form and find the value of m

- 2
- 5
- 5
- 8

14) Convert a slope intercept y = (5/4)x + 5 to standard form

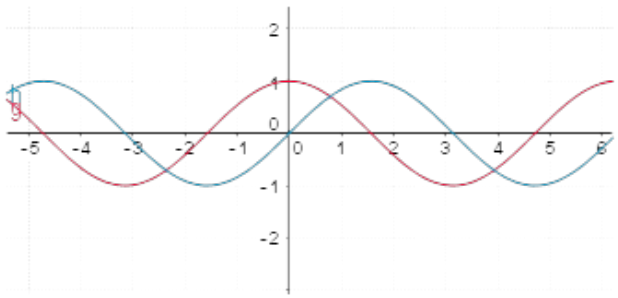
- 4y + 5x = -20
- 4y – 5x = 20
- y – x = 4
- 9x – 5y = 30

15) Convert a slope intercept y = (2/3)x – 4 to standard form

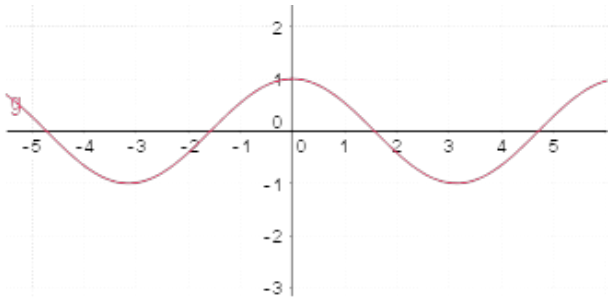
- y – x = -6
- 3y – 2x = -12
- y + x = 8
- x + y = 6

16) Identify Sine graph from the following graphs

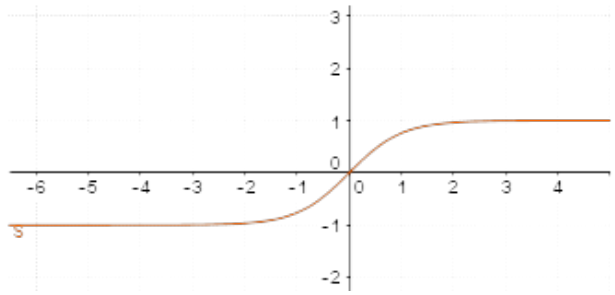
a)



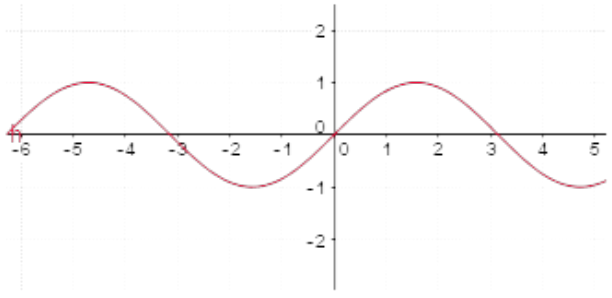
b)



c)



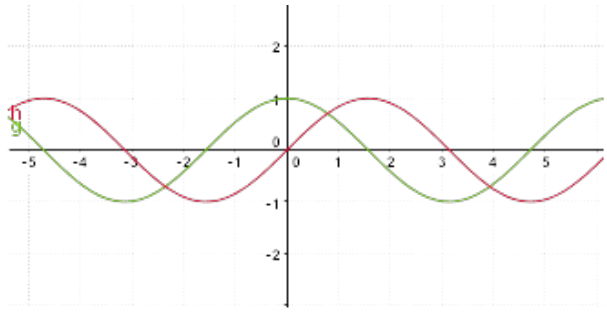
d)



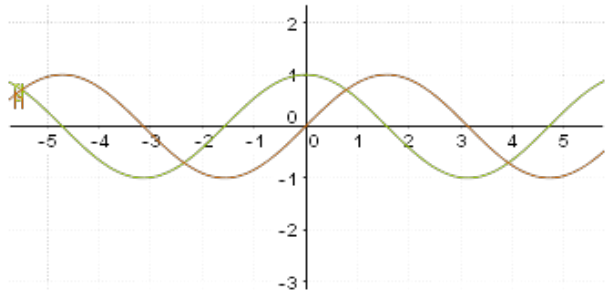
- c
- b
- a
- d

17) Identify Cosine graph from the following graphs

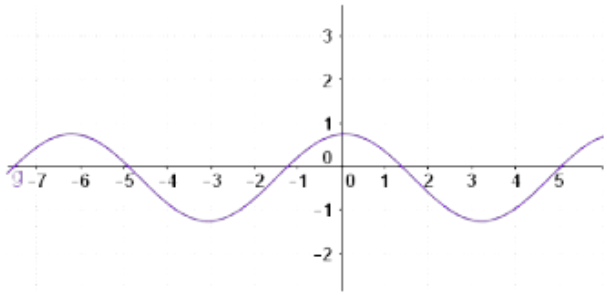
a)



