

November 11, 2015

$$\frac{ax^2}{2} - \frac{bx}{2} + \frac{c}{2} = 0$$

$$x^2 - 2x = -1$$

(c) $-2 \cdot \frac{1}{2} = -1$
 (d) $(-1)^2 = 1$

$$x^2 - 2x + 1 = -\frac{2}{2} + \frac{1}{2}$$

$$(x-1)^2 = \frac{-2+2}{2} = -\frac{1}{2}$$

$$(x-1)^2 = -\frac{1}{2}$$

$$x-1 = \pm \sqrt{-\frac{1}{2}}$$

$$x-1 = \pm \frac{i}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$x-1 = \pm \frac{i\sqrt{2}}{2}$$

$$x = 1 \pm \frac{i\sqrt{2}}{2}$$

Nov 11-10:00 AM

$$x^2 - 7x - 1 = 0$$

$$\frac{7 \pm \sqrt{53}}{2}$$

$$\left(\frac{7 + \sqrt{53}}{2}\right)\left(\frac{7 + \sqrt{53}}{2}\right) - 7\left(\frac{7 + \sqrt{53}}{2}\right) - 1 = 0$$

$$\frac{49 + 14\sqrt{53} + 53}{4} - \frac{49 - 7\sqrt{53}}{2} - 1 = 0$$

$$\frac{102 + 14\sqrt{53} - 98 - 14\sqrt{53}}{4} - 1 = 0$$

$$\frac{4}{4} - 1 = 0$$

$$1 - 1 = 0$$

$$0 = 0$$

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$$ax^2 + bx + c = 0$$

$$(x-h)^2 + k = 0$$

$$(x-2)^2 + 4 = 0 \quad \begin{matrix} h=2 \\ k=4 \end{matrix}$$

$$(x-2)(x-2) + 4 = 0$$

$$x^2 - 4x + 4 + 4 = 0$$

$$x^2 - 4x + 8 = 0$$

Nov 11-10:30 AM

$f(x) = x^2$

x	f(x)
0	0
1	1
2	4
3	9
4	16

$g(x) = x^2 - 4x + 8$

$g(0) = (0)^2 - 4(0) + 8 = 8$

$g(2) = (2)^2 - 4(2) + 8 = 4 - 8 + 8 = -4 + 8 = 4$

$g(3) = (3)^2 - 4(3) + 8 = 9 - 12 + 8 = -3 + 8 = 5$

$g(4) = (4)^2 - 4(4) + 8 = 16 - 16 + 8 = 8$

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