Name: _____ Date: _____

Regents Review: Quadratic Formula Algebra 1

Simplify the following radicals.

1. $\pm\sqrt{25}$
2. $3\sqrt{81}$
3. $\sqrt{50}$
4. $2\sqrt{18}$
5. $\sqrt{48}$
6. $\sqrt{32}$
7. $3\sqrt{36}$
8. $2\sqrt{56}$
9. $4\sqrt{98}$
10. $\sqrt{240}$
11. $-2\sqrt{108}$

Solve the following equations using the quadratic formula.

12. Solve $x^2 - 3x - 7 = 0$. Round your **solutions** to the *nearest hundredth*.

13. Solve $2x^2 - 8x = 10$. Leave your **answers** in *simplest radical form* if necessary.

14. Solve $x^2+8x-5=0$. Leave your **roots** in *simplest radical form* if necessary.

15. Solve $10=3x^2-14x$. Leave your **zeros** in *simplest radical form* if necessary.

16. Jacob wants to create a rectangular flower garden that contains an area of 10 m^2. If the length needs to be 2 meters longer than the width, determine the dimensions of the garden, *to the nearest hundredth of a meter.*

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Regents Review: Completing the Square Algebra 1

Solve the following equations by completing the square.

(1) $x^2 - 8x + 11 = 0$

(2) $x^2 - 14x = 0$

(3) $0 = x^2 + 4x + 3$

(4) $0 = -x^2 - 16x - 7$

(5) $2 = -x^2 + 6x$

(6) $9 = 3x^2 - 30x$

(7) $16x = 4x^2 + 8$

(8) $-5x^2 = 10x + 1$

(9) Which equation has the same solutions as $x^2 + 6x - 7 = 0$

(1) $(x + 3)^2 = 2$

(2) $(x - 3)^2 = 2$

(3) $(x - 3)^2 = 16$

(4) $(x + 3)^2 = 16$