Take Assessment: Exam 1

Name Exam 1

Instructions

Multiple Attempts This Test allows 2 attempts. This is attempt number 1.

Force Completion This Test can be saved and resumed later.

Question Completion Status:

Question 1 **5 points** Save

Find an equation for the line with the given properties. Express the answer using the general form of the equation of a line.

Parallel to the line 3x - 4y = 1; containing the point (-1, 0)

- 3x - 4y = 4
- 3x - 4y = -3
- -4x - 3y = 4
- -4x - 3y = 3

Question 2 **5 points** Save

Solve the problem.

If (a, 3) is a point on the graph of y = 2x - 5, what is a?

- 1
- -1
- 4
- -4

Question 3 **5 points** Save

Find an equation for the line with the given properties. Express the answer using the slope-intercept form of the equation of a line.

Slope = 0; containing the point (-8, -1)

- y = -1
- x = -8
- y = -8
- x = -1

Question 4 **5 points** Save

Find an equation for the line with the given properties. Express the answer using the slope-intercept form of the equation of a line.

horizontal; containing the point (-7, -2)

- x = -7
- x = -2
- y = -7
- y = -2

Question 5 **5 points** Save

Solve the problem.

How much pure acid should be mixed with 2 gallons of a 50% acid solution in order to get an 80% acid solution?

- 3 gal
- 5 gal
- 8 gal
- 1 gal

Question 6 **5 points** Save

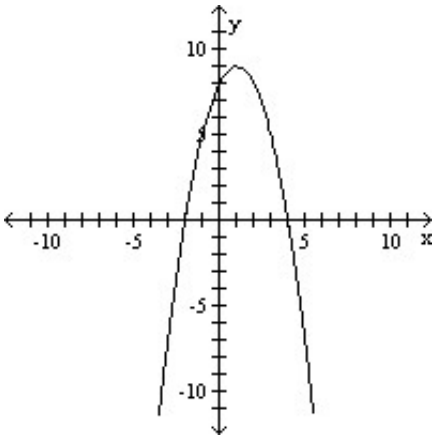
Use the discriminant to determine whether the quadratic equation has two unequal real solutions, a repeated real solution, or no real solution without solving the equation.

$x^2 - 3x + 6 = 0$

- repeated real solution
- two unequal real solutions
- no real solution

Question 7 **5 points** Save

List the intercepts of the graph.



- (-2, 0), (0, 8), (0, 4)
- (-2, 0), (0, 8), (4, 0)
- (0, -2), (8, 0), (0, 4)
- (0, -2), (0, 8), (4, 0)

Question 8 **5 points** Save

Find the slope and y-intercept of the line.

x - y = 0

- slope = 1; y-intercept = 0
- slope = 1; y-intercept = 1
- slope = -1; y-intercept = 0
- slope = 1; y-intercept = -1

Question 9 **5 points** Save

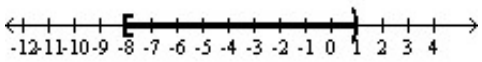
Find the real solutions of the equation by factoring.

$$\frac{x-7}{x} = \frac{48}{x+7}$$

- {7, 1}
- {49, -1}
- {49, 1}
- {7, -1}

Question 10 **5 points** Save

Express the graph shown using interval notation. Also express it as an inequality involving x.



- (-8, 1)
  $-8 < x < 1$
- [-8, 1)
  $-8 \le x < 1$
- [-8, 1]
  $-8 \le x \le 1$
- (-8, 1]
  $-8 < x \le 1$

Question 11 **5 points** Save

Solve the problem.

Tracy can wallpaper 5 rooms in a new house in 15 hours. Together with her trainee they can wallpaper the 5 rooms in 10 hours. How long would it take the trainee working by herself to do the job?

- 15 hr
- 60 hr
- 45 hr
- 30 hr

Question 12 **5 points** Save

Write the expression in the standard form a + bi.

i^{-55}

- 1
- -1
- -i
- i

Question 13 **5 points** Save

Write the standard form of the equation of the circle with radius r and center (h, k).

r = 10; (h, k) = (4, -10)

- $(x + 4)^2 + (y - 10)^2 = 100$
- $(x + 4)^2 + (y - 10)^2 = 10$
- $(x - 4)^2 + (y + 10)^2 = 100$
- $(x - 4)^2 + (y + 10)^2 = 10$

Question 14 **5 points** Save

Solve the problem.

4 - i is a solution of a quadratic equation with real coefficients. Find the other solution.

- -4 - i
- 4 + i
- -4 + i
- 4 - i

Question 15 **5 points** Save

Solve the equation by the Square Root Method.

$(2x + 3)^2 = 25$

- {1, 4}
- {-14, 14}
- {-4, 1}
- {0, 1}

Question 16 **5 points** Save

Solve the problem.

At Bargain Car Rental, the cost of renting an economy car for one day is $19.95 plus 20 cents per mile. At Best Deal Car Rental, the cost of renting a similar car for one day is $24.95 plus 15 cents per mile. Solve the inequality 24.95 + 0.15x < 19.95 + 0.20x to find the range of miles driven such that Best Deal is a better deal than Bargain.

- x < 10 mi
- x > 100 mi
- x < 100 mi
- x > 10 mi

Question 17 **5 points** Save

Decide whether or not the points are the vertices of a right triangle.

(-9, 0), (-7, 4), (-5, 3)

- No
- Yes

Question 18 **5 points** Save

Use the discriminant to determine whether the quadratic equation has two unequal real solutions, a repeated real solution, or no real solution without solving the equation.

$5x^2 - 2x - 1 = 0$

- repeated real solution
- two unequal real solutions
- no real solution

Question 19 **5 points** Save

Solve the problem.

Find the dimensions of a rectangle whose perimeter is 32 meters and whose area is 60 square meters.

- 5 m by 11 m
- 7 m by 9 m
- 6 m by 10 m
- 5 m by 9 m

Question 20 **5 points** Save

Solve the problem.

Find all the points having an x-coordinate of 9 whose distance from the point (3, -2) is 10.

- (9, 6), (9, -10)
- (9, 13), (9, -7)
- (9, -12), (9, 8)
- (9, 2), (9, -4)

Save Submit