Ninth Grade - LQE Model

1) Find the roots of $6x^2 + x - 2$ using factoring

- (2/3 , -½)
- (-2/3 , ½)
- (-2/3 , -½)
- (2/3 , ½)

2) Find the roots of $6x^2 + 7xy - 20y^2$ using factoring

- (-5/2y , -4y/3)
- (5/2y , -4y/3)
- (5/2y , 4y/3)
- (-5/2y , 4y/3)

3) Find the roots of $20x^2 - 13x + 2 = 0$ using factoring.

- 0.5 or 0.25
- 0.4 or 0.30
- 0.4 or 0.4 5
- 0.4 or 0.25

4) Find the roots of $8x^2 + 14x - 15 = 0$ using factoring.

- 2.5 or -0.75
- -2.5 or 0.75
- 2.5 or 0.75
- -2.5 or -0.75

5) Find the roots of 5x = 3/x -11/2 using factoring.

- -1.5 or 0.4
- 1.5 or -0.4
- 1.5 or 0.4
- -1.5 or -0.4

6) Find the roots of $8y^2 - 2y - 15$ using factoring.

- -5/4 , 3/2
- 5/4 , 3/2
- -5/4 , 3/2
- -5/4 , -3/2

7) Find the roots of $15x^2 + 14x - 16$ using factoring.

- 2/3 , - 8/5
- 2/3 , 8/5
- -2/3 , 8/5
- -2/3 , -8/5

8) Find the roots of $6x^2 - x - 15 = 0$ using factoring.

- 3/2 , 5/3
- -3/2 , 5/3
- 3/2 , -5/3
- -3/2 , -5/3

9) Find the roots of $8y^2 + 10y - 25 = 0$ using factoring.

- 7/8 , 1/2
- 4/5 , 6/3
- 5/4 , 5/2
- 5/4 , -5/2

10) Find the roots of $6x^2 - 47x + 77$ using factoring.

- -7/3 , 11/2
- - 7/3 , -11/2
- 7/3 , 11/2
- 7/3 , -11/2

11) In solving the quadratic equation $2x^2 - 12x + 13 = 0$ by the method of Completing the Square, which of the following is correct?

- 3.5
- 2.5
- 78
- -2.5

12) In solving the quadratic equation $5x^2 + 2x - 9 = 0$ by the method of Completing the Square, which of the following is correct?

- 3.84
- 0.84
- 2.84
- 1.84

13) In solving the quadratic equation $4y^2 - 12y + 7 = 0$ by the method of Completing the Square, which of the following is correct?

- 0.8
- 0.2
- 0.6
- 0.7

14) In solving the quadratic equation $8z^2 - 3z - 2 = 0$ by the method of Completing the Square, which of

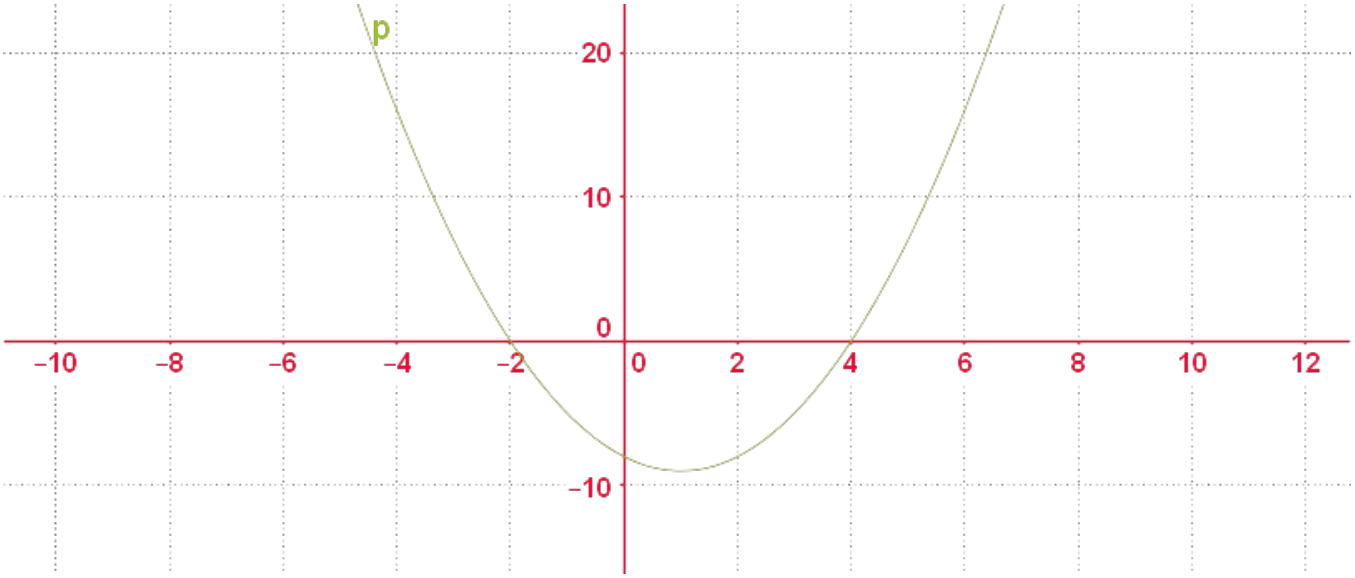
the following is correct?

