

## Question 1

Not yet  
answeredPoints out of  
8.75Flag  
question**Find the exact distance between the points.**

(-9, 4) and (-5, -6)

Select one:

- a.  $10\sqrt{2}$
- b.  $2\sqrt{29}$
- c. 200
- d. 116

## Question 2

Not yet  
answeredPoints out of  
8.75Flag  
question**Evaluate as indicated.**If  $K(x) = |x-9| + x$ , find  $K(-7)$ .

Select one:

- a. -23
- b. 9
- c. -9
- d. 23

Question 3

Not yet answered

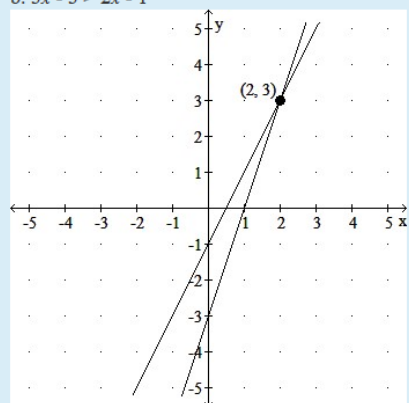
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Use the graph to solve the equation and inequality. Write the solution to the inequality in interval notation.

a.  $3x - 3 = 2x - 1$

b.  $3x - 3 > 2x - 1$



Select one:

- a. a. {3}; b. (3,  $\infty$ )
- b. a. {3}; b. ( $-\infty$ , 3}
- c. a. {2}; b. ( $-\infty$ , 2)
- d. a. {2}; b. (2,  $\infty$ )

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Question 4

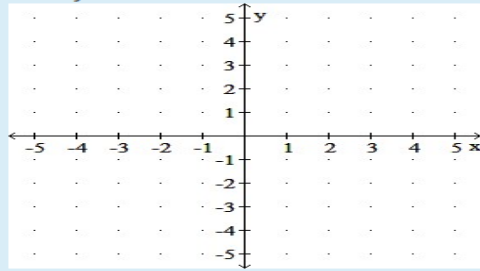
Not yet answered

Points out of 8.75

Flag question

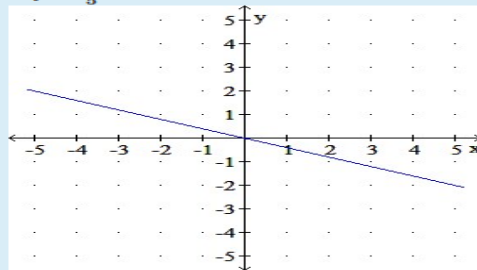
Write the equation in slope-intercept form. Then, graph the line using the slope and y-intercept.

$-5x - 2y = 0$

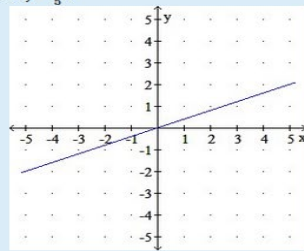


Select one:

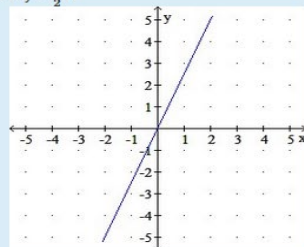
- a.  $y = -\frac{2}{5}x$



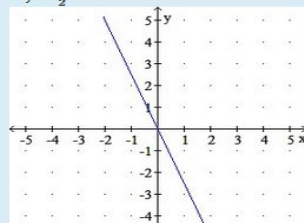
- b.  $y = \frac{2}{5}x$



- c.  $y = \frac{5}{2}x$



- d.  $y = -\frac{5}{2}x$



Question **5**

Not yet  
answered

Points out of  
8.75

Flag  
question

Determine if the lines defined by the given equations are parallel, perpendicular, or neither.

$$y = \frac{7}{5}x - 2$$

$$y = -\frac{7}{5}x - 4$$

Select one:

- a. neither
- b. perpendicular
- c. parallel

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Question 6

Not yet answered

Points out of 8.75

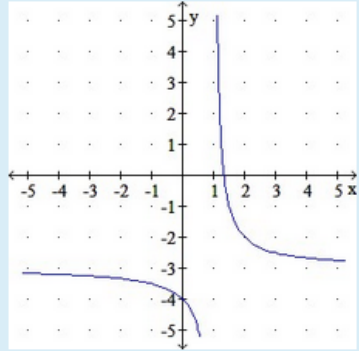
Flag question

Use translations to graph the given function.

