Intermediate Algebra (B) ***Name*** _____

Review – Unit 5 Part 3 ***Class period 1 2 3 4 5***

For problem 1, graph the absolute value function and identify the following features.

1. $y = |x - 2| + 6$

Opens UP/DOWN (Circle one)

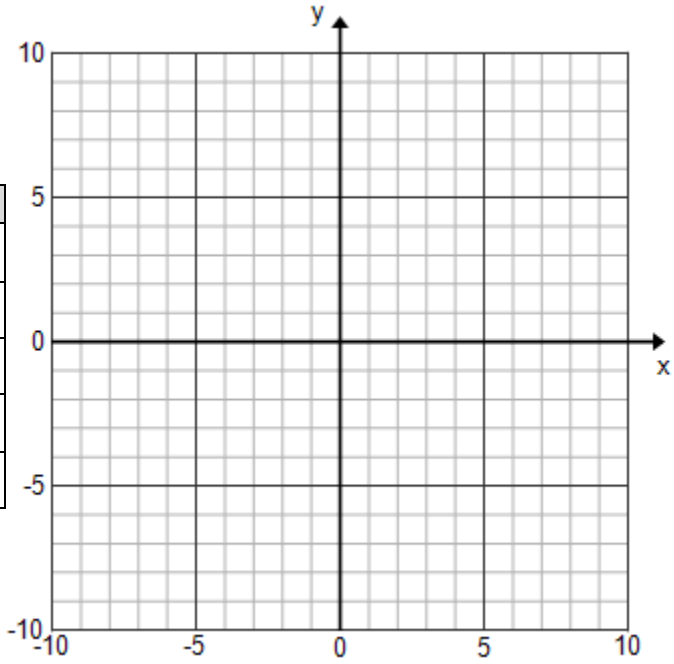
Vertex: _____

Axis of symmetry: _____

Domain: _____

Range: _____

x	*y*

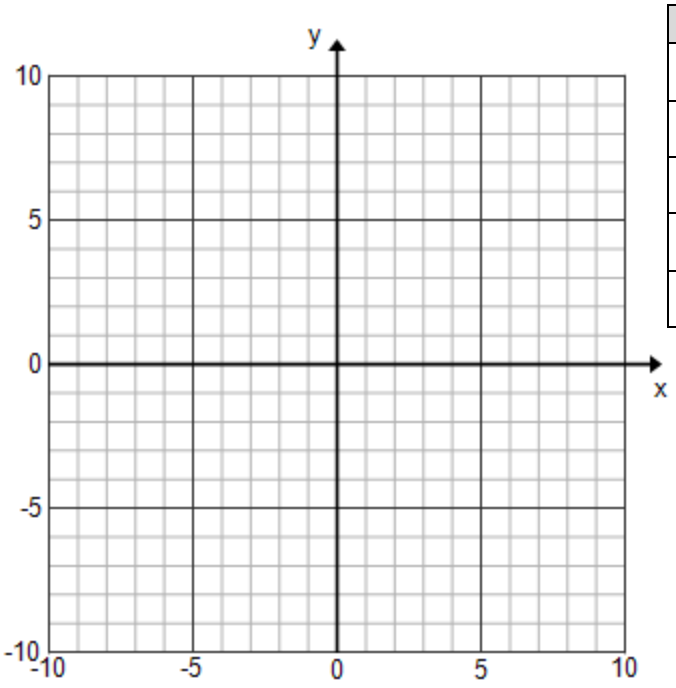


Solve the following equation graphically and algebraically.

2. $|x + 5| = 12$

Graphical Solutions

x	*y*



Solution(s):_____

Algebraic Solutions

Solution(s):_____

Problems 3 and 4, solve algebraically.

3. $6|x+5|=36$

Solution(s):_____

4. $-|x-8|=-4$

Solution(s):_____

Problems 5-8: Solve by using Square Roots. You must show your work to receive full credit

