**Assignment: Solving Quadratic Equations Using the Square Root Property**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_

**Solve. Show Work!**

1. $x^{2}=121$ 8. $x^{2}=10$$\left(x-5\right)^{2}=20$

2. $x^{2}-16=0$ 9. $x^{2}=-28$$\left(x-8\right)^{2}=-144$

3. $x^{2}+8=0$ 10. $5x^{2}-100=0$$\left(x-7\right)^{2}+4=48$

4. $x^{2}-10x+25=20$ 11. $x^{2}+4x+4=-6$$\left(x+2\right)^{2}+10=4$

5. $x^{2}-16x+64=-144$ 12. $2x^{2}-24x+72=36$$5\left(x-9\right)^{2}=45$

6. $x^{2}-14x+49=44$ 13. $-5x^{2}-60x-180=10$$-5\left(x+6\right)^{2}=10$

7. $x^{2}-4x+4=49$ 14. $5x^{2}+90x+405=45$$16\left(x-2\right)^{2}-12=-60$

15. Solve using the square root principle: $x^{2}+14x+49=5$

A $x=-7\pm \sqrt{5}$ B $x=\pm 2\sqrt{3}$

C $x=\pm 7\sqrt{5}$ D $x=7\pm \sqrt{5}$

16. A square is increased by 4 inches on each side. If the new area is 36 in2, what was the length of a side of the original square?

**Graph.**

![Description: [image]]()![Description: [image]]()17. $f\left(x\right)=2\left(x+1\right)^{2}-2$ 18. $f\left(x\right)=-\left(x-2\right)^{2}+4$

Vertex:

Axis of Sym:

Domain:

Range:

Solutions:

Max/Min

Vertex:

Axis of Sym:

Domain:

Range:

Zeros:

Max/Min