Summary on Solving Quadratic Equations

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Name_____ Class time: _____ Score_____

Methods for Solving Quadratic Equations written in the form: $ax^2 + bx + c = 0$.		
	Advantages	Disadvantages
Factoring	This is usually the fastest method.	Not all polynomials are factorable; some factorable polynomials are difficult to factor.
Square Root Property	This is the simplest method for solving equations of the form $(ax + b)^2 = c$.	Few equations are given in this form.
Completing the Square	This method can always be used, although most people prefer the quadratic formula.	It requires more steps than other methods.
Quadratic Formula	This method can always be used.	It is more difficult than factoring because of the square root, although calculators can simplify its use.

Solve each equation using any method.

1. $p^2 = 7$

2. $6x^2 - x - 15 = 0$

3. $n^2 + 6n + 4 = 0$

4. $(x-3)^2 = 25$

5. $\frac{5}{m}+\frac{12}{m^2}=2$

6. $3m^2=3-8m$

7. $2r^2-4r+1=0$

8. $x^2=-12$

9. $x^4-10x^2+9=0$

10. $(2k+3)^2=8$

11. $\frac{2}{x}+\frac{1}{x-2}=\frac{5}{3}$

12. $8x^2-4x=2$

13. $z^2 + z + 1 = 0$

14. $4y^2 - 12y + 9 = 0$

15. $r^2 - 72 = 0$

16. $-3x^2 + 4x = -4$

17. $x^2 - 5x - 36 = 0$

18. $w^2 = 169$

19. $3p^2 = 6p - 4$

20. $2(3k-1)^2 + 5(3k-1) = -2$