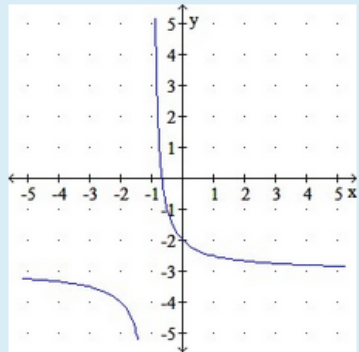
$$g(x) = \frac{1}{x-1} + 3$$

Select one:

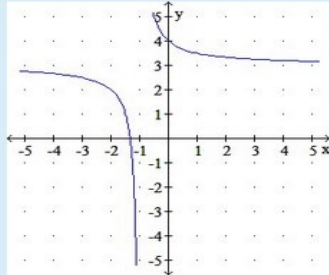
a.



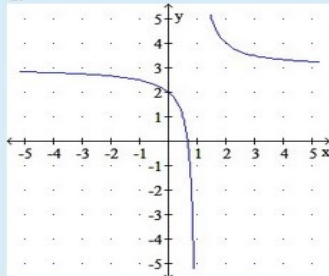
b.



c.



d.



**Question 7**

Not yet answered

Points out of 8.75

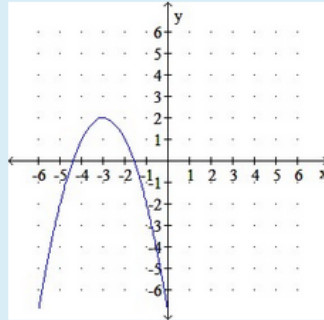
Flag question

Use transformations to graph the given function.

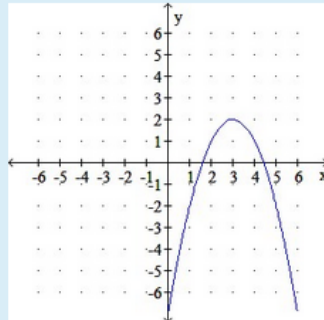
$$f(x) = -(x + 3)^2 + 2$$

Select one:

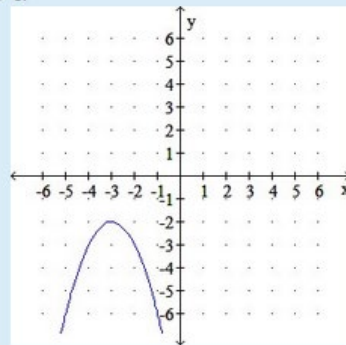
a.



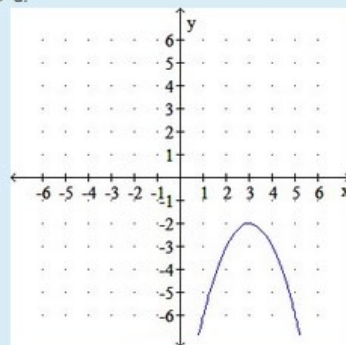
b.



c.



d.



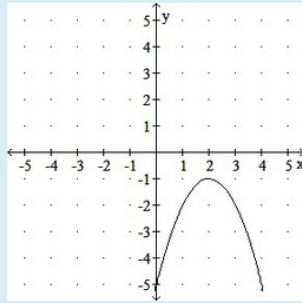
Question 8

Not yet answered

Points out of 8.75

Flag question

Use interval notation to write the intervals over which  $f$  is (a) increasing, (b) decreasing, and (c) constant.



Select one:

- a. a.  $(-\infty, 2)$   
b.  $(2, \infty)$   
c. never constant
- b. a.  $(-\infty, 2)$   
b.  $(2, \infty)$   
c.  $x = 2$
- c. a.  $(-\infty, -1)$   
b.  $(-1, \infty)$   
c. never constant
- d. a.  $(-\infty, -2)$   
b.  $(-2, \infty)$   
c. never constant

Question 9

Not yet answered

Points out of 8.75

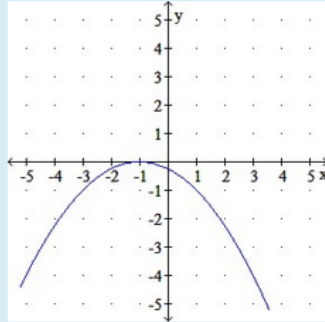
Flag question

Graph the function and determine the minimum or maximum value of the function.

