

Name _____



Date _____

Quadratic Equations

Use the discriminant to determine the nature of each quadratic equation's roots.

1. $7x^2 - 4x + 9 = 0$	2. $24x^2 + 20x = 22$	3. $-40x^2 + 30x = -6\frac{2}{3}x^2 + 6\frac{2}{3}$
4. $-3\frac{2}{5}x^2 + 20\frac{2}{5} = 37\frac{2}{5}x$	5. $7x^2 + 8x + 3 = 0$	6. $9x^2 + 8x + 3 = 2x^2$
7. $-1\frac{4}{5}x = -1\frac{2}{5}x^2 - 2$	8. $45x^2 + 55x = -5$	9. $-2x^2 - 7x + 9 = 0$
10. $18x^2 + 6x + 1 = 9x^2$	11. $12x^2 - x - 7 = 0$	12. $-12x^2 - 5x = 6$
13. $4x^2 - 10x = 7$	14. $-9x^2 + 6x - 1 = 0$	15. $-\frac{1}{74}\frac{1}{4}x^2 - 40\frac{1}{2}x = 27x - 20\frac{1}{4}$