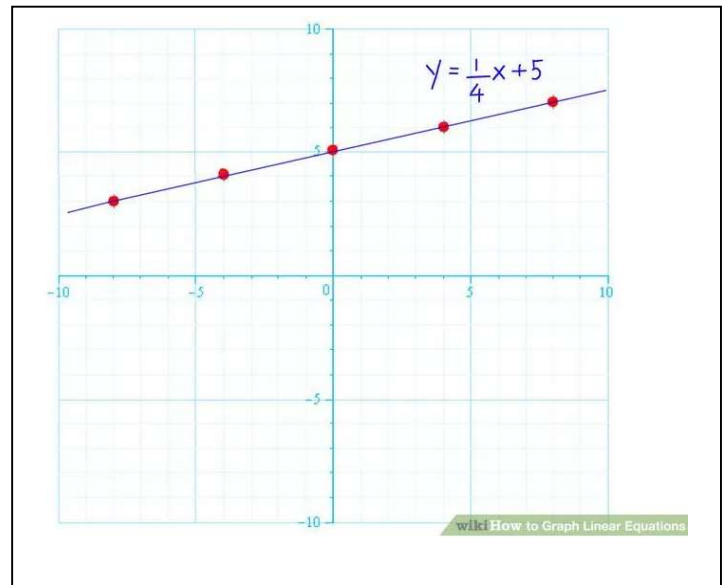


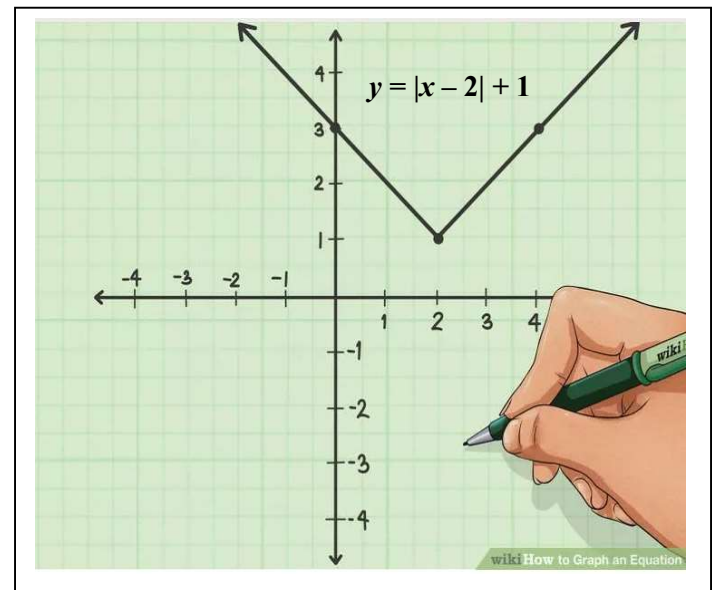
How to Graph Linear Equations

1. Make sure the linear equation is in the form: $y = mx + b$
2. Plot the number b on the Y-axis
3. Convert m into a fraction
4. Start extending the line from b using the slope, or rise over run
5. After 3 or more points, use a ruler and draw the line.



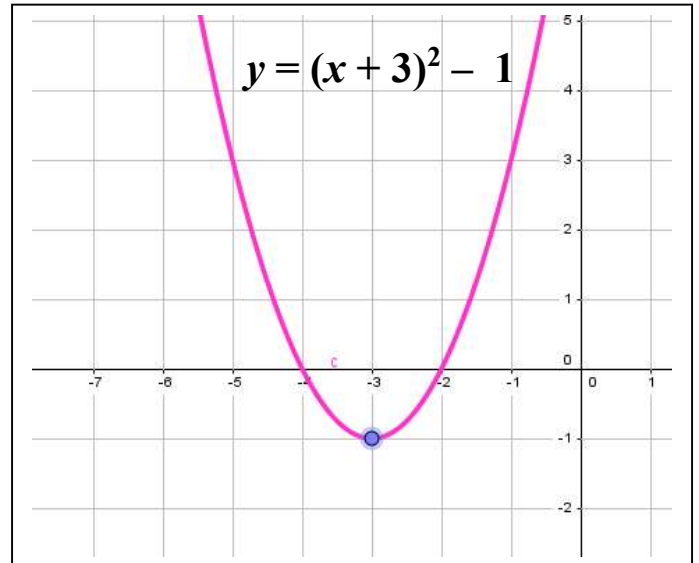
How to Graph Absolute Values

1. Make sure the equation is in the form: $y = a|x - h| + k$
2. Plot the vertex (h, k)
3. Convert a into a fraction
4. Start extending the right side of the line from the vertex using the slope a , or rise over run
5. Go back to the vertex and extend the left side using the slope a or rise over run.



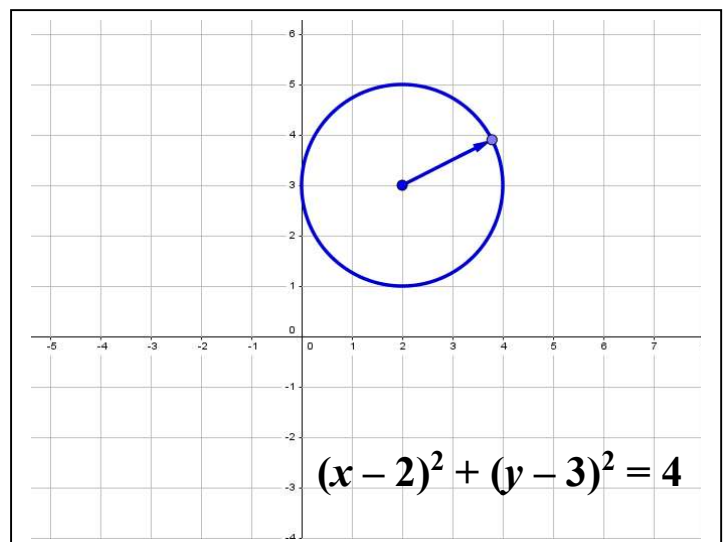
How to Graph Parabolas

1. Make sure the equation is in the form: $y = a(x - h)^2 + k$
2. Plot the vertex (h, k)
3. The changing slopes of the parabola are a multiplied by $(1, 3, 5 \dots)$
4. Start extending the right side of the parabola from the vertex using the slopes a *times* $(1, 3, 5..)$
5. Go back to the vertex and extend the left side using the same slopes a *times* $(1, 3, 5..)$, then draw a smooth curve to create the parabola.



How to Graph Circles

1. Make sure the equation is in the form: $(x - h)^2 + (y - k)^2 = r^2$
2. Plot the circle's center (h, k)
3. Find the square root of r^2
4. Start by plotting a point r units to the right, then r units to the left
5. Go back to the center and plot points r units above and r units below, then draw the circle.



How to Graph Cubic Functions

1. Make sure the equation is in the form:

$$y = a(x - h)^3 + k$$

2. Plot the point of symmetry (h, k)

3. Find the right reference point

$$(-1 + h, -a + k) \text{ or } (-b + h, -a + k)$$

4. Find the left reference point

$$(1 + h, a + k) \text{ or } (b + h, -a + k)$$

5. Make a smooth curve about the reference points, then extend the left side and right side using a ruler.