5. $x^2-4=32$

Solution(s):_____

6. $(x+2)^2-2=6$

Solution(s):_____

7. $3x^2+5=-13$

Solution(s):_____

8. $3(x-6)^2-4=-13$

Solution(s):_____

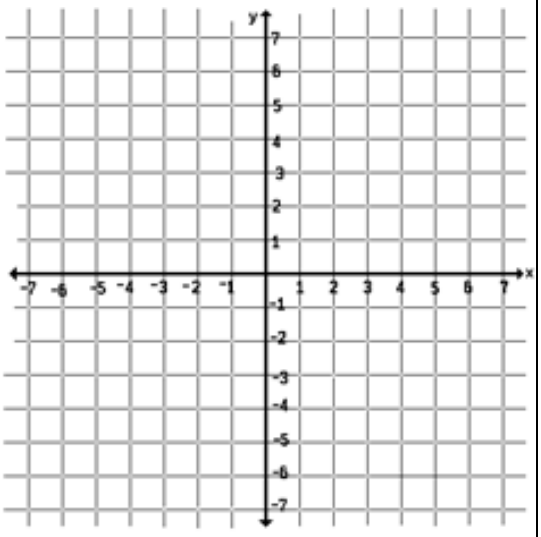
Pick ONE equation for EACH method. You cannot use the same equation twice. Solve the equation for x.

9. $x^2 + 6x - 16 = 0$ 10. $4x^2 + 20x + 25 = 0$ 11. $(x - 9)^2 = 4$ 12. $x^2 + 2x + 15 = 0$

Graphing

#_____

x	*y*



Solution(s):_____

Factoring

#_____

Solution(s):_____

Quadratic Formula

#_____

Solution(s):_____

Square Roots

#_____

Solution(s):_____

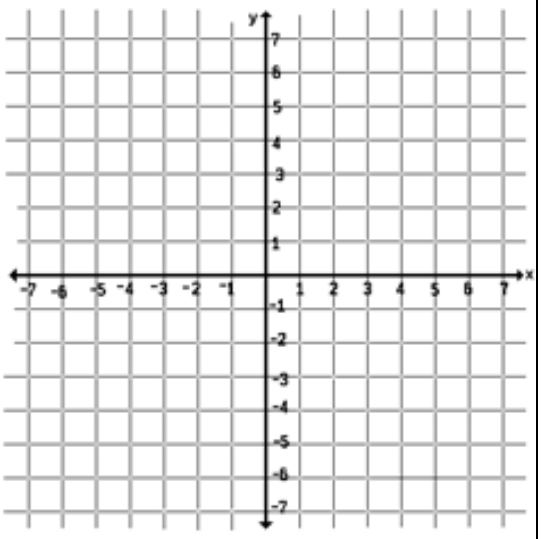
Pick ONE equation for EACH method. You cannot use the same equation twice. Solve the equation for x.

13. $x^2 + 16x - 9 = 0$ 14. $2x^2 + 30x = 0$ 15. $\frac{1}{3}(x+2)^2 = 5$ 16. $x^2 + x - 6 = 0$

Graphing

#_____

x	*y*



Solution(s):_____

Factoring

#_____

Solution(s):_____

Quadratic Formula

#_____

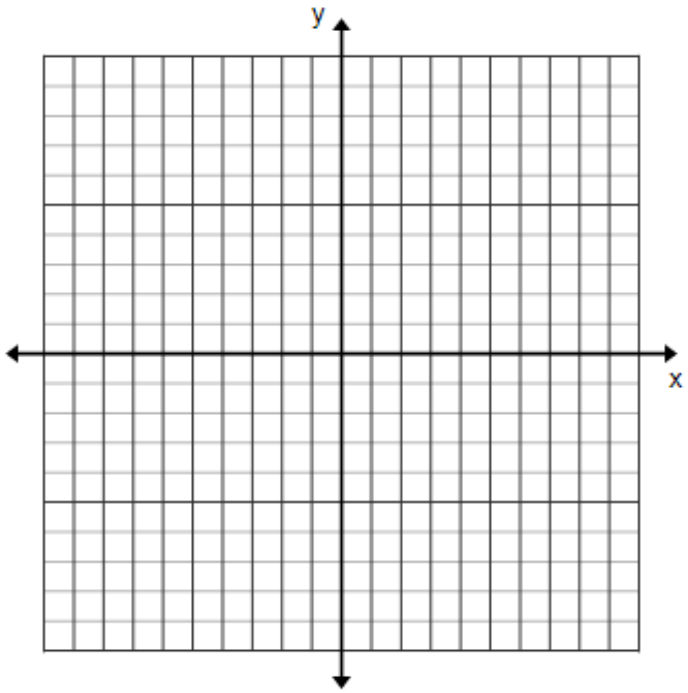
Solution(s):_____

Square Roots

#_____

Solution(s):_____

17. An apple drops from the top of a tree that is 32 feet tall. The falling object is modeled by, $h(t) = -16t^2 + s$, where h(t) represents the height of the pumpkin after t seconds, and s is the height of the tree. After how many seconds does the pumpkin hit the ground? Use any method to solve. Round your answer to nearest tenth of a second.



Solution(s):_____