



Ninth Grade - Interpreting Functions

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

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

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

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

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

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

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

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

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

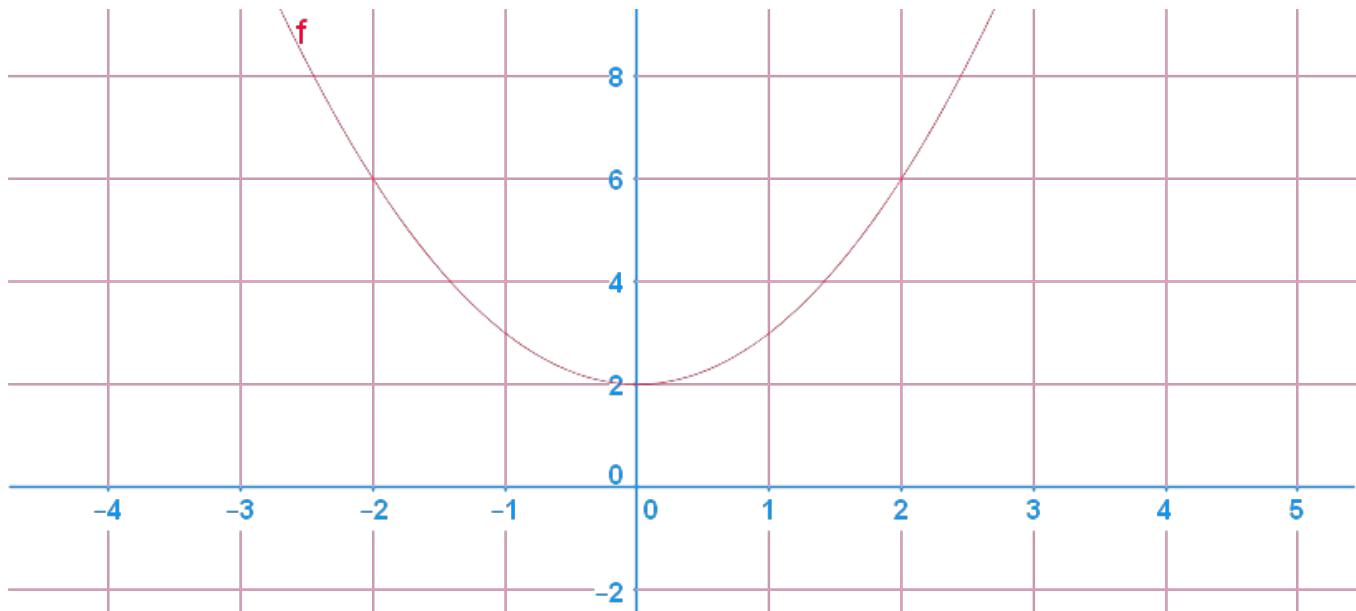


- Maximum value = 3
- Maximum value = -3
- Minimum value = 9
- Minimum value = 3

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

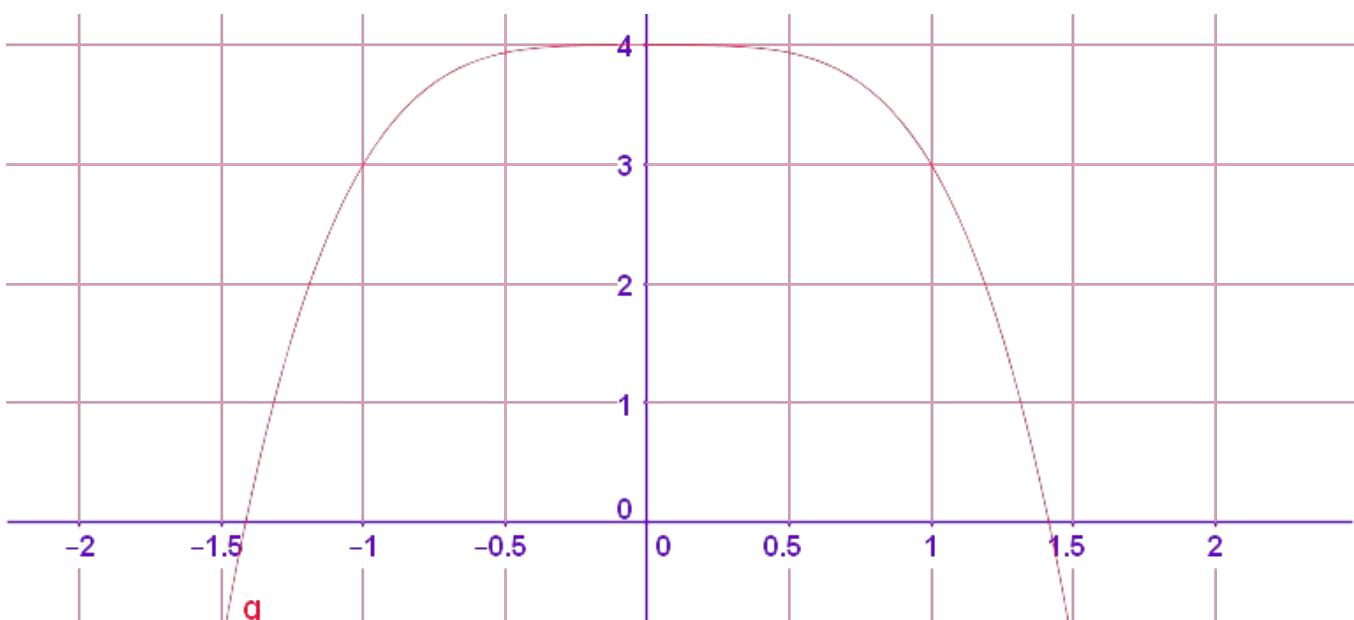
- Minimum value = 4
- Maximum value = -4
- Maximum value = -6
- Minimum value = -4

7) Determine the range of function for the graph?



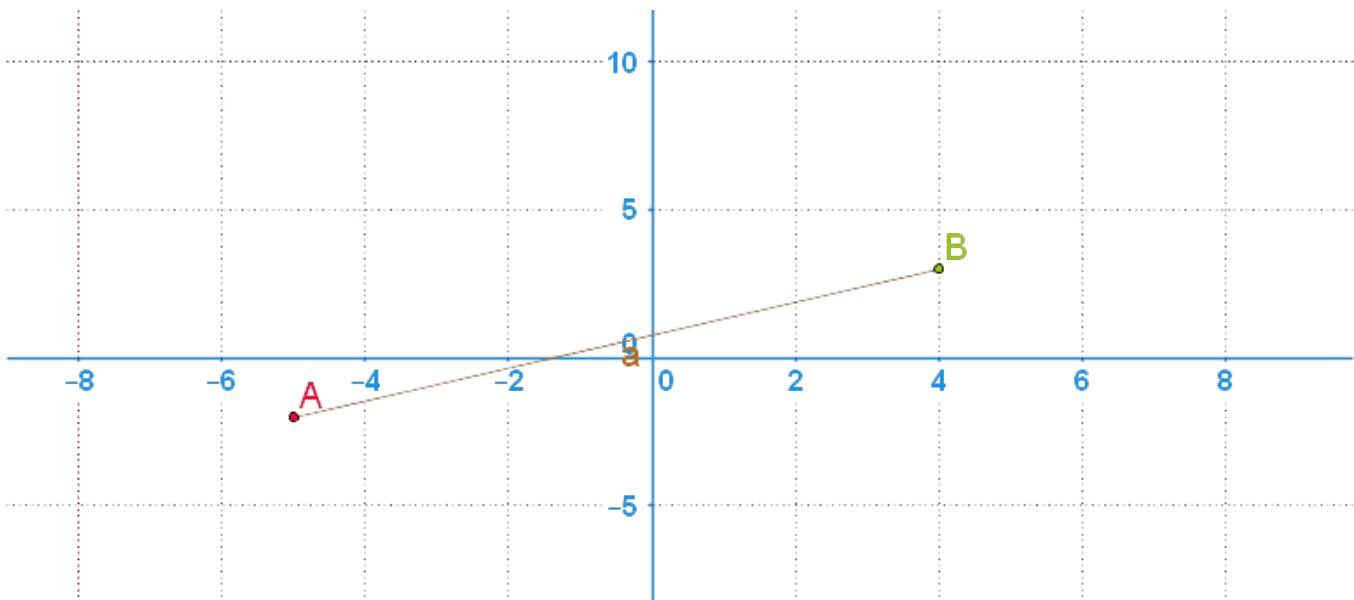
- y
- $y \geq 2$
- $y \leq 2$
- $y > 2$

8) Determine the domain of function for the graph?



