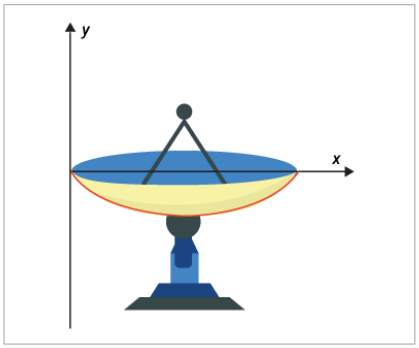
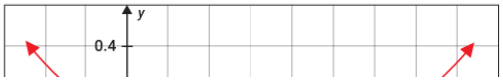
ATTEMPT 1

The curve of a satellite dish is represented by a quadratic function shown in the graph. The diameter of the dish is 1. 1.2 ✓ m.



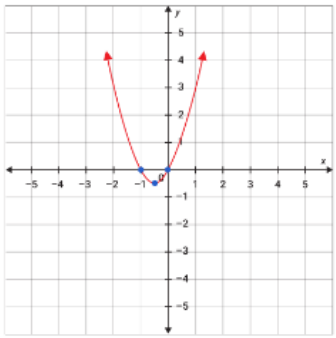


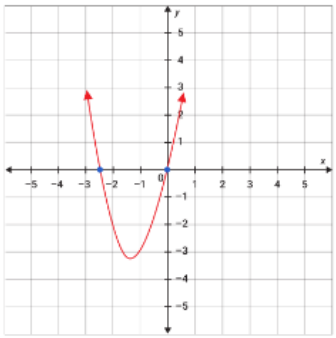
Choose the correct answer.

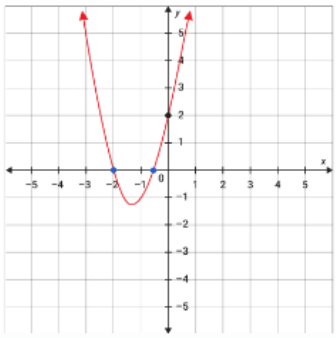
The x-intercepts of the quadratic function $y = 2x^2 + 5x + 2$ are at -0.5 and -2.

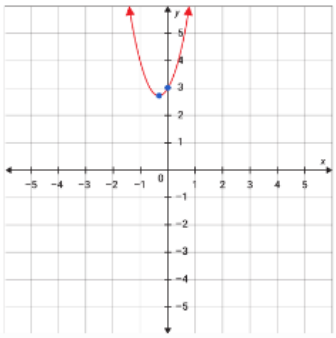
Which of the following graphs best represents the given function?

ATTEMPT 1









The solutions of a quadratic equation are 1 and -3. Which of the following equations have these solutions?

ATTEMPT 1

- ☐ $-x^2+x=0$
- ☐ $-2x^2+2x=0$
- ☐ $-0.1x^2+0.4x+90=0$
- ☑ $4x^2+8x-12=0$ ✓
- ☐ $x^2+6x+9=0$
- ☑ $2x^2+4x-6=0$ ✓

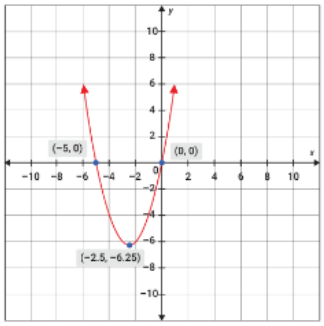
Two equations have solutions 1 and -3. They are $2x^2+4x-6=0$ and $4x^2+8x-12=0$. Substitute the given roots in the equations to see if the terms on the left side of the equation match the terms on the right side of the equation. That is, $0=0$.

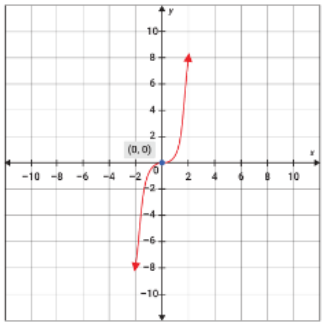
Choose the correct answer.

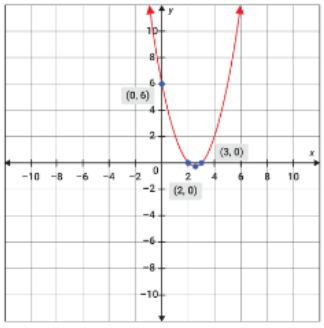
A quadratic equation has solutions of 2 and 3.