- 0.28875
- 0.28515625
- 0.2579625
- 0.79515625

15) Which of the following is correct for the vertex of the parabola $f(x) = 2x^2 + 8x - 12$?

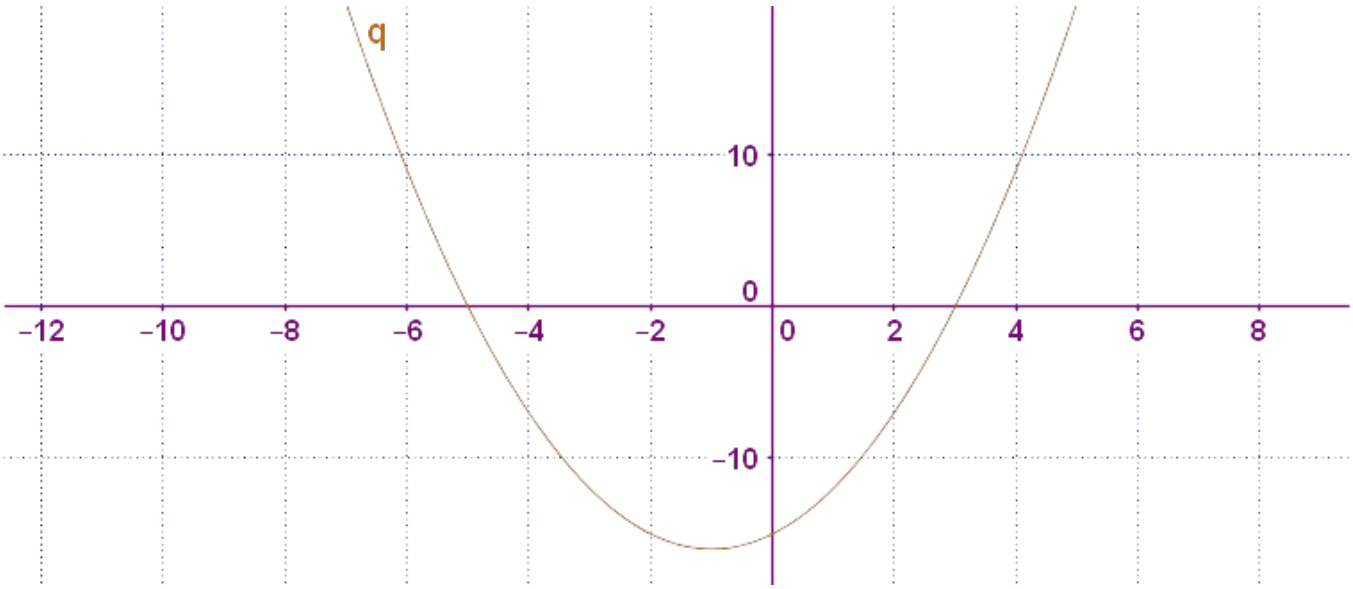
- (-2, -20)
- (-2, 20)
- (2, -20)
- (2, 20)

16) The below shows part of the graph of the function $f(x) = x^2 ? 2x – 8$. What is the equation of its axis of symmetry?