- - ?
- ?
- ?
- y
- $y \geq 0$

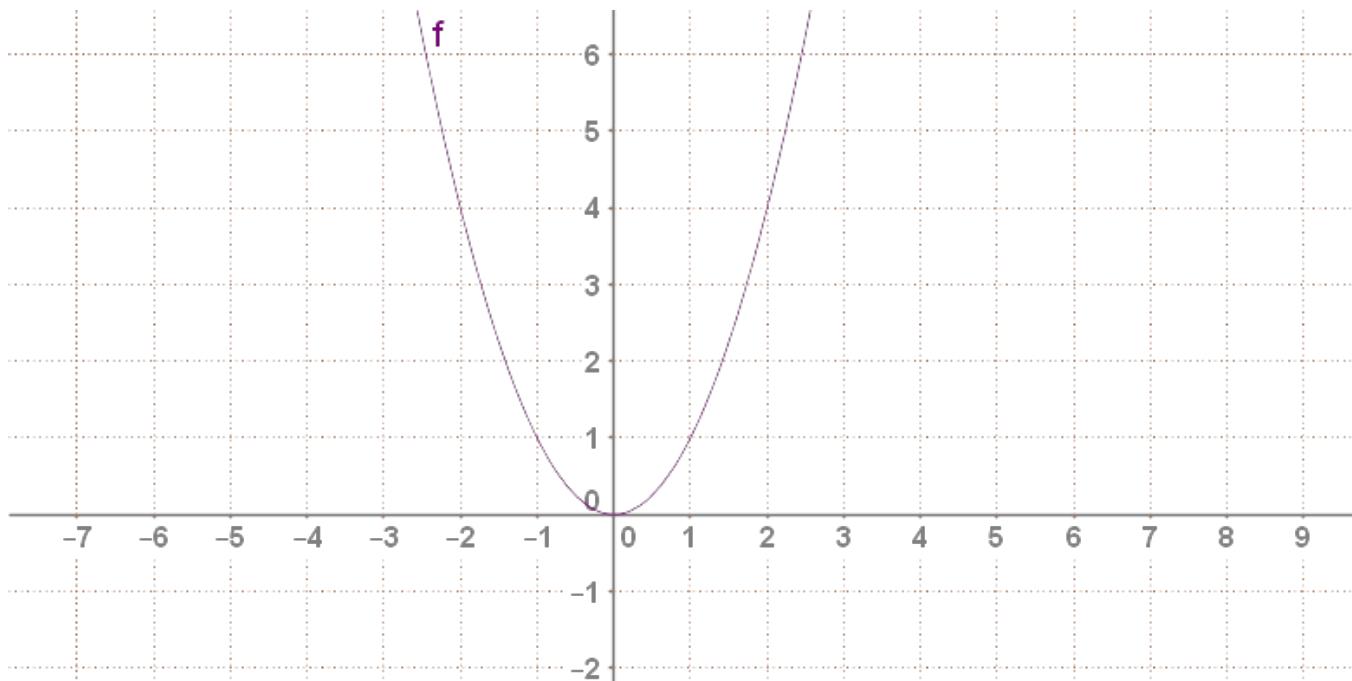
10) Determine the domain of function for the graph?



- -5
- 5
- 9
- -5



11) Determine the range of function for the graph?