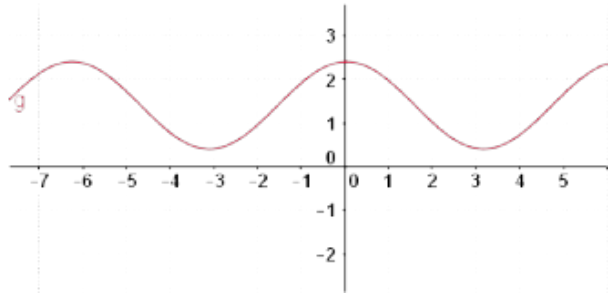
b)



c)



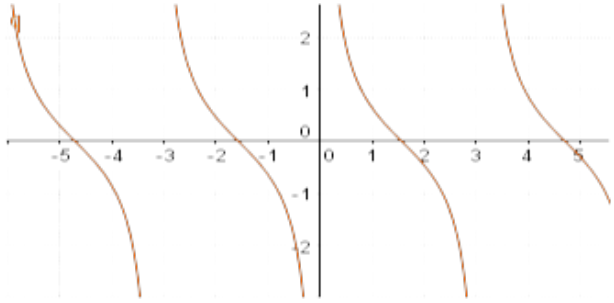
d)



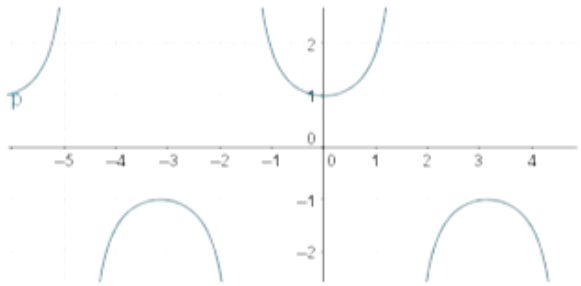
- d
- c
- b
- a

18) Identify the graph does not represent Periodic function from the following graphs

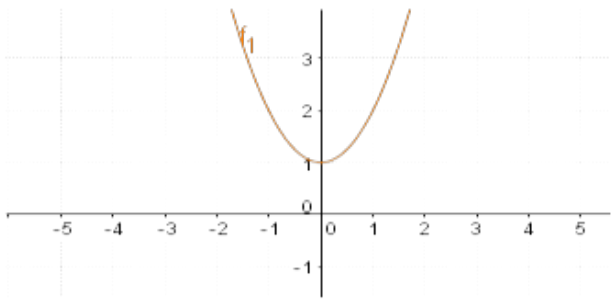
a)



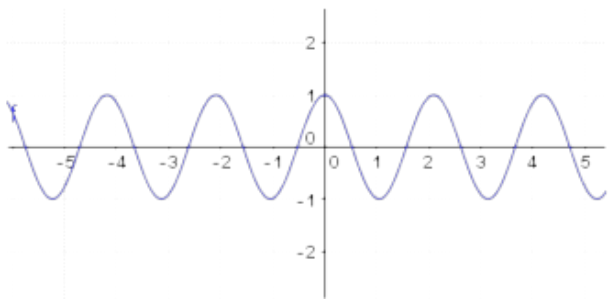
b)



c)



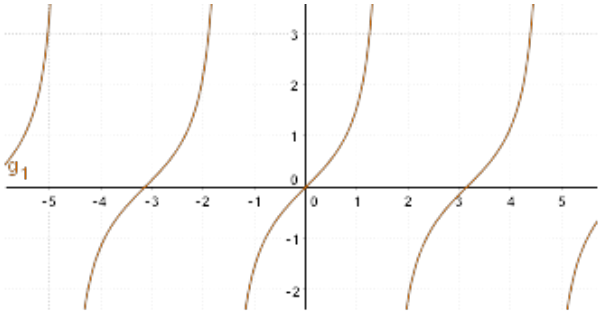
d)



