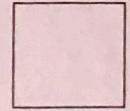


Name: _____

Unit 8: Quadratic Equations



Date: _____ Bell: _____

Homework 4: Quadratic Roots

**** This is a 2-page document! ****

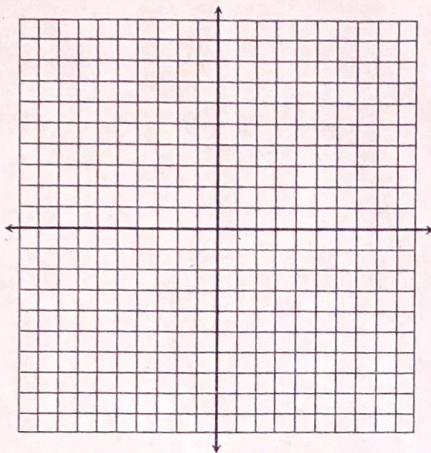
1. The points at which a quadratic equation intersects the x -axis are referred to as:

- _____
- _____
- _____
- _____

Graph each quadratic equation and identify its solutions, using discriminant.

2. $y = x^2 + 2x - 3$ d: _____

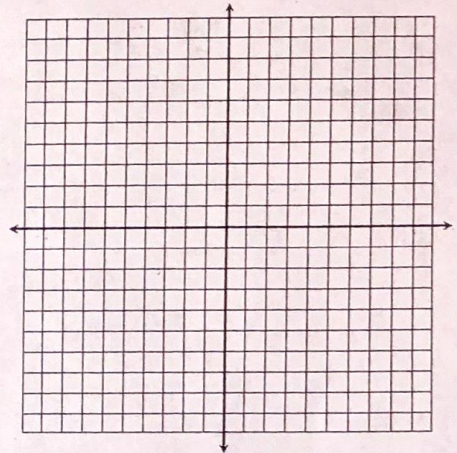
| x | y |
|----|---|
| -4 | |
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |



Solutions:

3. $y = x^2 - 8x + 12$ d: _____

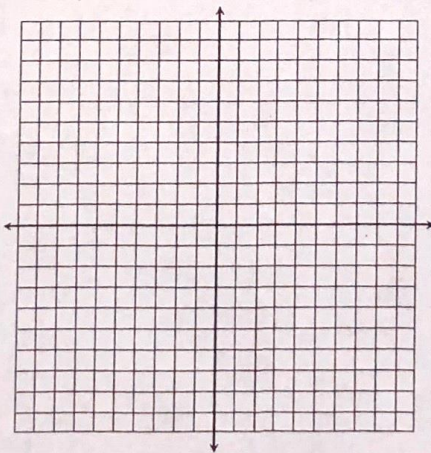
| x | y |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |



Solutions:

4. $y = x^2 - 4$ d: _____

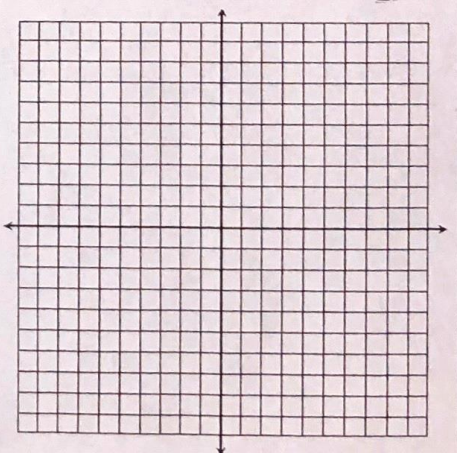
| x | y |
|----|---|
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |



Solutions:

5. $y = -x^2 + 10x - 21$ d: _____

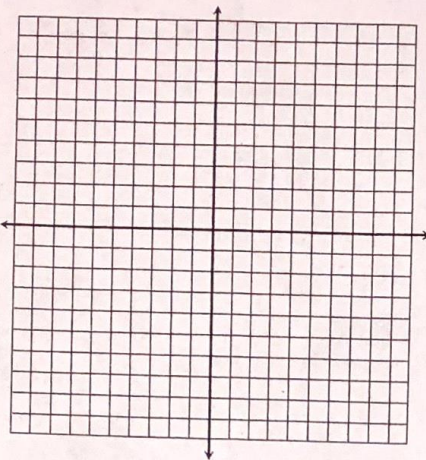
| x | y |
|---|---|
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |



Solutions:

6. $y = x^2 - 4x + 5$ d:

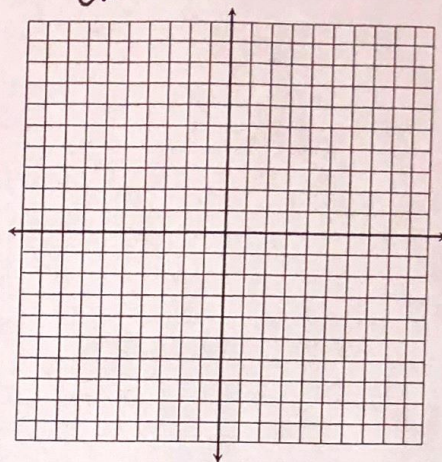
| x | y |
|----|---|
| -1 | |
| 0 | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |



Solutions:

7. $y = -2x^2 - 8x$ d:

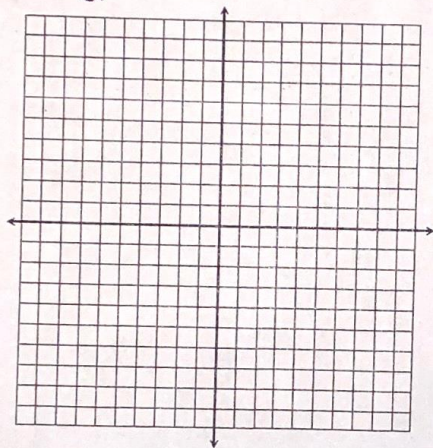
| x | y |
|----|---|
| -5 | |
| -4 | |
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |



Solutions:

8. $y = x^2 - 6x + 9$ d:

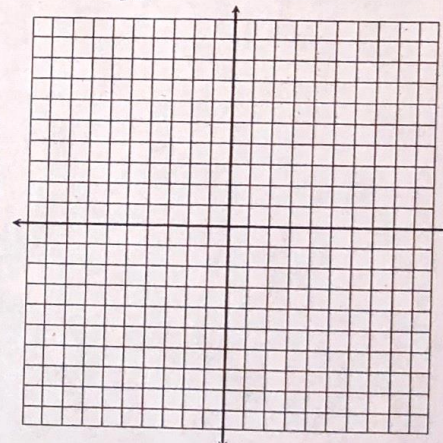
| x | y |
|---|---|
| 0 | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |



Solutions:

9. $y = x^2 + 4x + 9$ d:

| x | y |
|----|---|
| -5 | |
| -4 | |
| -3 | |
| -2 | |
| -1 | |
| 0 | |
| 1 | |



Solutions:

Use the discriminant to determine the number of solutions.

10. $y = x^2 - 3x + 2$

- 2 solutions
- 1 solution
- 0 solutions

11. $y = 2x^2 - 4x + 3$

- 2 solutions
- 1 solution
- 0 solutions

12. $y = -3x^2 + 5x - 1$

- 2 solutions
- 1 solution
- 0 solutions

13. $y = x^2 - 5x - 10$

- 2 solutions
- 1 solution
- 0 solutions

14. $y = -x^2 + 2x - 1$

- 2 solutions
- 1 solution
- 0 solutions

15. $y = 4x^2 - 9$

- 2 solutions
- 1 solution
- 0 solutions