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

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

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

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

- 5
- 8
- 5
- 2



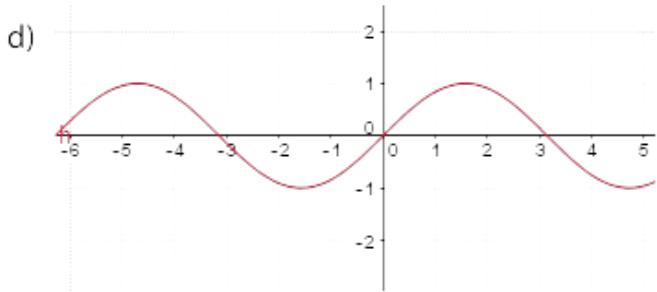
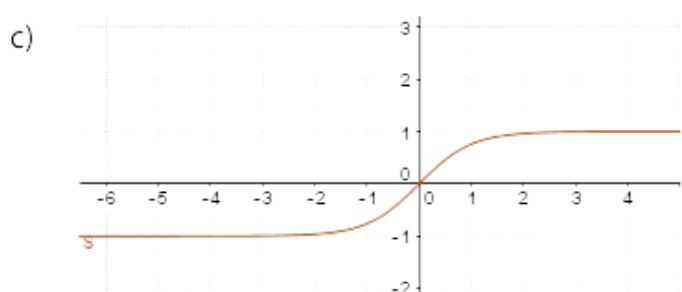
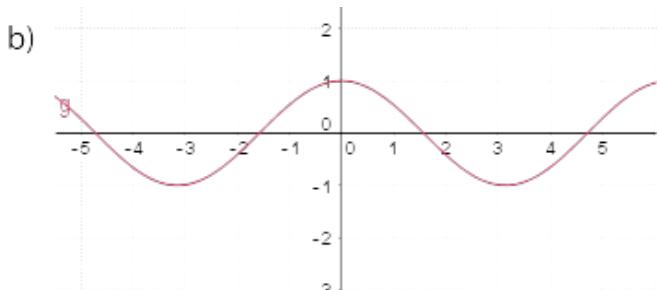
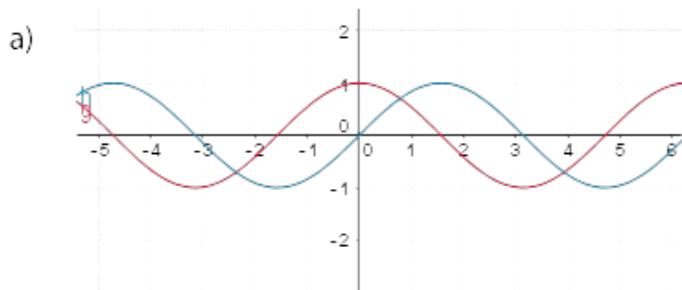
14) Convert a slope intercept $y = (5/4)x + 5$ to standard form

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

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

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

16) Identify Sine graph from the following graphs

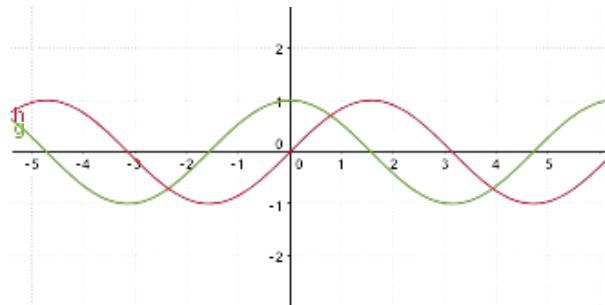


- a
- b
- d
- c

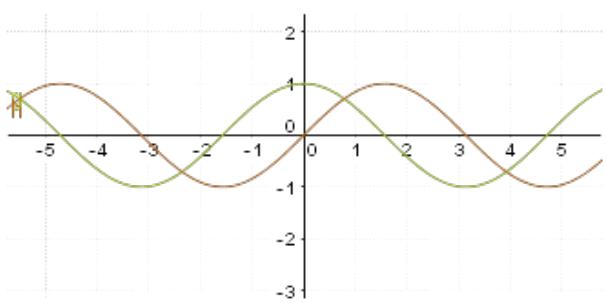


17) Identify Cosine graph from the following graphs

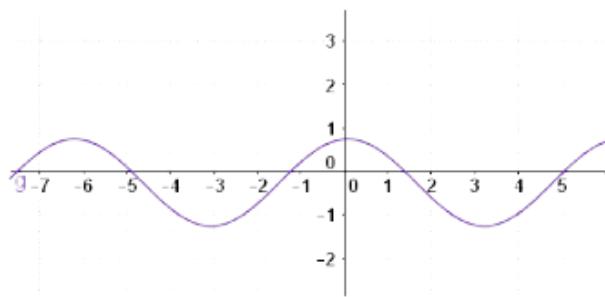
a)