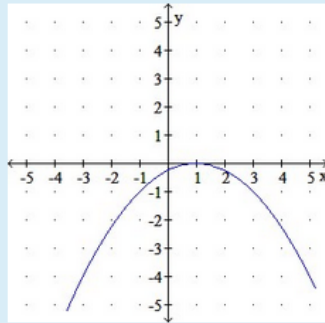
$$m(x) = -\frac{1}{4}(x+1)^2$$

Select one:

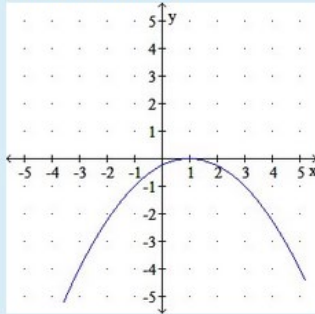
a. maximum value = 0



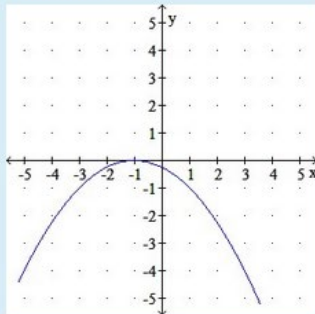
b. minimum value = 0



c. maximum value = 0



d. minimum value = 0



**Question 10**

Not yet answered

Points out of 8.75

Flag question

Write the function in vertex form and determine the x-intercept(s)

$$h(x) = -5x^2 + 11x$$

Select one:

- a.  $h(x) = -5(x - \frac{11}{10})^2 + \frac{121}{20}$ ; (0,0) and  $(\frac{11}{5}, 0)$
- b.  $h(x) = 5(x + \frac{11}{10})^2 - \frac{121}{10}$ ; (0,0) and  $(\frac{11}{5}, 0)$
- c.  $h(x) = -5(x - \frac{11}{10})^2 - \frac{121}{10}$ ; (0,0) and  $(-\frac{11}{5}, 0)$
- d.  $h(x) = 5(x + \frac{11}{10})^2 + \frac{121}{10}$ ; (0,0) and  $(-\frac{11}{5}, 0)$

**Question 11**

Not yet answered

Points out of 8.75

Flag question

Solve the problem.

Given  $f(x) = 2x^3 + 7x^2 + 14x - 9$ . Use the intermediate value theorem to determine whether  $f(x)$  has a zero on the interval  $[0, 1]$ , find the zero if it exists.

Select one:

- a. -1
- b. 1
- c.  $\frac{1}{2}$
- d. There is no zero on the interval.

**Question 12**

Not yet answered

Points out of 8.75

Flag question

A table of values is given for  $Y_1 = f(x)$ . Determine whether the intermediate value theorem guarantees that the function has a zero on the given interval.

$$Y_1 = 17x^4 - 39x^3 + 186x^2 + 298x + 398 \quad [-2, -1]$$

X	$Y_1$
-4	9,030
-3	3,608
-2	1,130
-1	342
0	398
1	860
2	1,698
3	3,290

$\bar{X} = -4$

Select one:

- a. Yes
- b. No

## Question 13

Not yet answered

Points out of 8.75

Flag question

Use long division to divide.

$$(4x^3 - 17x^2 - 1x + 29) \div (x - 4)$$

Select one:

- a.  $4x^2 - 1x + 4$
- b.  $4x^2 - 33x + 131 - \frac{495}{x-4}$
- c.  $4x^2 - 1x - 5 + \frac{9}{x-4}$
- d.  $4x^2 - 33x - 364$

## Question 14

Not yet answered

Points out of 8.75

Flag question

Use long division to divide.

$$(-150x^2 + 15x^4 + 135) \div (3x + 9)$$

Select one:

- a.  $155x^3 - 50x - \frac{420}{x+3}$
- b.  $5x^3 - 65x + \frac{240}{x+3}$
- c.  $5x^3 - 15x^2 - 5x + 15$
- d.  $5x^3 + 15x^2 - 5x - 15$

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## Question 15

Not yet answered

Points out of 8.75

Flag question

Write a polynomial  $f(x)$  that meets the given conditions.Polynomial of lowest degree with real coefficients and zeros  $4i$  and  $2 - i$ .

