

Name: _____

QUARTER 2 EXAM
STUDY GUIDE

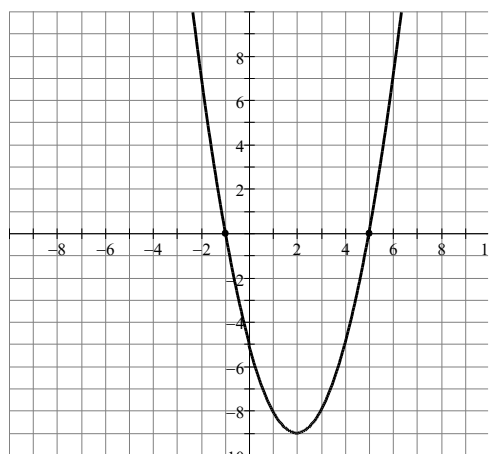


UNIT 8 – SOLVING QUADRATICS

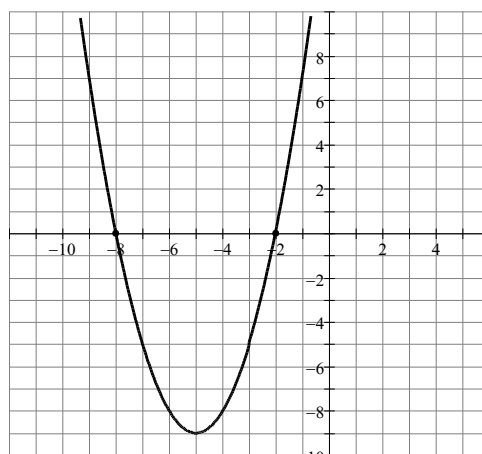
Objective: Solve Quadratics by Graphing.

1. Identify the solutions from each of the graphs.

a) $x =$ _____ and $x =$ _____



b) $x =$ _____ and $x =$ _____



2. Graph each of the equations below on your graphing calculator. State the Solutions.

a) $y = x^2 + 2x - 10$

b) $y = x^2 + 8x + 7$

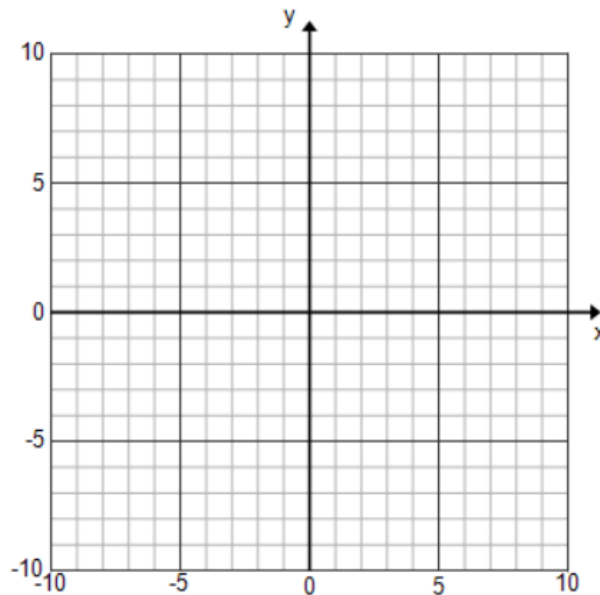
3. Graph the function and answer the questions below.

$$y = x^2 - 5x + 6$$

y-intercept: _____

vertex: _____

x-intercepts: _____ and _____



Objective: Solve Quadratics by Square Roots.

4. $x^2 - 4 = 32$

5. $x^2 + 3 = 0$

6. $8x^2 = 32$

7. $10x^2 - 4 = 36$

Objective: Solve Quadratics by Quadratic Formula.

8. $x^2 - 4x - 5 = 0$

9. $9x^2 - 4 = 7x$

Objective: Determine the number of solutions by finding the Discriminant.

10. $x^2 = -6 + 10x$

11. $3x^2 - 6x + 4 = 0$

Discriminant: _____

Discriminant: _____

Number of Solutions: _____

Number of Solutions: _____

24) What is the quadratic formula used for?

What is another name for a solution?

How are solutions and x-intercepts related?

How many solutions does a quadratic equation have?

Objective: Simplify Radical Expressions involving Adding, Subtracting, Multiplying, and Dividing.

Simplify the following expressions. DO NOT USE DECIMALS.

12) $\sqrt{25}$

13) $\sqrt{100}$

14) $\sqrt{80}$

15) $-\sqrt{90}$

16) $-5\sqrt{20} \cdot 3\sqrt{4}$

17) $\sqrt{10} \cdot 3\sqrt{9}$

18) $\sqrt{\frac{81}{4}}$

19) $\frac{\sqrt{25}}{5}$

20) $\frac{\sqrt{3}}{\sqrt{7}}$

21) $\frac{\sqrt{1}}{\sqrt{3}}$

22) $\frac{3}{\sqrt{11}}$

23) $\frac{\sqrt{169}}{17}$

24) $\sqrt{12} + \sqrt{3}$

25) $\sqrt{12} - 2\sqrt{27} + \sqrt{32}$

Objective: Solve Radical Equations.

26) $\sqrt{x} - 11 = 0$

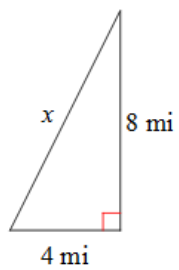
27) $\sqrt{6x} - 2 = 4$

28) $\sqrt{5x} + 10 = 5$

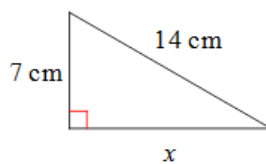
29) $\sqrt{x-4} + 5 = 11$

Objective: Solve using the Pythagorean Theorem. (Leave answers as simplified radicals)

30)



31)



Objective: Bar Graphs, Pie Charts, and Dot Plots.