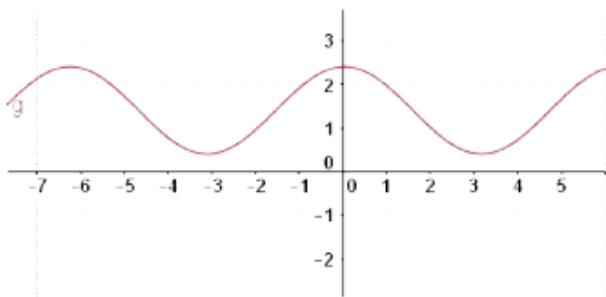
b)



c)



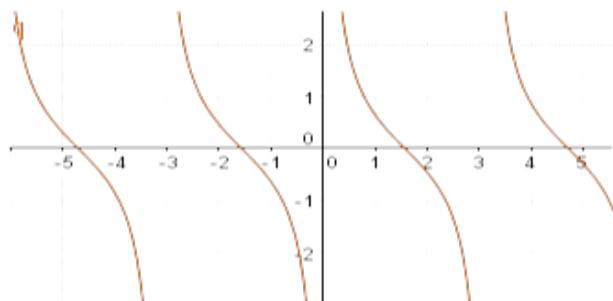
d)



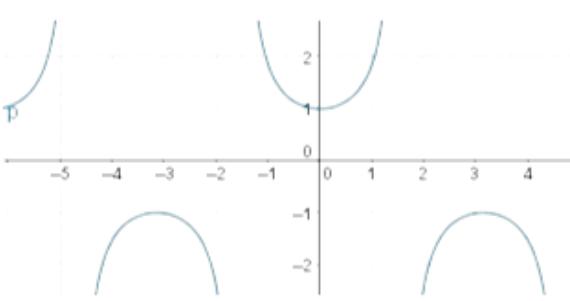
- a
- c
- b
- d

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

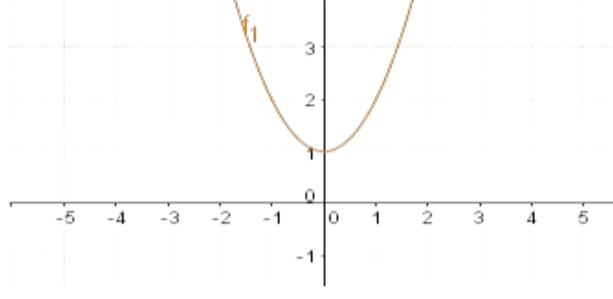
a)



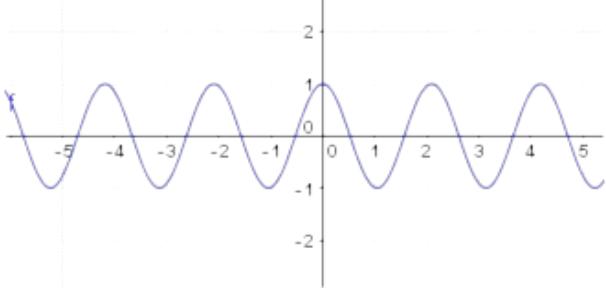
b)



c)