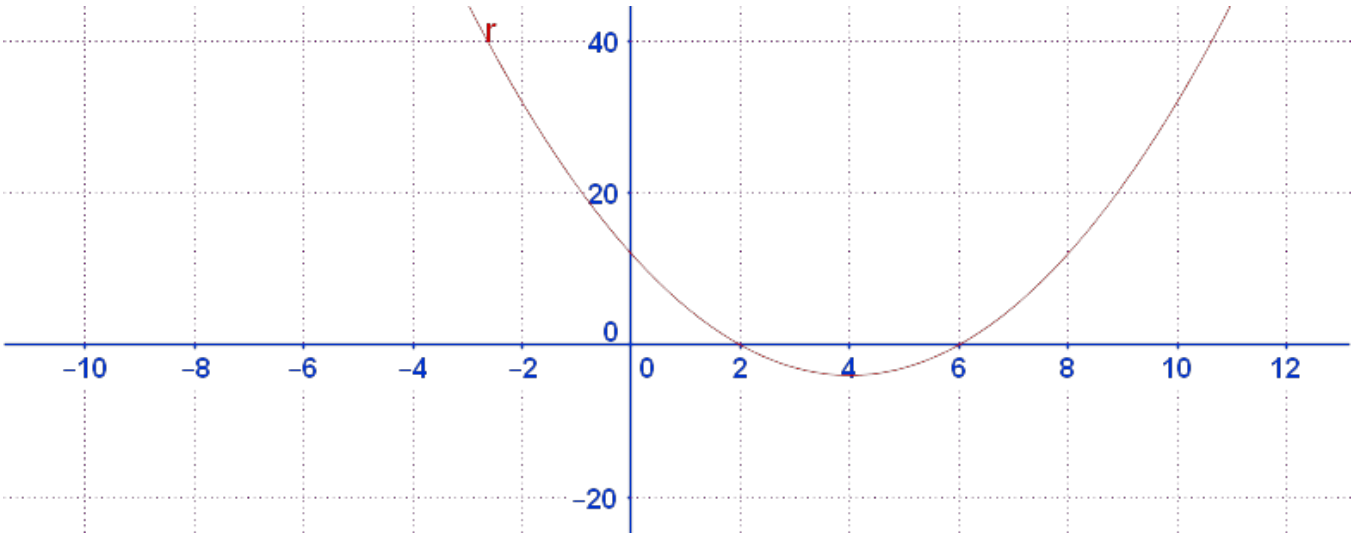
- 8
- 7
- 3
- 1

17) The below shows part of the graph of the function f(x) = x² + 2x ? 15. What is the equation of its axis of symmetry?



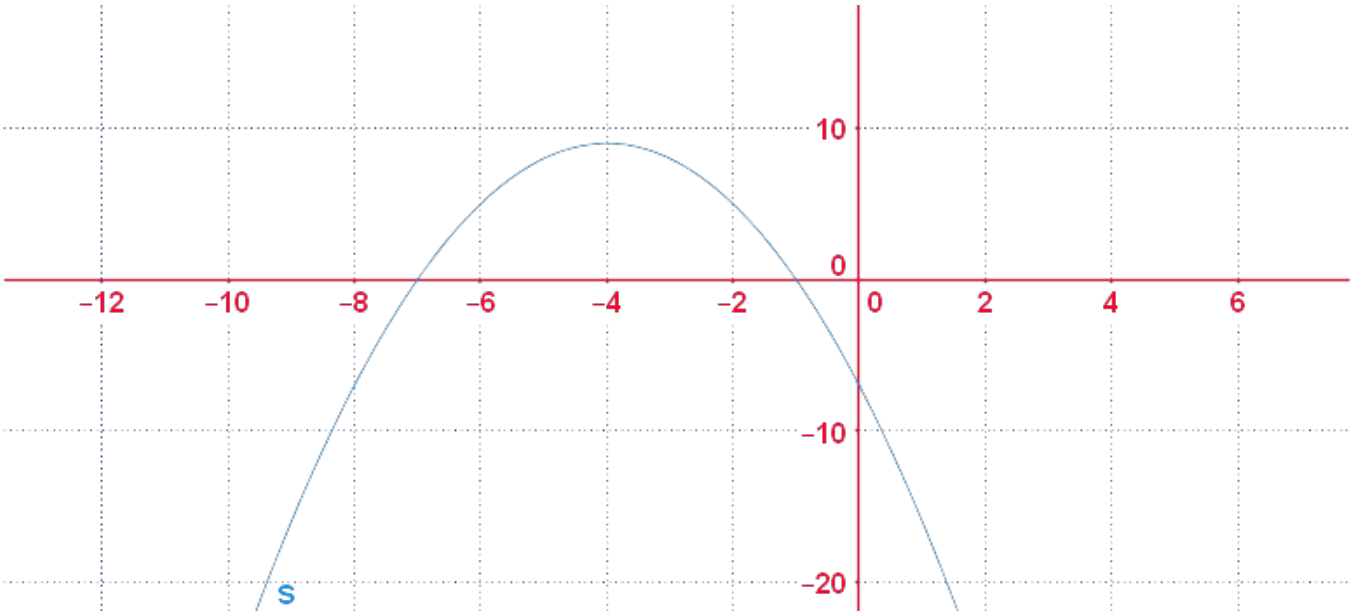
- 6
- 1
- 8
- 3

18) The below shows part of the graph of the function f(x) = x² ? 8x + 12. What is the equation of its axis of symmetry?



