**The Square Root Property**

1. Solve “by inspection” each of these equations. That is, do not use paper and pencil or a calculator. Be sure to include negative as well as positive solutions.
2. $x^{2}=49$ b. $x^{2}=81$ c. $x^{2}=25$

*x* = \_\_\_ , *x* = \_\_\_ *x* = \_\_\_ , *x* = \_\_\_ *x* = \_\_\_ , *x* = \_\_\_

1. For each of these equations, determine how many solutions there are (0 solutions, 1 solution, or 2 solutions).
2. $x^{2}=-5$ b. $x^{2}=1$ c. $x^{2}=0$
3. Graph the parabola $y=x^{2}$.

 

Then find how many places each of these lines intersect the parabola.

a. $y=-5$ b. $y=1$ c. $y=0$

1. Explain how your answers in part 3 are related to your answers in part 2.
2. Use your calculator to find $-2^{2},\left(-2\right)^{2},-\left(-2\right)^{2}$ and $–(2)^{2}$. Do you get the same result for each one? \_\_\_\_\_\_ Explain.
3. Solve these equations. Leave the answers in radical form.
4. $x^{2}=31$ b. $x^{2}=19$ c. $x^{2}=201$

*x* = \_\_\_ , *x* = \_\_\_ *x* = \_\_\_ , *x* = \_\_\_ *x* = \_\_\_ , *x* = \_\_\_

1. Find decimal approximations to the solutions of the equations in question 6. Round to the nearest thousandth.

 *x* ≈ \_\_\_ , *x* ≈ \_\_\_ *x* ≈ \_\_\_ , *x* ≈ \_\_\_ *x* ≈ \_\_\_ , *x* ≈ \_\_\_

1. Without using a calculator estimate the location of each of these numbers on a number line.

 a.  b.  c.  d.  e. 