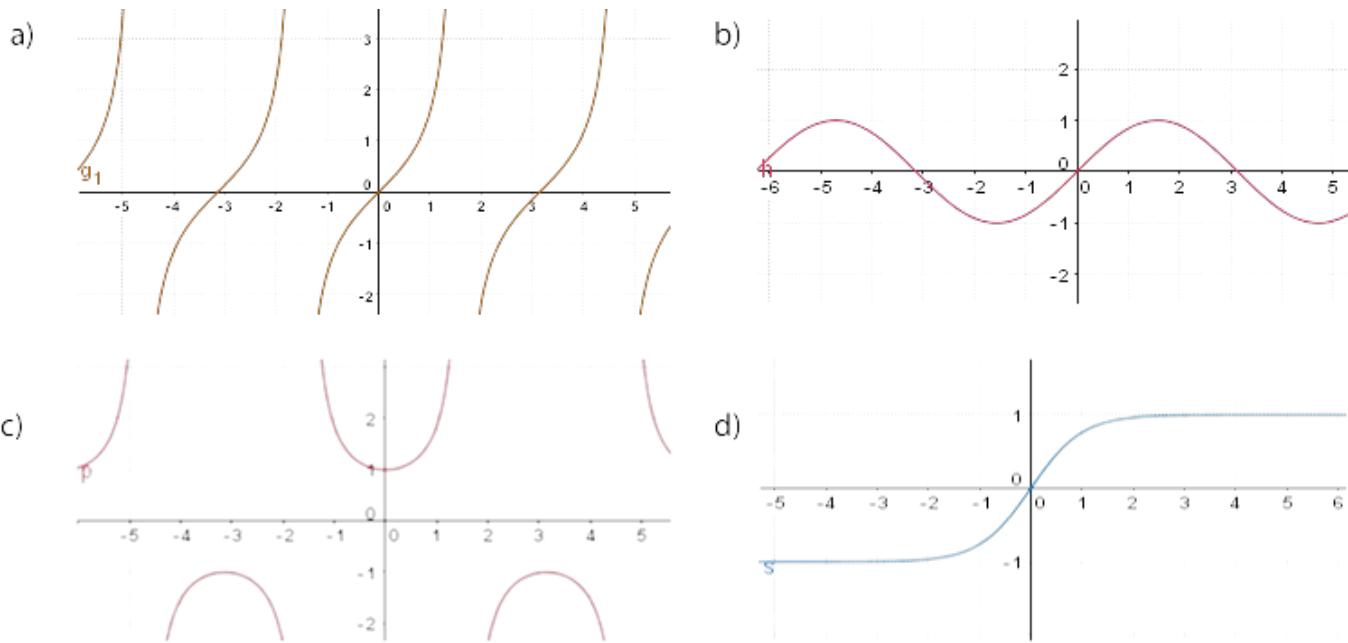
d)





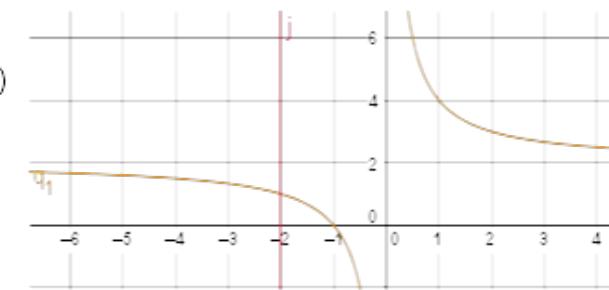
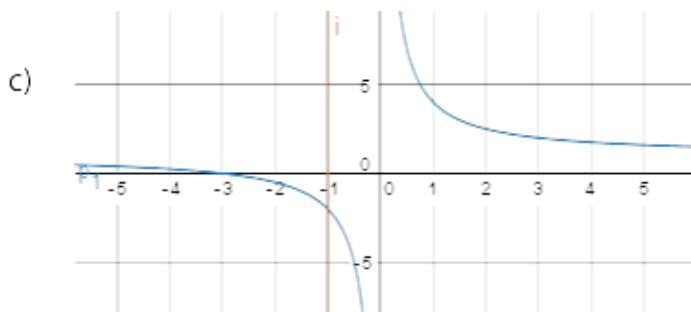
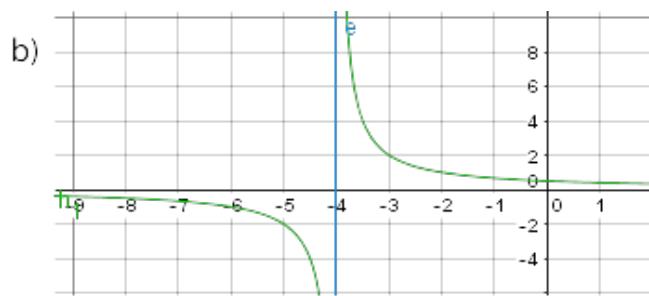
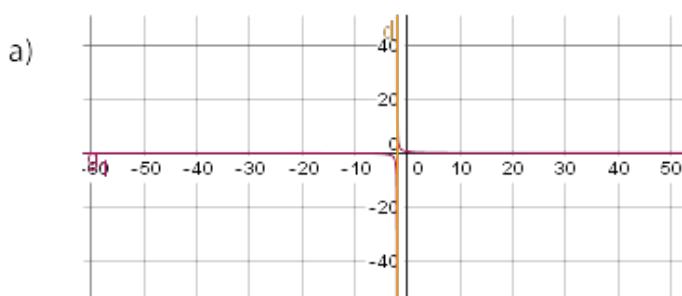
- Graph 2
- Graph 3
- Graph 1
- Graph 4