- -5
- -4
- 4
- 5

19) The below shows part of the graph of the function f(x) =-x² ? 8x – 7. What is the equation of its axis of symmetry?



- 5
- 8
- -4
- 9

20) Solving the quadratic equation x² - 4 = 0; x = ?

- 8
- 5
- -2
- -5

21) Solving the quadratic equation 3x² + 4x + 5 = 0; x = ?

- -32 > 4
- -32 > 4
- -44
- -66 > 3

22) Solving the quadratic equation $x^2 + 4x - 5 = 0$; x = ?

- (7,2)
- (1,-5)
- (0,9)
- (1,5)

23) Write the equation of the line that has a slope of -7/ 8 and contains the point (4, 5/4)

- (7/8)x + (19/4)
- (-7/8)x - (19/4)
- (-7/8)x + (9/ 4)
- (-7/8)x + (19/4)

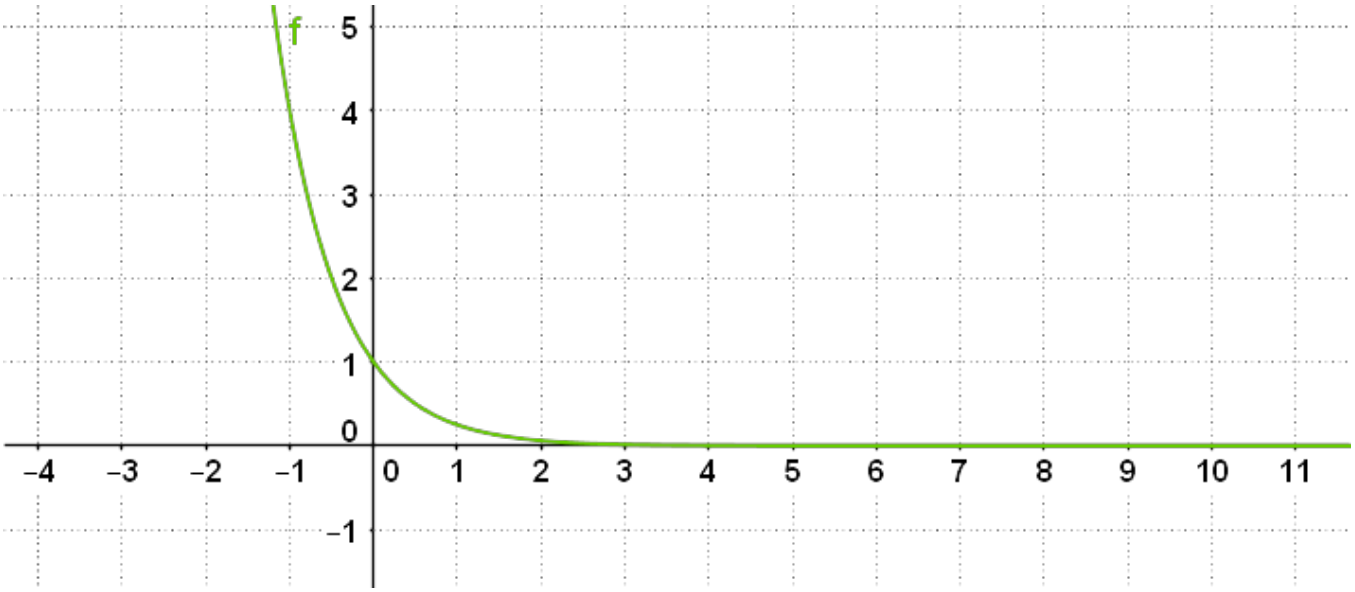
24) Write the slope-intercept form of the line with a slope of -0.6 and which contains the point (3.8, 7.25)

- y = 3.8x + 7.25
- y =-0.6x + 3.8
- y = -0.6x + 9.53
- y = -0.6x + 4.97

25) Write the equation of the line that passes through the points (2, 1) and (?1, ?5)

