SMART START

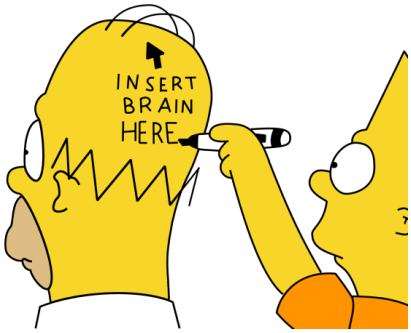
Last night, my Chick-Fil-A supper cost $22.71. I gave the drive-through guy $25.21. Why?

Ways we've learned to solve for x in a quadratic equation:

1) Factoring
    a. GCF
    b. Factor by grouping
    c. Box Method in Reverse
    d. Bust the B
2) Square Root
3) Completing the Square
4) Quadratic Formula

Please commit to memory....

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



$ax^2+bx+c=0$

ex 1) $x^2 + 8x + 15 = 0$

a: 1

b: 8

c: 15

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-8 \pm \sqrt{(8)^2 - 4(1)(15)}}{2(1)}$$

$$x = \frac{-8 \pm \sqrt{4}}{2} = \frac{-8 \pm 2}{2}$$

① $\frac{-8+2}{2} = \frac{-6}{2} = -3$

② $\frac{-8-2}{2} = \frac{-10}{2} = -5$

$x = -3, -5$

ex 2) $3x^2 + 7x - 6 = 0$

a: 3

b: 7

c: -6

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-7 \pm \sqrt{(7)^2 - 4(3)(-6)}}{2(3)} = \frac{-7 \pm \sqrt{121}}{6}$$

$$\frac{-7 \pm 11}{6}$$

$$\frac{-7+11}{6} = \frac{4}{6} = \frac{2}{3}$$

$$\frac{-7-11}{6} = \frac{-18}{6} = -3$$

#1-5 $\left(\frac{b}{2}\right)^2$

5) $\left(\frac{-7}{2}\right)^2 - \left(\frac{-7}{2}\cdot\frac{-7}{2}\right) = \frac{49}{4}$

#6-10 - Complete the Square

#11-15

14) $x^2 = 2x + 4$

$-x^2 \quad -x^2$

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

a: -1

b: 2

c: 4

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-2 \pm \sqrt{(2)^2 - 4(-1)(4)}}{2(-1)}$$

$$= \frac{-2 \pm \sqrt{20}}{-2}$$

essential skills due tomorrow morning.