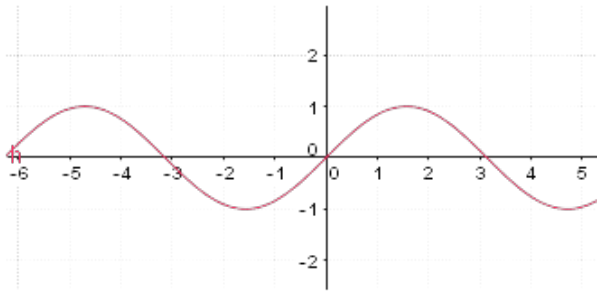
- Graph 1
- Graph 2
- Graph 4
- Graph 3

19) Identify the tangent function from the following graphs

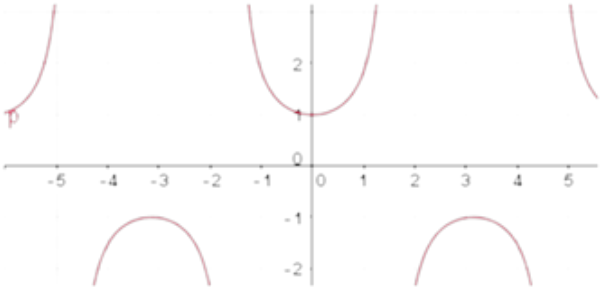
a)



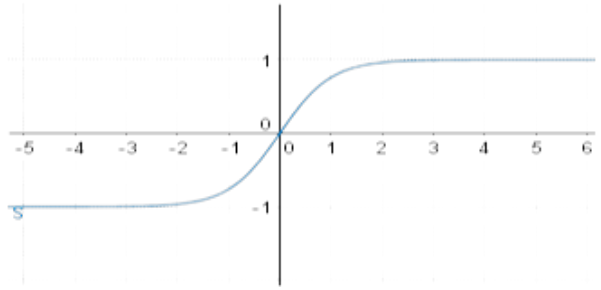
b)



c)



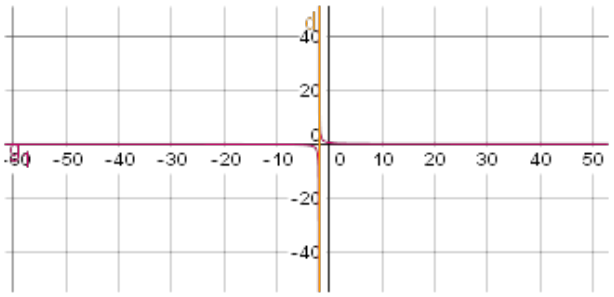
d)



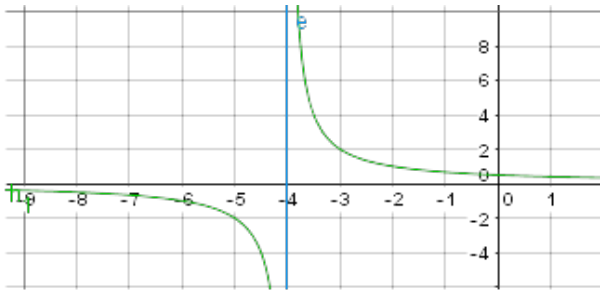
- a
- b
- c
- d

20) Identify the correct graph for the function f(x) = 1/ (x+2)

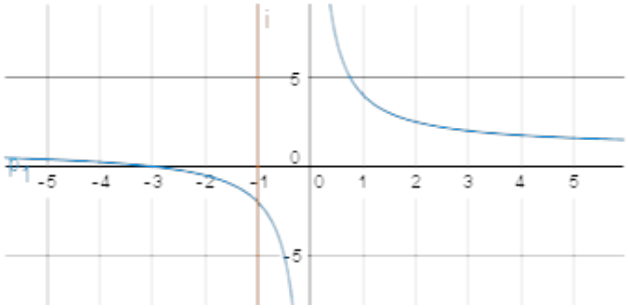
a)



b)



c)



d)

- d
- a
- b
- c

21) Identify the zeros of the function f(x) =(x² + 3x + 2) / (x² - 2x - 3)

- -5
- -8
- -3
- -2

22) Identify the zeros of the function f(x) = (x² - 6x + 9) / (x² - 9)

- -2
- 2
- No zeros
- -1

23) Identify the zeros of the function f(x) = (x – 3) / (x + 3)

- 3
- -3
- -8
- 2

24) Identify the period for the function y = 2sin4x + 3

- ? / 2
- ? / 3
- ? / 6
- ? / 4

25) Identify the amplitude for the function y = -2sin (2 / 3) (x – (? / 2))

- 8
- 5
- 2
- 9

26) If f(x) = (x^2 - x – 6) / (x^2 -1) then what are its asymptotes?

- (-1, -1)
- (1, -1)
- (3 , -2)
- (-3, 2)

27) Which of the following justification is correct for the statement [x] – [-x] = ?