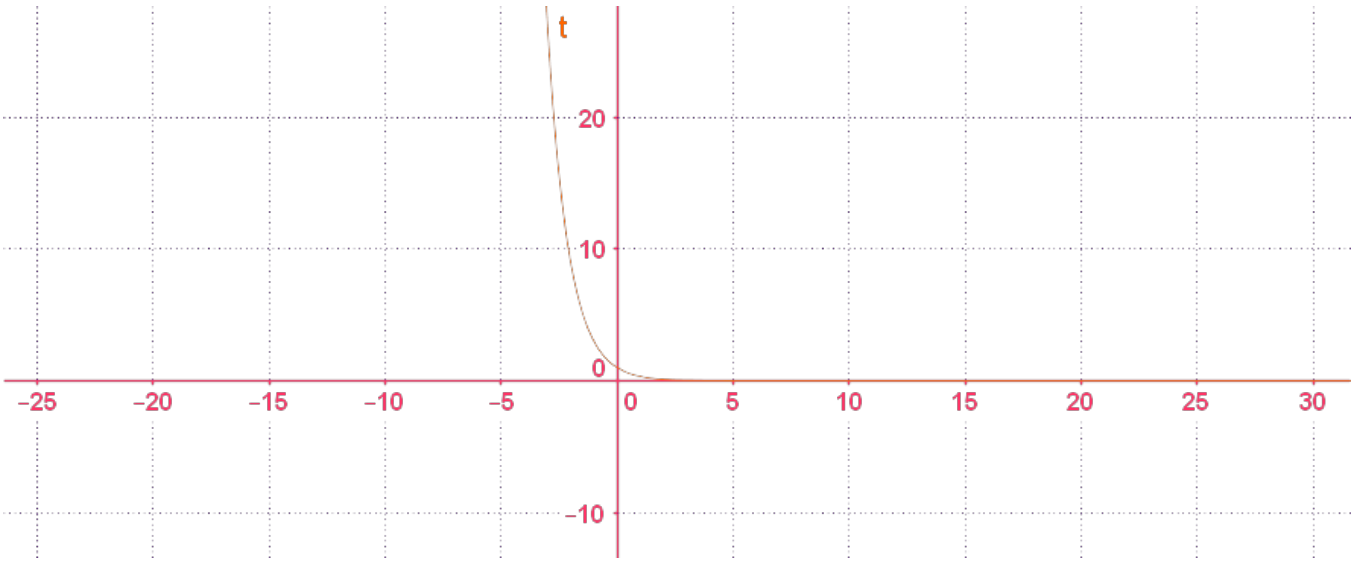
- y = 2x + 3
- y = - 2x – 3
- y = 2x – 3
- y = 2x – 4

26) Identify the correct function for the below graph.