Select one:

- a.  $f(x) = x^4 - 4x^3 + 12x^2 + 64x - 64$
- b.  $f(x) = x^4 + 4x^3 - 12x^2 - 64x + 64$
- c.  $f(x) = x^4 - 4x^3 + 19x^2 - 64x + 48$
- d.  $f(x) = x^4 - 4x^3 + 21x^2 - 64x + 80$

Question 16

Not yet answered

Points out of 8.75

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List the possible rational zeros.

$$f(x) = 25x^4 - 7x^3 + 2x + 10$$

Select one:

- a.  $\pm 1, \pm \frac{1}{5}, \pm \frac{1}{25}, \pm 5, \pm 2, \pm 10, \pm \frac{2}{5}, \pm \frac{2}{25}$
- b.  $\pm 1, \pm \frac{1}{5}, \pm \frac{1}{25}, \pm 5, \pm \frac{5}{2}, \pm 25, \pm \frac{25}{2}$
- c.  $1, \frac{1}{5}, \frac{1}{25}, 5, 2, \frac{2}{5}, \frac{2}{25}$
- d.  $-1, -\frac{1}{5}, -\frac{1}{25}, -5, -2, -\frac{2}{5}, -\frac{2}{25}$

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Question 17

Not yet answered

Points out of 8.75

Flag question

Provide the missing information.

If  $(a, b)$  is a point on the graph of a one-to-one function  $f$ , then the corresponding ordered pair \_\_\_\_\_ is a point on the graph of  $f^{-1}$ .

Answer:

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Question 18

Not yet answered

Points out of 8.75

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Provide the missing information.

Let  $f$  be a one-to-one function and let  $g$  be the inverse of  $f$ . Then  $(f \circ g)(x) = \underline{\hspace{2cm}}$  and

$(g \circ f)(x) = \underline{\hspace{2cm}}$ .

(Please enter a semicolon between your two answers.)

Answer:

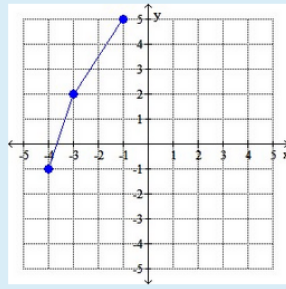
Question 19

Not yet answered

Points out of 8.75

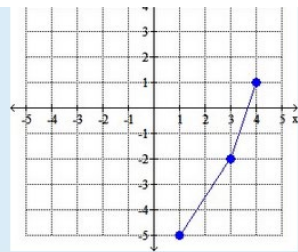
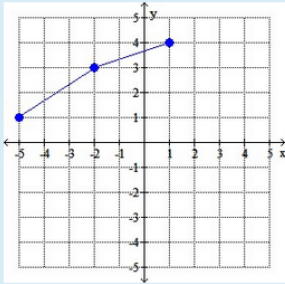
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The graph of a function is given. Graph the inverse function.

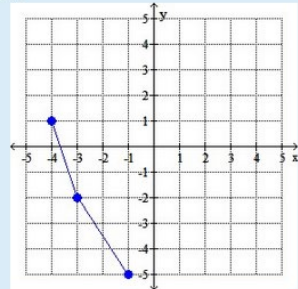


Select one:

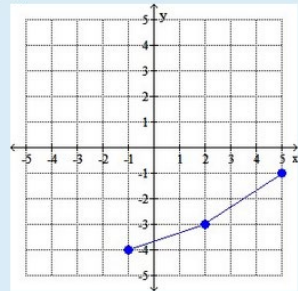
a.



c.



d.



## Question 20

Not yet  
answeredPoints out of  
8.75Flag  
question

## Solve the problem.

Based on data from a hurricane, the function defined by  $w(x) = -1.17x + 1,225$  gives the wind speed  $w(x)$  (in mph) based on the barometric pressure  $x$  (in millibars, mb). Write a function representing the inverse of  $w$  and interpret its meaning in context.

Select one:

- a.  $w^{-1}(x) = \frac{1,225 - x}{1.17}$
- b.  $w^{-1}(x) = \frac{x - 1,225}{1.17}$ ; The inverse gives the barometric pressure  $w^{-1}(x)$  for a given wind speed.
- c.  $w^{-1}(x) = \frac{1,225 - x}{1.17}$ ; The inverse gives the barometric pressure  $w^{-1}(x)$  for a given wind speed.
- d.  $w^{-1}(x) = \frac{x - 1,225}{1.17}$ ; The inverse gives the wind speed  $w^{-1}(x)$  for a given barometric pressure.