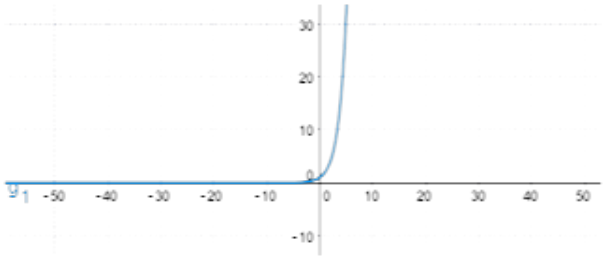
$a) 2[x]-1, if\ x \notin Z \quad b) 2[x]-1, if\ x \in Z$

$c) 2[x], if\ x \in Z \quad d) 2[x], if\ x \notin Z$

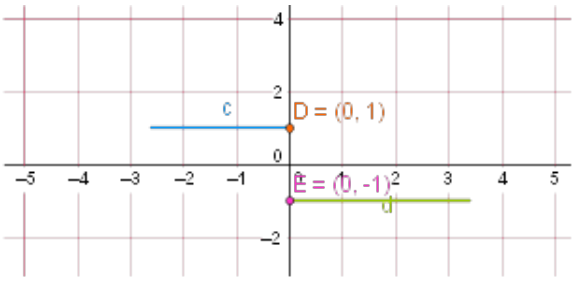
- 1 and 3
- 1 only
- 2 and 4
- 2 only

28) Which of the graph represents signum function

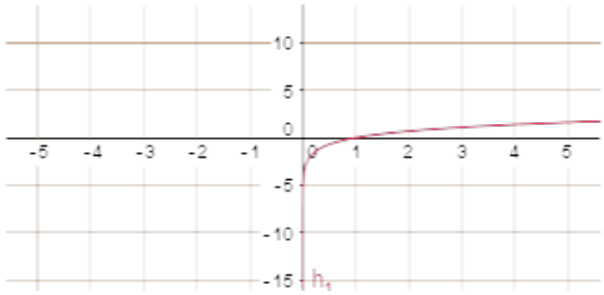
a)



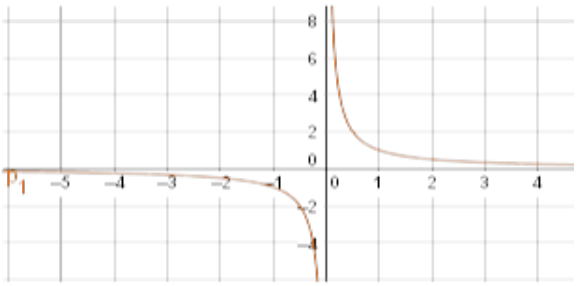
b)



c)



d)

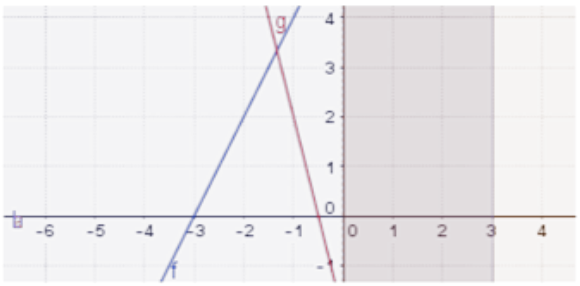


- a
- b
- d
- c

29) Choose the correct graph for

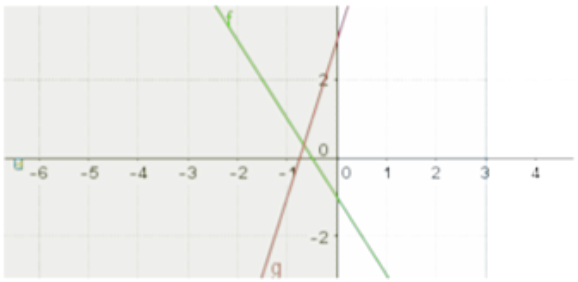
$$f(x)=\begin{cases}2x-2, x<0\\ -4x+16, x\geq 3\end{cases}$$

a)

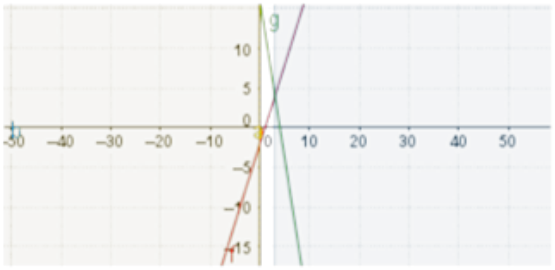


b)

c)



d)



- b
- a
- c
- d

30) Choose the correct graph for the following

$$f(x)=\begin{cases}3x+1, x<1\\ 2x, x\geq 1\end{cases}$$

- d
- b
- a
- c