Algebra 2 CA Standards Semester 1 Final Exam Part II: Free Response Review

name _____

1. Solve: $|2x-9|=11$

2. **Solve:** $|x+6|\geq 3$

3. Solve: $|3x+2|\leq 13$

4. **Solve algebraically:**

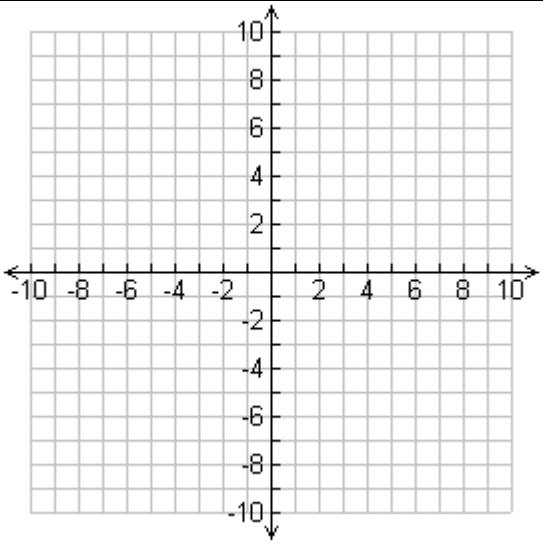
$3x-8y=30$

$5x+6y=-8$

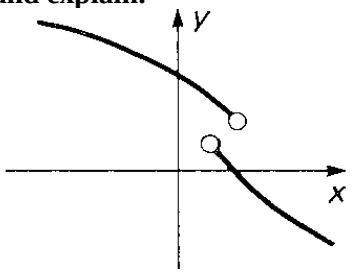
5. Solve by graphing. Be sure to indicate the coordinates of the solution.

$x+2y=8$

$y=x+1$



6. Tell whether the graph represents a function and explain.



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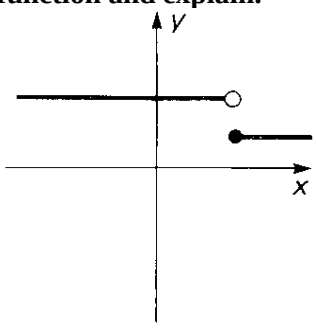

8. Solve by completing the square: $x^2 - 12x = -45$

9. A quadratic equation goes through these 3 points. Find the quadratic equation of the function.
(1, 6), (3, 26), (-2, 21)

10. A kicker on a football team kicks the ball to make a field goal. The ball starts on the ground at time zero. The distance the ball is from the ground (d) varies with respect to time (t) in seconds. After 1 second the ball is 24 feet high. After 2 seconds the ball is 16 feet high.

a) Find the quadratic equation that fits this data.

b) When will the ball hit the ground? Round your answer to the nearest hundredth of a second.

c) When will the ball reach its maximum height? After how many seconds?