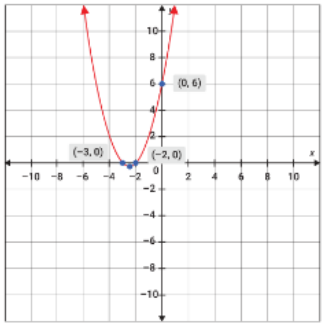
Select the graph of the related quadratic function.

ATTEMPT 1









Enter your answer in the blank.

A quadratic equation has two unique real solutions when the graph intersects the *x*-axis at

1. 2 ✓ points.

1. 2 ✓

If the graph intersects the *x*-axis at two different points, the quadratic equation has two unique real solutions.

ATTEMPT 1

Drag and drop your answer into the blank.

If the graph of a quadratic function intersects the x-axis at two different points, then the related equation has 1. two unique real solutions ✓.

no real solution | three unique real solutions | one real solution

1. two unique real solutions ✓

If the quadratic graph intersects the x-axis at two different points, then it has two unique real solutions.

ATTEMPT 1

Select your answer from the drop-down menu.

The standard form of the equation $x^2 + 4x = 9$ is 1. $x^2 + 4x - 9 = 0$ ✓

1. $x^2 + 4x - 9 = 0$ ✓

The standard form of a quadratic equation is $ax^2 + bx + c = 0$.

So, the standard form of the given equation $x^2 + 4x = 9$ is $x^2 + 4x - 9 = 0$.

ATTEMPT 3

Select your answer from the drop-down menu.

Mariam says "The quadratic equation $x^2 + 4x + 3 = 0$ has solutions -1 and -3."

The solutions of the given equation are 1. correct ✓ .

1. correct ✓

When $x = -1$	When $x = -3$

Drag and drop your answer into the blank.

From the graph of a quadratic function, we can say that the solution or roots of the related equation are found at the 1. *x*-intercepts ✓ of the graph.

variables | coordinates of the vertex | *y*-intercept

1. *x*-intercepts ✓

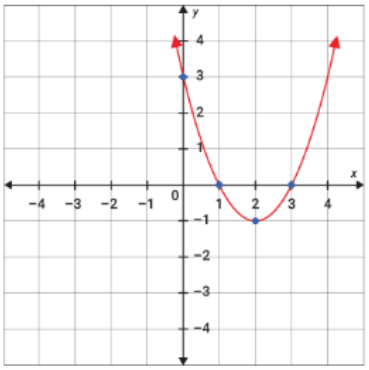
The roots or the solutions of any quadratic function are the *x*-coordinates of the ***x*-intercepts** of the graph of that function.

Select your answer from the drop-down menu.

The graph shows the quadratic function, $y = x^2 - 4x + 3$.

The solutions of the related quadratic equation,

$x^2 - 4x + 3 = 0$, are 1. 1 and 3 .

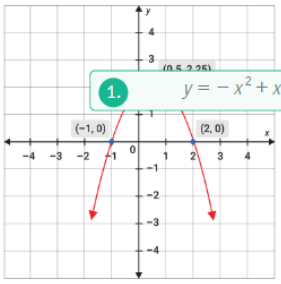


1. 1 and 3 ✓

The x-intercepts of the graph of the quadratic function $y = x^2 - 4x + 3$ are $(1, 0)$and $(3, 0)$. So the solutions of the equation $x^2 - 4x + 3 = 0$ are 1 and 3.

Drag and drop the correct answer.

From the graph given below, identify the correct equation of the function.



1. $y = -x^2 + x + 2$ ✓

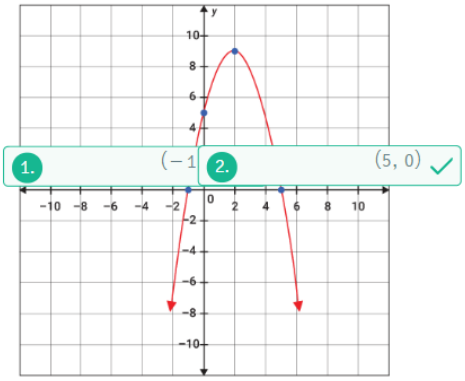
$y = -3x^2 + 5x + 2$ $y = 5x^2 + 4x - 3$ $y = 3x^2 - 6x + 1$

1. $y = -x^2 + x + 2$ ✓

From the graph, you can see that the parabola intersects the y-axis at (0, 2). Identify the quadratic function which has a y-intercept of 2.

The solutions of the quadratic equation $-x^2 + 4x + 5 = 0$ are -1 and 5. Below is the graph of the related quadratic function.

Drop the correct coordinates to the correct location on the graph.



1. $(-1$ 2. $(5, 0)$

$(0, -1)$ $(-1, 5)$ $(0, 5)$

1. $(-1, 0)$