

Number of Questions: **46**

Question 1 of 46

Part 1 of 4

$$f(-3) = 0.0498$$

Part 2 of 4

$$f(4.6) = 99.4843$$

Part 3 of 4

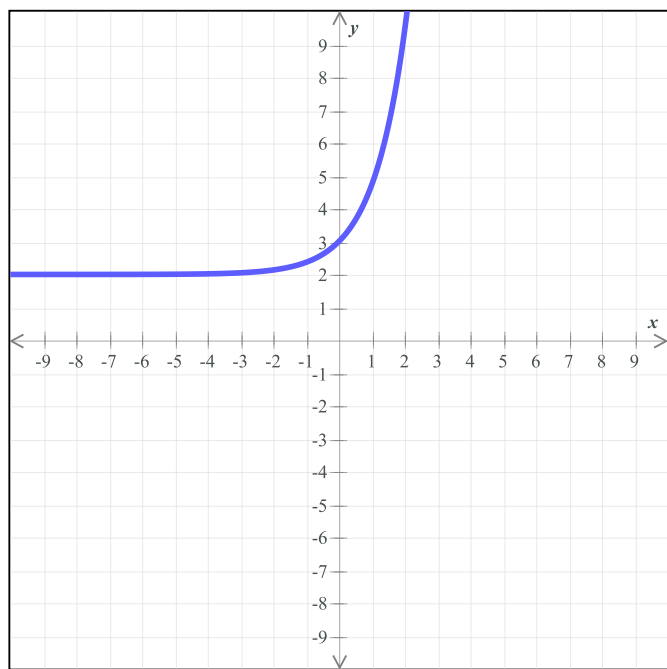
$$f(\sqrt{13}) = 36.8020$$

Part 4 of 4

$$f(\pi) = 23.1407$$

Question 2 of 46

Part 1 of 3



Part 2 of 3

The domain of the function k is $(-\infty, \infty)$.

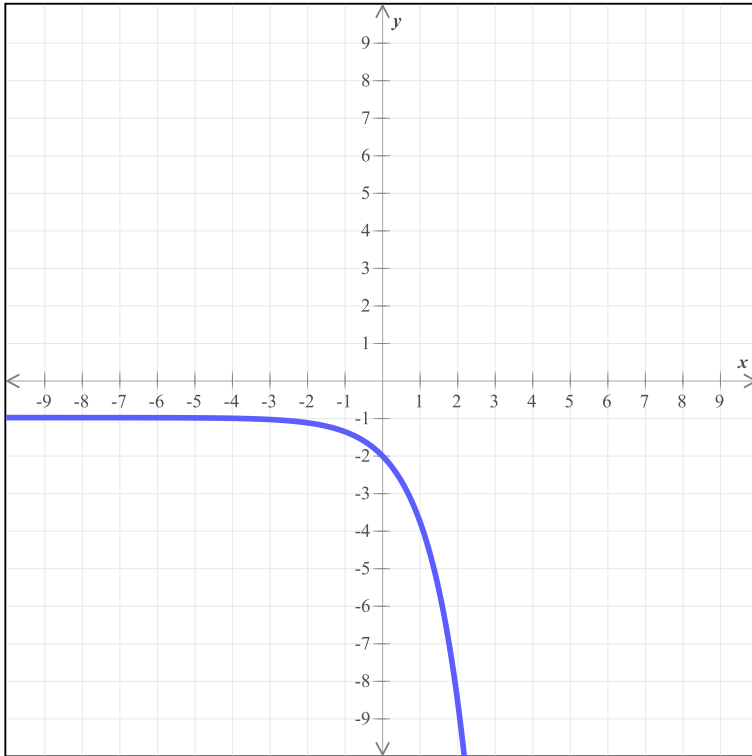
The range of the function k is $(2, \infty)$.

Part 3 of 3

The equation of the horizontal asymptote is $y=2$.

Question 3 of 46

Part 1 of 3



Part 2 of 3

The domain of the function n is $(-\infty, \infty)$.

The range of the function n is $(-\infty, -1)$.

Part 3 of 3

The equation of horizontal asymptote is $y = -1$.

