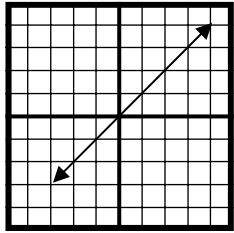


# Graphing



# Equations



# Graphing Equations

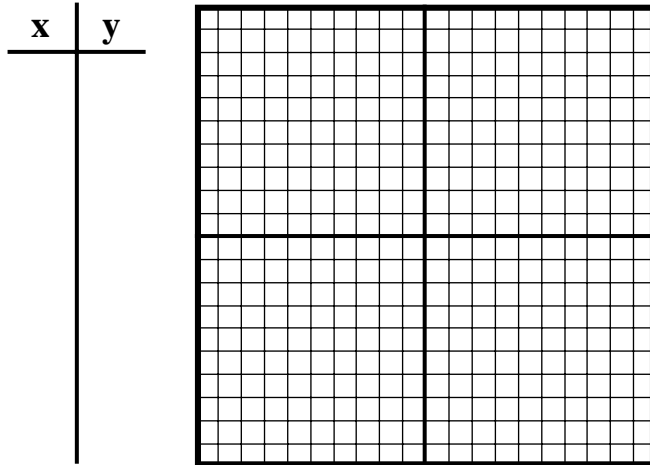
---

---

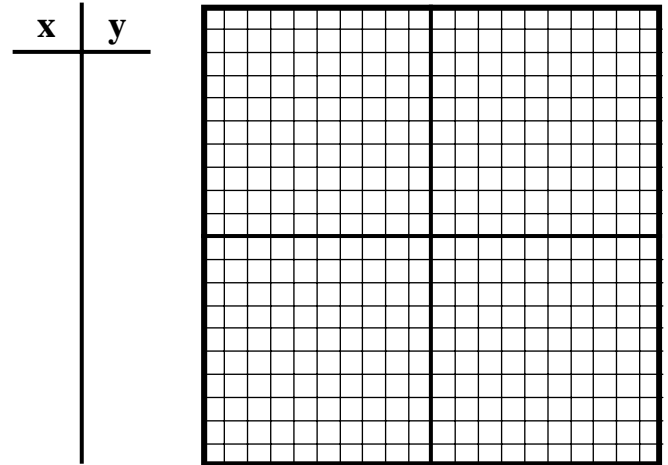
---

## Graphing Equations 1

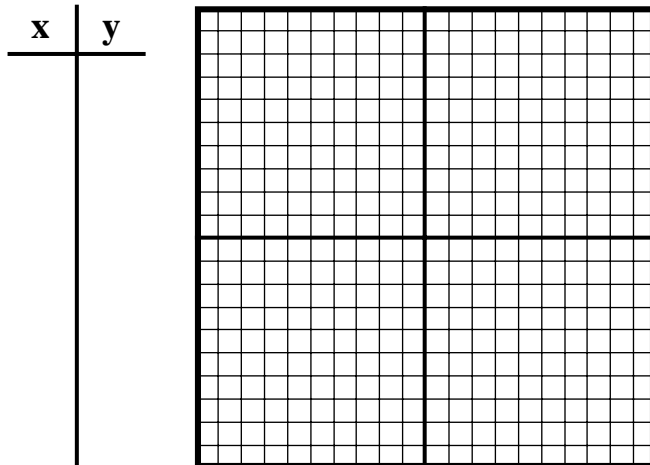
1)  $y = 2x^2 - 3$



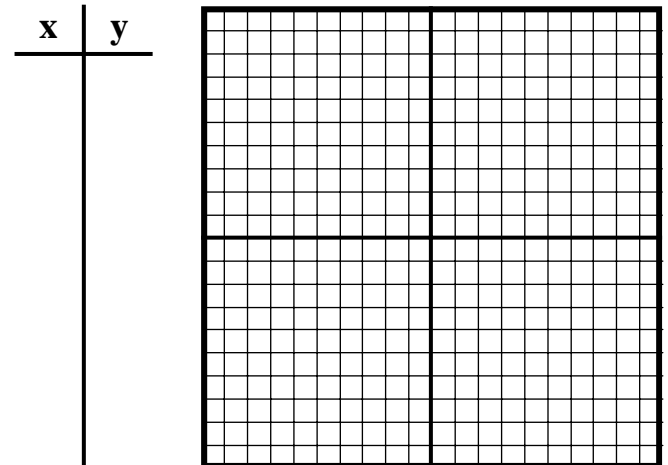
2)  $y = 2x + 3$



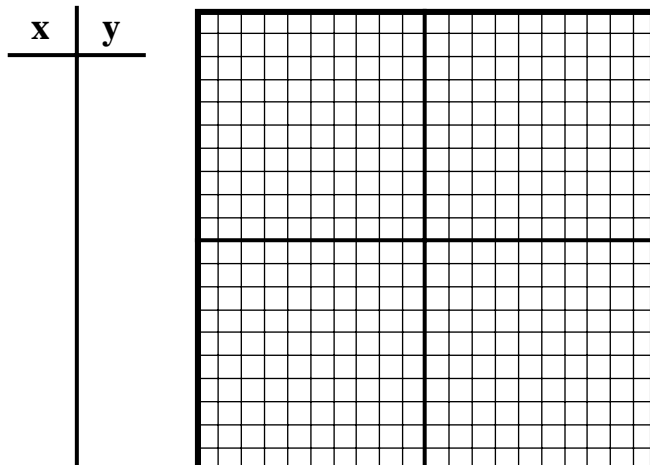
3)  $y = -3|x| + 2$



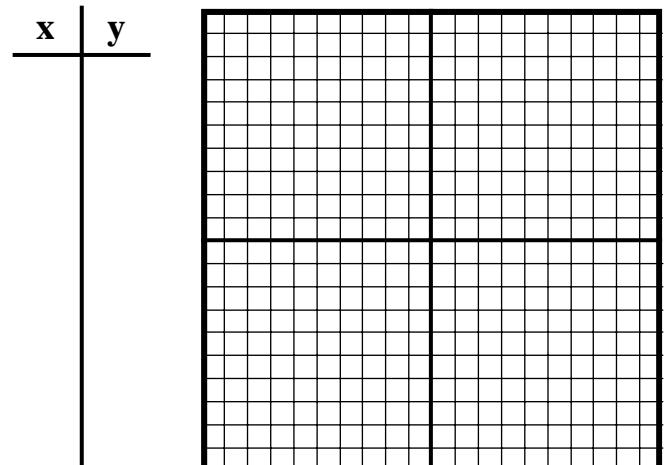
4)  $y = -x^2 + 5$

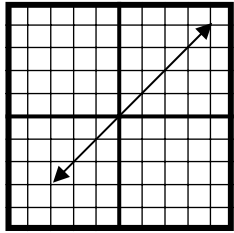


5)  $y = -3x + 1$



6)  $y = |x| - 4$





# Graphing Equations

## Teacher Tips

(1 of 2)

**Lesson Description:** Graphing Equations is a lesson designed to introduce students to different types of equations and their resulting graphs. Students use t-tables to find solutions for the given equations and then graph them. As they graph they discover the differences between linear functions, quadratic functions, and absolute value functions. The Analyzing the Graphs worksheet gives students the opportunity to look carefully at the different graphs and learn from their observations.

**Math Content:** Graphing Linear Equations, Graphing Quadratic Equations, Graphing Absolute Value Equations, Using T-Tables, Graphing Ordered Pairs, Identifying Functions, Exponents, and Absolute Value

**Time Required:** 1-2 Class Periods

**Graphing Equations includes:**

- \* 2 Graphing Equations student worksheets
- \* 2 Graphing Equations student worksheet Answer Keys
- \* 1 Graphing Equations Analyzing the Graphs worksheet
- \* 1 Graphing Equations Analyzing the Graphs worksheet Answer Key
- \* 1 Graphing Equations template
- \* 2 Graphing Equations Teacher Tips pages
- \* 1 Graphing Equations Cover Sheet

**10 Pages in all!**

**Materials Needed:** Rulers for drawing graphs (optional)

**Suggested Grade Level:** 5th - 8th

**Teacher Testimonial:** Graphing Equations is a lesson that allows students to discover several different types of functions as they use t-tables to find solutions for each equation. This lesson is a perfect extension activity to use after students have been taught to graph linear equations. Students discover what the graph of a quadratic function or an absolute value function looks like and this provides a foundation for future learning of these concepts. The format of the lesson encourages students to analyze different types of graphs and to construct meaning as they proceed through the lesson.

**Teacher Tips:**

- \* An extra Graphing Equations template is included in this lesson. The teacher can use it to create additional worksheets or to quickly create a quiz on graphing equations.
- \* Students should graph at least five solutions for each equation. They should write them on their t-tables before graphing them. The more ordered pairs the students graph the clearer their graphs will become to them.

