

NAME:

DATE:

A2.Q2.BERMELLEEMBO: SOLVING QUADRATIC EQUATIONS BY GRAPHING

**DAY EQ3
(EQUATIONS)**

NOTES

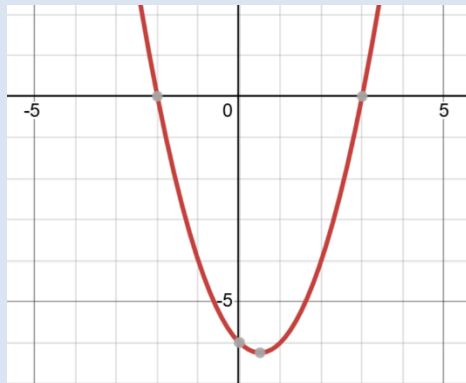
Solve the equation by using the **graphing method**. BOX YOUR ANSWER

1. $x^2 - x - 6 = 0$ *Be sure to draw a quick sketch to support your answer(s).*

ALSO CIRCLE: A. TWO REAL SOLUTIONS B. ONE REAL REPEAT SOLUTION C. NO REAL SOLUTION

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

Let $f(x) = x^2 - x - 6$ *Find the zeros



On the calculator:

$$Y_1 = x^2 - x - 6$$

Graph it

Locate the zeros

$$x = -2 \text{ or } x = 3$$

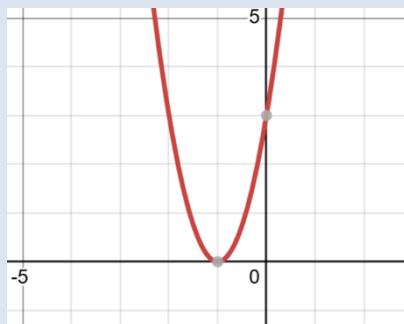
Solve the equation by using the **graphing method**. BOX YOUR ANSWER

2. $3x^2 + 6x + 3 = 0$ *Be sure to draw a quick sketch to support your answer(s).*

ALSO CIRCLE: A. TWO REAL SOLUTIONS B. ONE REAL REPEAT SOLUTION C. NO REAL SOLUTION

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

Let $f(x) = 3x^2 + 6x + 3$ *Find the zeros



On the calculator:

$$Y_1 = 3x^2 + 6x + 3$$

Graph it

Locate the zeros – It's hard to see sometimes, but assume it touches the axis with a bounce

$$x = -1$$

Solve the equation by using the **graphing method**. BOX YOUR ANSWER

3. $2x^2 + x + 3 = 0$ Be sure to draw a quick sketch to support your answer(s).

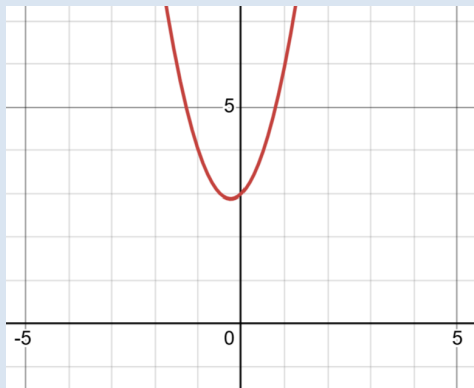
ALSO CIRCLE: A. TWO REAL SOLUTIONS

B. ONE REAL REPEAT SOLUTION

C. NO REAL SOLUTION

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

Let $f(x) = 2x^2 + x + 3$ *Find the zeros



On the calculator:

$$Y_1 = 2x^2 + x + 3$$

Graph it

Notice that the curve clearly does NOT touch the x-axis

NO REAL
SOLUTIONS

Solve the equation by using the **graphing method**. BOX YOUR ANSWER

4. $0.25x^2 + 8 = 3x$ Be sure to draw a quick sketch to support your answer(s).

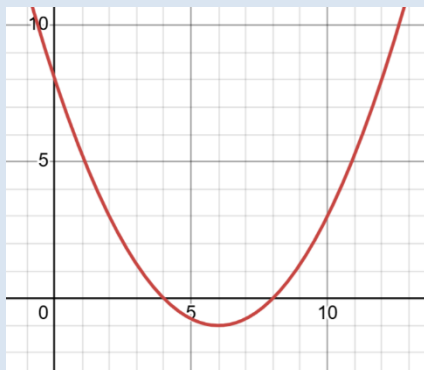
ALSO CIRCLE: A. TWO REAL SOLUTIONS

B. ONE REAL REPEAT SOLUTION

C. NO REAL SOLUTION

$$0.25x^2 - 3x + 8 = 0$$

Let $f(x) = 0.25x^2 - 3x + 8$ *Find the zeros



On the calculator:

$$Y_1 = 0.25x^2 - 3x + 8$$

Graph it

Locate the zeros

$x = 4$ or $x = 8$

Solve the equation by using the **graphing method**. BOX YOUR ANSWER

5. $-3x^2 = 2x + 5$ *Be sure to draw a quick sketch to support your answer(s).*

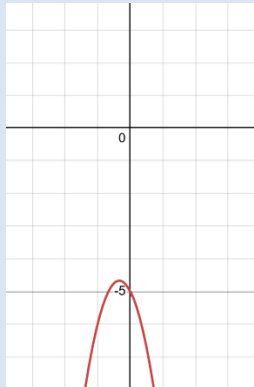
ALSO CIRCLE: A. TWO REAL SOLUTIONS

B. ONE REAL REPEAT SOLUTION

C. NO REAL SOLUTION

$$-3x^2 - 2x - 5 = 0$$

Let $f(x) = -3x^2 - 2x - 5$ *Find the zeros



On the calculator:

$$Y_1 = -3x^2 - 2x - 5$$

Graph it

Notice that the curve clearly does NOT touch the x-axis

NO REAL
SOLUTIONS

Solve the equation by using the **graphing method**. BOX YOUR ANSWER

6. $2x^2 + 20x = -50$ *Be sure to draw a quick sketch to support your answer(s).*

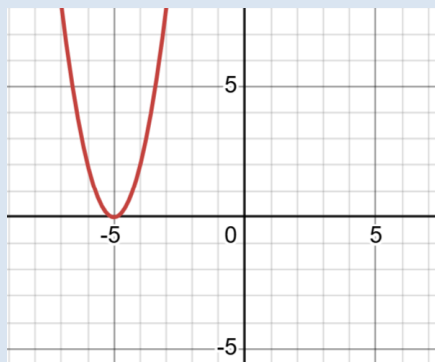
ALSO CIRCLE: A. TWO REAL SOLUTIONS

B. ONE REAL REPEAT SOLUTION

C. NO REAL SOLUTION

$$2x^2 + 20x + 50 = 0$$

Let $f(x) = 2x^2 + 20x + 50$ *Find the zeros



On the calculator:

$$Y_1 = 2x^2 + 20x + 50$$

Graph it

Locate the zero – It's hard to see sometimes, but assume it touches the axis with a bounce

$x = -5$