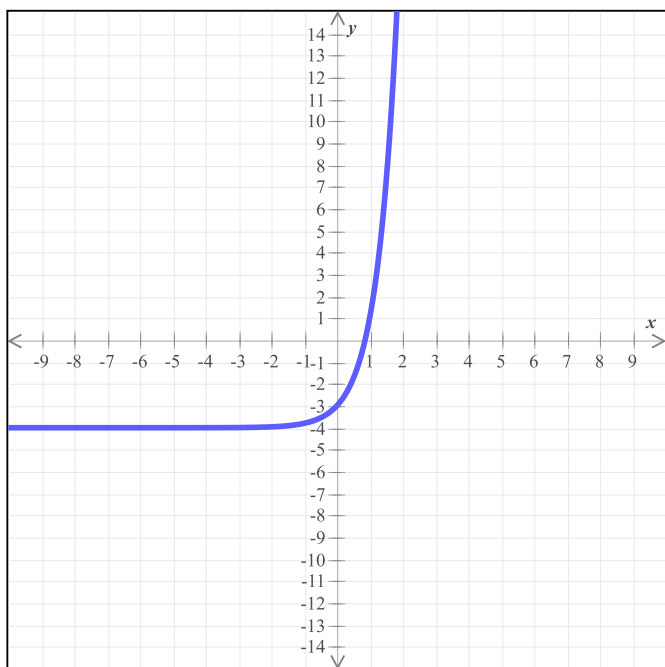
Question 4 of 46

(a) $f(x) = (\sqrt{4.5})^x$

(c) $h(x) = 4.7^x$

Question 5 of 46

Part 1 of 3



Part 2 of 3

The domain of the function f is $(-\infty, \infty)$.

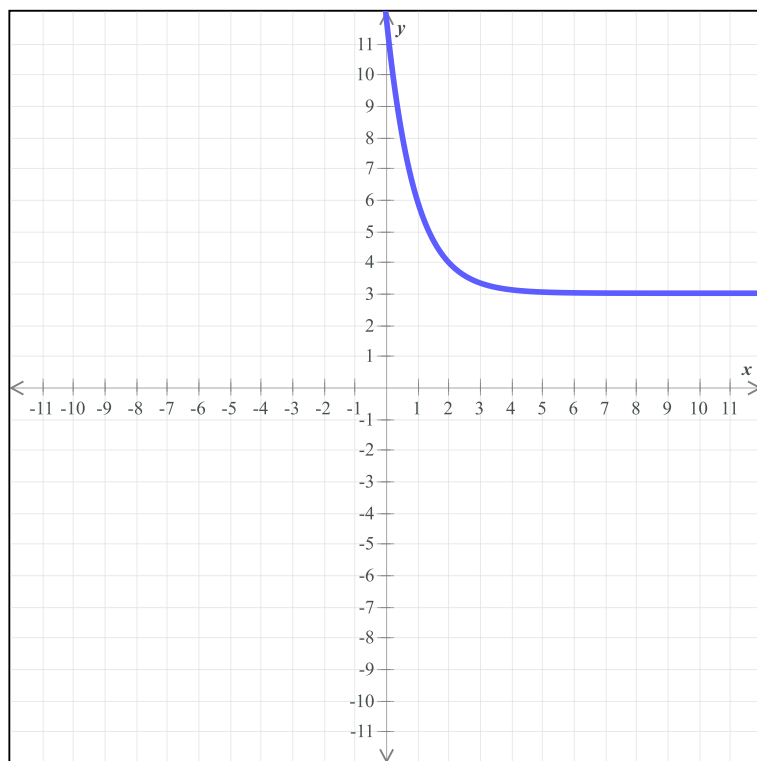
The range of the function f is $(-4, \infty)$.

Part 3 of 3

The equation of the horizontal asymptote is $y = -4$.

Question 6 of 46

Part 1 of 3



Part 2 of 3

The domain of the function g is $(-\infty, \infty)$.

The range of the function g is $(3, \infty)$.

Part 3 of 3

The equation of the horizontal asymptote is $y = 3$.

Question 7 of 46

Part 1 of 3

At 4.5% simple interest, the total interest Aniyah would pay is \$1620.

Part 2 of 3

At 4% interest compounded continuously, the total interest Aniyah would pay is \$1529.96.

Part 3 of 3

4% interest compounded continuously for 3 yr results in less total interest.