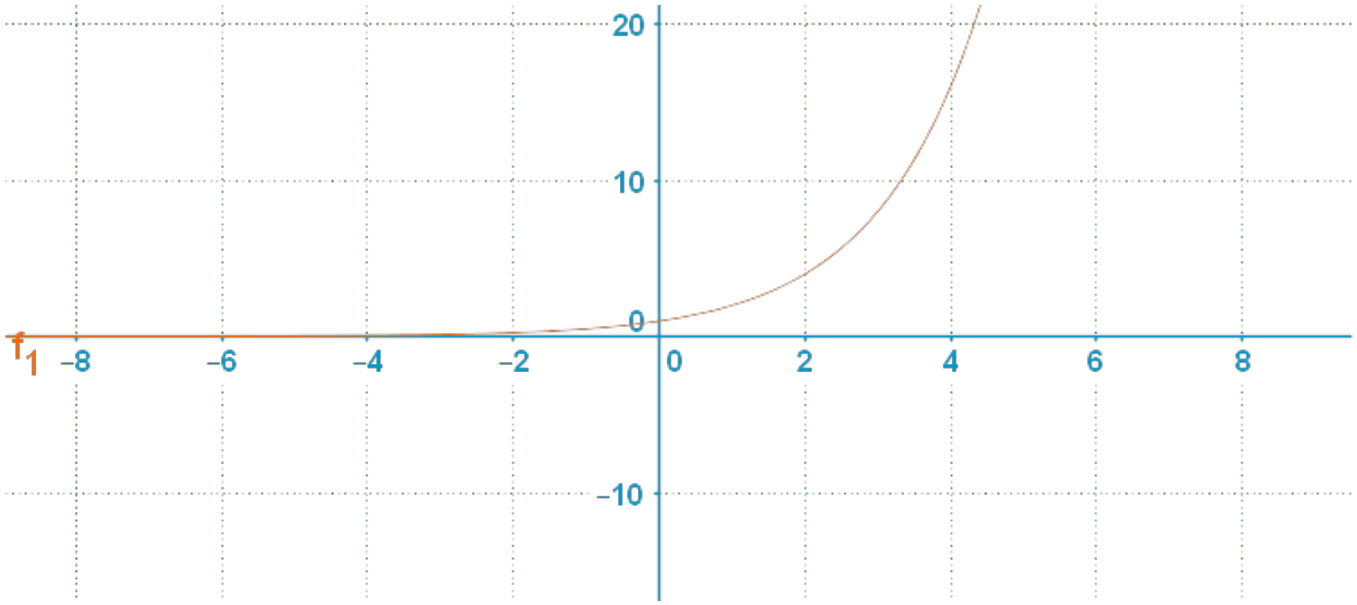
- 5 - x
- 7 - x
- 4 - x
- 2 - x

27) Identify the correct function for the below graph.



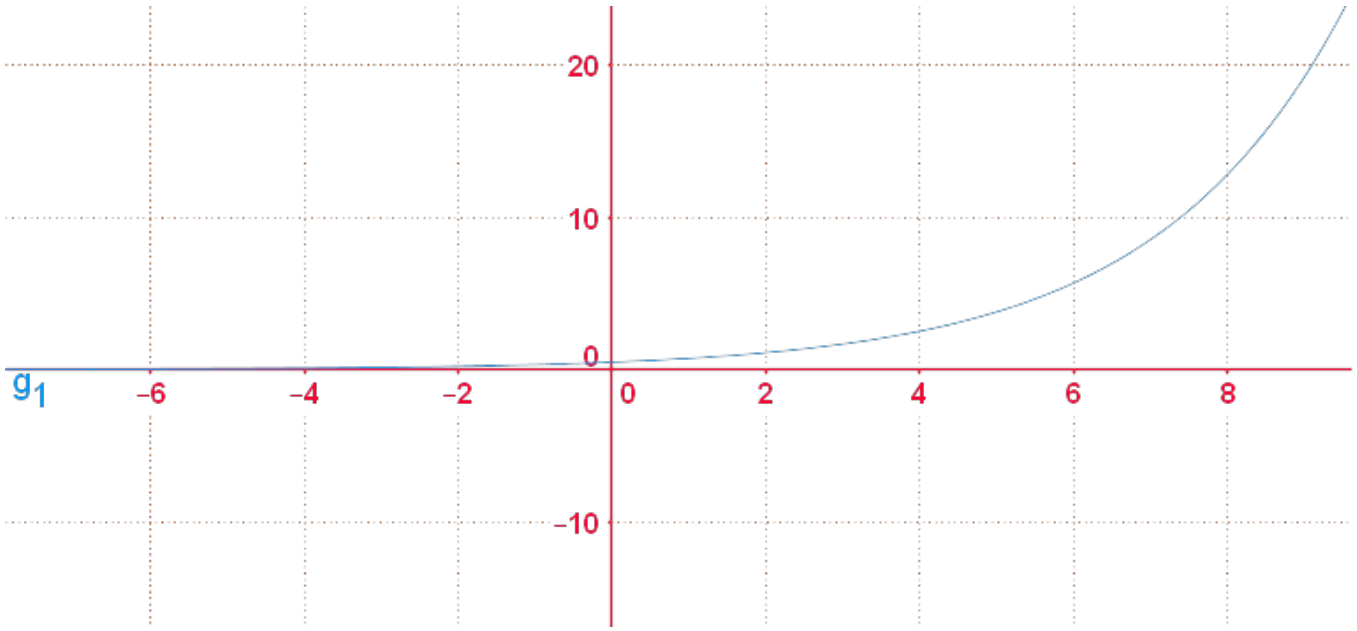
- 8-x
- 7-x
- 3-x
- 6-x

28) Identify the correct function for the below graph.



- (9/2)-x
- (1/2)-x
- (5/2)-x
- (3/2)-x

29) Identify the correct function for the below graph.



- (3/2)^x/2
- (9/2)^x/2
- (1/2)^x/2

- (5/2)^x/2

30) Given f(x) = 45(6) (1/2 x), Evaluate f(3)

- 671.36
- 601.36
- 691.36
- 661.36