

A1 S2 w10d1 9-6 Different Methods

Alg I Week 10 Mon Warm Up

1. Skill 15: Factor special polynomials completely.

$$2x^3 - x^2 - 162x + 81$$

2. Skill 16: Solve a quadratic equation by factoring.

$$5x^2 + 34x = -24$$

3. Skill 17: Completing the Square. Solve by completing the square. Leave answer as an integer or in simplified radical form.

$$a^2 + 14a - 51 = 0$$

4. Skill 18: Solve a quadratic equation using the quadratic formula. Give answer in simplified radical form AND round to the nearest hundredth.

$$2x^2 + 4x = 7$$

Radical answer: _____ Decimal Answer: _____

5. Evaluate the function $f(x) = -x^2 + 3x - 5$ at the given values:

a. $f(-1) =$

b. $f(2) =$

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Which Method is Best?

We have learned 4 methods for solving quadratic equations:

- graphing
- factoring
- completing the square
- quadratic formula

Which method(s) would you choose to solve each equation? Justify your reasoning.

1. $x^2 + 4x - 15 = 0$

2. $9x^2 - 49 = 0$

3. $4x^2 - 41x = 73$

4. $3x^2 - 7x + 3 = 0$

5. $x^2 + 4x - 60 = 0$

6. $-4x^2 + 8x + 1 = 0$

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CW/HW

ANY WHICH METHOD

Solve by Factoring

1. $n^2 + 2n - 15 = 0$

2. $8x^2 + 10x + 3 = 0$

3. $3b^2 + 7b - 6 = 0$

Solve by completing the square

4. $6b + b^2 - 16 = 0$

5. $c^2 - 4c = 21$

6. $(x+8)^2 - 2 = 14$

Solve using the quadratic formula. Give answer in simplified radical form AND as a decimal rounded to the nearest hundredth, or exact value(s) if appropriate.

7. $9c^2 + 8c + 1 = 0$

8. $2w^2 - 28w = -98$

9. $2j^2 - 3j = -1$

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Solve using any method. You must use each method at least one time (factoring, complete square, quadratic formula) State the name of the method you used:

10. $z^2 - 10z + 24 = 0$

Method: _____

11. $v^2 + 8v = 15$

Method: _____

12. $4d^2 - 8d + 3 = 0$

Method: _____

Solution: _____

13. $(x - 3)^2 + 3 = 28$

Method: _____

Solution: _____

14. $-3p^2 + 17p = 20$

Method: _____

Solution: _____

15. $3j^2 - 20j = -12$

Method: _____

Solution: _____

Solution: _____

Solution: _____