Question 8 of 46

$$2^9 = 512$$

Question 9 of 46

$$10^{-5} = \frac{1}{100,000}$$

Question 10 of 46

$$\log_2 4 = 2$$

Question 11 of 46

$$\log_5 25 = 2$$

Question 12 of 46

$$\log\left(\frac{1}{1000}\right) = -3$$

Question 13 of 46

$$\log_{\pi} 1 = 0$$

Question 14 of 46

$$\log_5(125q) = 3 + \log_5 q$$

Question 15 of 46

Part 1 of 3

quotient property of logarithms

Part 2 of 3

$$\ln e - \ln 11$$

Part 3 of 3

1

Question 16 of 46

$$\log\left(\frac{p^3 + q}{100}\right) = \log(p^3 + q) - 2$$

Question 17 of 46

Part 1 of 6

First, apply the quotient property of logarithms.

Part 2 of 6

$$= \ln \sqrt[5]{ab} - \ln (cd)^2$$

Part 3 of 6

Then, apply the power property of logarithms.

Part 4 of 6

$$= \frac{1}{5} \ln(ab) - 2 \ln(cd)$$

Part 5 of 6

$$= \frac{1}{5} (\ln a + \ln b) - 2 (\ln c + \ln d)$$

Part 6 of 6

$$= \frac{\ln a}{5} + \frac{\ln b}{5} - 2 \ln c - 2 \ln d$$

Question 18 of 46

$$4\log_5 u - 2\log_5 v - 3\log_5 w = \log_5 \left(\frac{u^4}{v^2 w^3} \right)$$

Question 19 of 46

The solution set is $\{2\}$.

Question 20 of 46

The solution set is $\left\{ \frac{1}{2} \right\}$.

Question 21 of 46

The exact solution set is $\left\{ \frac{\ln 853}{\ln 11} \right\}$.

$$t \approx 2.8145$$

Question 22 of 46

The exact solution set is $\{-4\}$.

Question 23 of 46

The exact solution set is $\{6\}$.

Question 24 of 46

It will take approximately 27 years.

Question 25 of 46

Part 1 of 2

It will take approximately 1.9 hour(s) for the amount of caffeine to drop below 80 mg.

Part 2 of 2

Laura should stop drinking coffee approximately 6 hour(s) before going to bed.

Question 26 of 46

It will take 69 minutes for the steel to reach a temperature of 110°F .

Question 27 of 46

$\{(3, 8)\}$

Question 28 of 46

The system has no solution, $\{\}$.

The system is inconsistent.

Question 29 of 46

Part 1 of 2

5000

Part 2 of 2

2000

Question 30 of 46

The system has one solution.

The solution set is $\{(-1, 1, 2)\}$.

Question 31 of 46

$$\left[\begin{array}{ccc|c} 6 & 2 & -3 & -1 \\ 9 & 0 & 4 & -8 \\ 0 & 4 & -4 & -4 \end{array} \right]$$

Question 32 of 46

The matrix is not in row-echelon form.

In order for the matrix to be in row-echelon form, the element in row 2, column 2 must be 1.

Question 33 of 46

The matrix is not in row-echelon form.

In order for the matrix to be in row-echelon form, the element in the row 3, column 2 must be 0.

Question 34 of 46

The matrix is not in row-echelon form.

In order for the matrix to be in row-echelon form, the element in row 2, column 2 must be 1.

Question 35 of 46

$$\{(5, 9, 3)\}$$

Question 36 of 46

$$\{(-2, 3, -2)\}$$

Question 37 of 46

Part 1 of 2

$$3 \times 1$$

Part 2 of 2

The matrix is a column matrix.

