

Unit 5 Review

Name: _____

- Sort the equations based on the most efficient way to solve. Make a note as to WHY that is the method you chose. There should be at least 4 equations in each category.
- Show all work on a separate sheet of paper. Solutions should be written in exact, simplified form.

$7x^2 - 20x - 3 = 0$	$x^2 - 6x - 11 = 0$	$x^2 - 2x - 15 = 0$	$5x^2 + 23x - 10 = 0$
$x^2 + 16 = 0$	$2x^2 + 4x - 70 = 0$	$4x^2 - 12x + 9 = 0$	$2x^2 + 5x + 10 = 0$
$x^2 + 4x - 17 = 0$	$2x^2 - 8x = 0$	$2x^2 - 5x + 1 = 0$	$x^2 + 4x + 17 = 0$
$-\frac{1}{2}(x - 3)^2 - 5 = 8$	$x^2 - 9x - 36 = 0$	$3x^2 + 9x = 0$	$x^2 + 9x + 10 = 0$
$x^2 - 100 = 0$	$3x^2 - 7x + 5 = 0$	$x^2 - 8 = 0$	$x^2 + 10x - 2 = 0$

Write the quadratic equation given the solution(s) and a point on the parabola.

21. $\{-2, \frac{3}{4}\}$ and passes through $(1, -6)$

22. $\{0, 5\}$ and passes through $(1, 4)$

23. $x = 2$ and passes through $(-2, 40)$

24.

x	$f(x)$
-8	0
2	-180
8	0

Use the discriminant to determine the number and nature/type of solutions.

25. $-2x^2 + 4x + 8 = 10$

26. $3x^2 + 10x = -3$

27. $7x^2 + x + 3 = 0$

28. $10x^2 - 2x - 7 = -3$