

MasterMath

Solve Quadratic Equations by Using Square Roots and by Completing the Square

Name _____

Date _____

1. Solve these equations:

Equation	x =
$3x^2 - 3 = 0$	± 1
$2x^2 - 42 = 8$	± 5
$2x^2 + 13 = 11$	no solution
$x^2 + 8 = 3$	no solution
$5x^2 - 17 = -19$	no solution
$9x^2 - 35 = 14$	$\pm 2\frac{1}{3}$
$25x^2 + 11 = 15$	$\pm \frac{2}{5}$
$6x^2 + 6 = 6$	0
$2x^2 - 32 = 0$	± 4
$4x^2 + 10 = 11$	$\pm \frac{1}{2}$

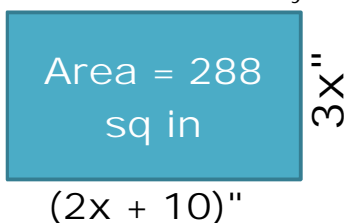
2. Solve these equations. Round your answer to the nearest hundredth.

Equation	x =	
$(x - 7)^2 = 6$	9.45	4.55
$\frac{1}{2}(x - 8)^2 = 3$	10.45	5.55
$5(x - 2)^2 = 70$	5.74	-1.74
$3x^2 - 35 = 45 - 2x^2$	4	-4
$(4x^2 - 6)^2 = 81$	1.94	-1.94
$\frac{1}{3}(x - 6)^2 = 20$	13.75	-1.75
$42 = 3(x^2 + 5)$	3	-3

3. Solve these equations by completing the square. If necessary, round your answer to the nearest hundredth.

Equations	x =	
$x^2 - 6x - 72 = 0$	12	-6
$x^2 + 11x = -5\frac{1}{4}$	$-\frac{1}{2}$	$-10\frac{1}{2}$
$x^2 - 8x + 1 = 0$	7.87	.13
$3x^2 - 18x - 20 = 0$	6.96	-.96
$2x^2 - 8x - 14 = 0$	5.32	-1.32
$x^2 + 2x + .4 = .9x^2 + x$	-9.58	-.42
$x^2 + 12x + 10 = 0$	-11.1	.9

4. Find the value of x. Round your answer to the nearest hundredth if necessary.



x =	4.87"
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