Question 38 of 46

$$B + D \text{ Undefined}$$

Question 39 of 46

Part 1 of 3

$$AB = \begin{bmatrix} 18 & -4 \\ 22 & 12 \end{bmatrix}$$

Part 2 of 3

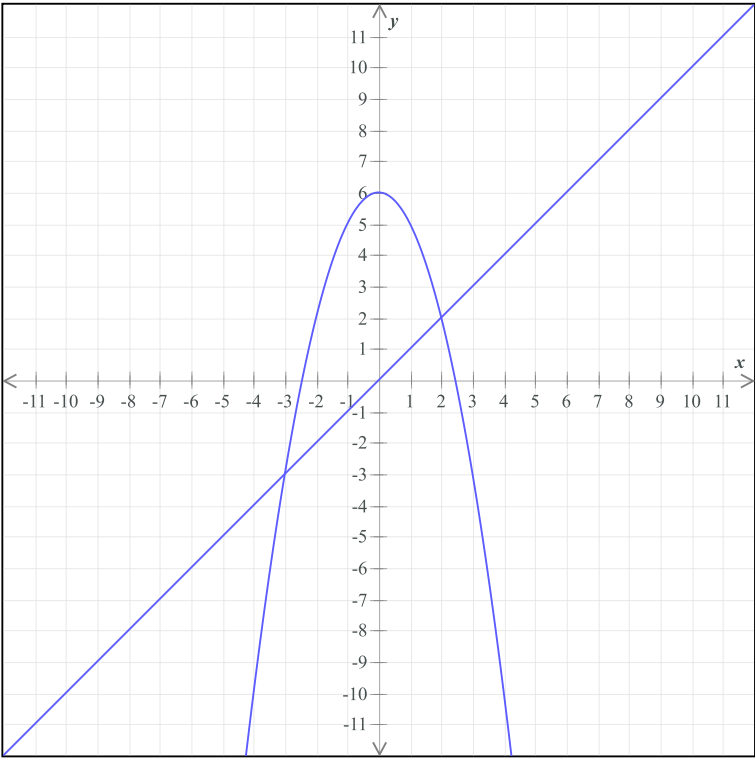
$$BA = \begin{bmatrix} -2 & 4 & 12 \\ 37 & 6 & -32 \\ 2 & 12 & 26 \end{bmatrix}$$

Part 3 of 3

A^2 is not defined.

Question 40 of 46

Part 1 of 2

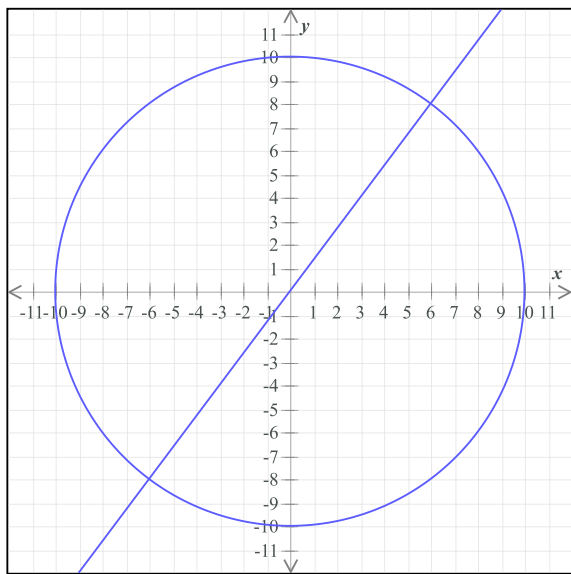


Part 2 of 2

The solution set is $\{(-3, -3), (2, 2)\}$.

Question 41 of 46

Part 1 of 2



Part 2 of 2

The solution set is $\{(6, 8), (-6, -8)\}$.

Question 42 of 46

Part 1 of 4

To determine whether A and B are inverses we must compute AB and BA .

Part 2 of 4

$$AB = \begin{bmatrix} -12 & -76 \\ 13 & -36 \end{bmatrix}$$

Part 3 of 4

$$BA = \begin{bmatrix} 25 & 59 \\ -55 & -73 \end{bmatrix}$$

Part 4 of 4

AB and BA do not equal the identity matrix. Therefore, A and B are not inverses.

Question 43 of 46

The matrix is singular.

Question 44 of 46

The matrix is singular.

Question 45 of 46

$$A^{-1} = \begin{bmatrix} 0 & -1 & -1 \\ -\frac{1}{4} & \frac{9}{4} & \frac{11}{4} \\ -\frac{5}{4} & \frac{13}{4} & \frac{19}{4} \end{bmatrix}$$

Question 46 of 46

Part 1 of 3

$$A = \begin{bmatrix} -8 & 0 & 2 \\ 0 & 7 & -4 \\ -2 & 2 & 3 \end{bmatrix}$$

Part 2 of 3

$$X = \begin{bmatrix} x \\ y \\ z \end{bmatrix}$$

Part 3 of 3

$$B = \begin{bmatrix} 3 \\ -29 \\ -14 \end{bmatrix}$$