

Question 1 (Mandatory) (1 point)



What does b represent, in this linear function $f(x) = mx + b$?

- y-intercept
- slope
- none of these
- x-intercept

Question 2 (Mandatory) (1 point)



About $p(t) = -22 - 44t$, which of following is right?

- linear function
- non-linear function
- unknown function
- none of these

Question 3 (Mandatory) (1 point)



Is the given function linear or non-linear?

$$h(x) = 2x^2 + x$$

- linear function
- non-linear function
- unknown function
- None of these

Question 4 (Mandatory) (1 point)



When $y = 0$, the graph has a intersection with:

- None of these
- slope
- x-axis
- y-axis

Question 5 (Mandatory) (1 point)



A linear function goes through two points (4, 4) and (2, 2), what is the slope?

- 1
- 2
- 2
- 1

Question 6 (5 points)



$f(x) = 700 - 350x$, find the intercepts:

- a) x-intercept: (0, 700), y-intercept: (0, 350)
- b) x-intercept: (2, 0), y-intercept: (0, 700)
- c) x-intercept: (0, 2), y-intercept: (0, 350)
- d) x-intercept: (2, 0), y-intercept: (0, 350)

Question 7 (3 points)



A line contains the two points (1, 3) and (2,3), what is the slope

- a) 0
- b) undefined
- c) 4
- d) -6

Question 8 (4 points)



A power company charges its customers,

(a) \$0.15 per kwh with a base fee of \$31.00 per month.

Let y represent monthly cost, and x represent the number of kwh used, which one of the following is correct?

- a) $y=0.15x + 31$
- b) $y=-0.15x + 31$
- c) $y=0.15x - 31$
- d) $y=-0.15x - 31$

Question 9 (4 points)



A linear function goes through two points (1, -4) and (0, 4), what is the equation?

- a) $y = -8x + 4$
- b) $y = -8x - 4$
- c) $y = 8x - 4$
- d) $y = 8x + 4$

Question 10 (4 points)



Find the x-intercept and y-intercept of the graph of the function $f(x) = -2/3x - 3/5$

- a) x-intercept : (0, -3/5). and y-intercept: (-9/10, 0)
- b) x-intercept : (-9/10, 0). and y-intercept: (0, 3/5)
- c) x-intercept : (0, 3/5). and y-intercept: (-9/10, 0)
- d) x-intercept : (0, -3/5). and y-intercept: (9/10, 0)

Question 11 (Mandatory) (1 point)



Use the verbal description to determine a linear equation for the situation:

The boiling point of water at sea levels is 100 degrees Celsius. The boiling point decreases 3.5 degrees Celsius per 1-kilometer increase in altitude.

$T(a) = -3.5a + 100$

$T(a) = 3.5a - 100$

$T(a) = 100a - 3.5$

$T(a) = -100a + 3.5$

Question 12 (Mandatory) (1 point)



A linear function goes through (0, 5) with a slope of -8, what is the equation of the function?

$f(x) = -8x - 5$

$f(x) = -8x + 5$

$f(x) = 8x - 5$

$f(x) = 8x + 5$

Question 13 (Mandatory) (1 point)



Find the equation of the line that passes through the points (2, 5) and (-1, -1).

$f(x) = 2x - 9$

$f(x) = -x - 1$

$f(x) = 2x + 5$

$f(x) = 2x + 1$

Question 14 (Mandatory) (1 point)





Which of the following is correct if the parabola opens up:

$a < 0$

$a = 0$

$a \neq 0$

$a > 0$

Question 15 (Mandatory) (1 point)



What is the vertex for the function: $f(x) = x^2 - 2x - 3$.

(-2, 10)

(0, -12)

(10, 1)

(1, -4)

Question 16 (Mandatory) (1 point)



which of the following is the intercepts for $f(x) = x^2 - 2x - 3$.

(3, 0) and (1, 0)

(-3, 0) and (1, 0)

(-3, 0) and (-1, 0)

(3, 0) and (-1, 0)

Question 17 (3 points)



Find the Vertex for $f(x) = x^2 - 6x + 8$.

- a) (3, -1)
- b) (3, 1)
- c) (-3, -1)
- d) (-3, 1)

Question 18 (3 points)



Find the x-intercepts of the function $f(x) = x^2 + 5x + 6$

- a) (-3, 0), (2,0)
- b) (3, 0), (-2,0)
- c) (3, 0), (2,0)
- d) (-3, 0), (-2, 0)

Question 19 (4 points)



What is the maximum or Minimum Value for $f(x) = x^2 - 8x + 7$

- a) Maximum Value= - 9
- b) Minimum Value= - 9
- c) Maximum Value= 9
- d) Minimum Value= 9

Question 20 (Mandatory) (1 point)



For the exponential function $f(x) = b^x$, which of the following could possibly be the value of b ?

-1

0

1/2

1

Question 21 (Mandatory) (1 point)



Evaluate the exponential function $f(x) = 5^x$ when $x=3$.

15

1235

1225

125

Question 22 (Mandatory) (1 point)



The following is an Exponential functions, which one is decay?

$f(x) = \left(\frac{16}{15}\right)^x$

$f(x) = 10.1^x$

$f(x) = 0.95^x$

$f(x) = \left(1\frac{1}{3}\right)^x$

Question 23 (Mandatory) (1 point)



The following is an Exponential functions, which one is growth?

$f(x) = 0.95^x$

$f(x) = 0.0095^x$

$f(x) = 0.095^x$

$f(x) = 1.95^x$

Question 24 (Mandatory) (1 point)



Convert $y = \log_a(x)$ into exponential format:

$y = a^x$

$x = a^y$

$a = y^x$

$a = x^y$

Question 25 (Mandatory) (1 point)





Convert $9 = \log_4(x)$ into exponential form.

$4^x = 9$

$x^4 = 9$

$9^x = 4$

$4^9 = x$

Question 26 (Mandatory) (1 point)



Evaluate $\ln(4)$:

1.386294

0.1386294

-1.386294

0.386294

Question 27 (3 points)



Convert the exponential equation into logarithmic format.

$$3^4 = 81$$

a) $\log_4 (81) = 3$

b) $\log_{81} (4) = 3$

c) $\log_3 (81) = 4$

d) $\log_3 (4) = 81$

Question 28 (3 points)



Convert the exponential equation in logarithmic form.

$$e^y = 5$$

a) $\ln (e) = y$

b) $\ln (5) = y$

c) $\log (x) = 5$

d) $\log_5 (y) = e$

Question 29 (3 points)



Solve the equation for x.

$$\log_7 x = 2$$

a) 49

b) 7

c) 35

d) 28

Question 30 (4 points)



Evaluate the logarithm.

$$\log_4 \left(\frac{1}{64} \right)$$

a) -4

b) -3

c) -2

d) -2

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