19) Identify the tangent function from the following graphs



- b
- d
- c
- a

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



- d
- c
- a
- b

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

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

22) Identify the zeros of the function $f(x) = (x^2 - 6x + 9) / (x^2 - 9)$

- -1
- -2
- No zeros
- 2

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



- -3
- 2
- 3
- -8

24) Identify the period for the function $y = 2\sin 4x + 3$

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

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

- 2
- 8
- 5
- 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 $[x] - [-x] = ?$

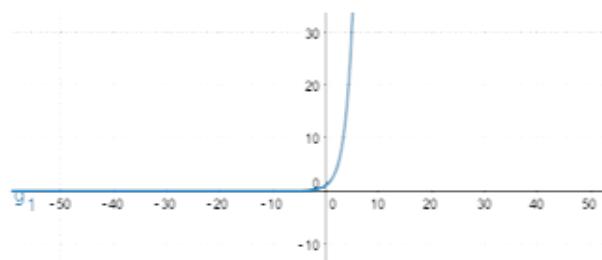
- a) $2[x] - 1$, if $x \notin Z$
- b) $2[x] - 1$, if $x \in Z$
- c) $2[x]$, if $x \in Z$
- d) $2[x]$, if $x \notin Z$



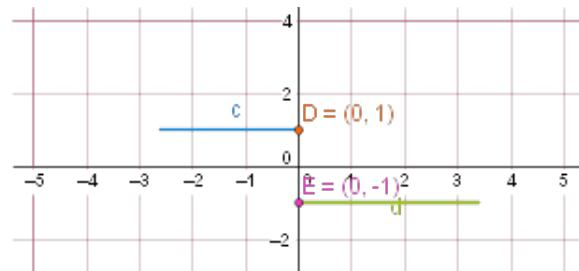
- 2 only
- 2 and 4
- 1 only
- 1 and 3

28) Which of the graph represents signum function

a)



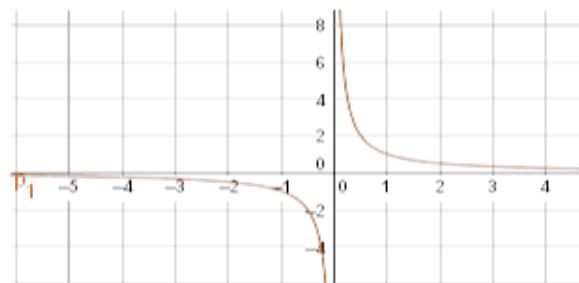
b)



c)



d)



- b
- d
- a
- c

29) Choose the correct graph for



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

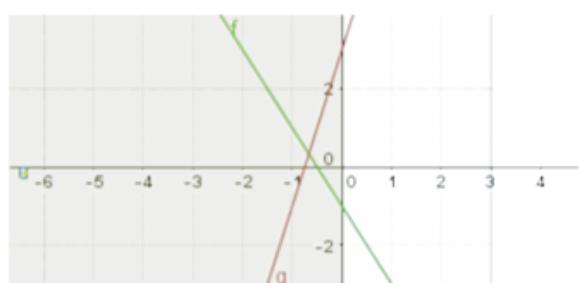
a)



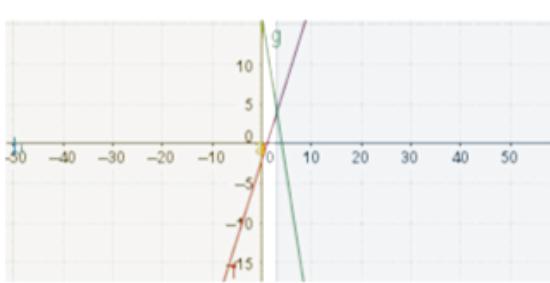
b)



c)



d)



- c
- a
- d
- b

30) Choose the correct graph for the following

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

- b
- c
- a
- d