$x^2+6x=-15$

$x^2+6x+15=0$

$a=1\ b=6\ c=15$

$$\frac{-6\pm\sqrt{36-60}}{2}$$

$$\frac{-6\pm\sqrt{-24}}{2}\quad i\sqrt{24}\ \sqrt{4}\sqrt{6}\quad 2i\sqrt{6}$$

$$\frac{-6\pm 2i\sqrt{6}}{2}$$

$$x=-3\pm i\sqrt{6}$$

$p^2-4p+8=5p$

$-5p\quad -5p$

$p^2-9p+8=0$

$a=1\ b=9\ c=8$

$\sqrt{49}=7$

$$p=\frac{9\pm\sqrt{81-4(1)(8)}}{2}$$

$$\frac{9\pm\sqrt{49}=7}{2}$$

$9+7=16\div 2=8$

$9-7=2\div 2=1$

1, 8

$x^2 - 6x + 7 = 0$

$A = 1 \quad B = 6 \quad C = 7$

$x = \frac{6 \pm \sqrt{36 - 4(1)(7)}}{}$

$x = \frac{6 \pm \sqrt{36 - 28}}{}$

$x = \frac{6 \pm \sqrt{4}\sqrt{2}}{}$

$x = \frac{6 \pm 2\sqrt{2}}{2}$

or

$x = 3 \pm \sqrt{2}$

$m^2 + 5m - 99 = 3m$

$-3m \qquad -3m$

$m^2 + 2m - 99 = 0$

$A = 1 \quad B = 2 \quad C = -99$

$-4 \cdot 1 \cdot -99$

400

$\frac{-2 \pm \sqrt{4 - -396}}{2}$

$\frac{-2 \pm 20}{2} = \begin{matrix} 9 \\ -11 \end{matrix}$

$-2 + 20 = \frac{18}{2} = 9$

$-2 - 20 = \frac{-22}{2} = -11$

4.)

$x^2 - 6x + 7 = 0$

$A = 1 \quad B = 6 \quad C = 7$

$$\frac{+6 \pm \sqrt{36 - 4(1)(7)}}{2}$$

$$\frac{+6 \pm \sqrt{36 - 28}}{2}$$

$$\frac{+6 \pm \sqrt{8}}{2}$$

$$\frac{+6 \pm \sqrt{4}\sqrt{2}}{2}$$

$$\frac{6 \pm 2\sqrt{2}}{2}$$

$$3 \pm \sqrt{2}$$

$r^2 - 4r + 8 = 5r$

$r^2 - 9r + 8 = 0 \quad a = 1, \; b = -9, \; C = 8$

$$x = \frac{9 \pm \sqrt{81 - 4(1)(8)}}{2}$$

$$x = \frac{9 \pm \sqrt{49}}{2}$$

$$x = \frac{9 \pm 7}{2} \qquad \frac{16}{2} \qquad \frac{2}{2}$$

$x = 8, \; 1$

(24)

$m^2+5m-99=3m$

$-3m \quad -3m$

$m^2+2m-99=0$

$a=1 \quad b=2 \quad c=-99$

$X=\frac{-2\pm\sqrt{4-4(1)(-99)}}{2}$

$X=\frac{-2\pm\sqrt{4-4(-99)}}{2}$

$X=\frac{-2\pm\sqrt{4+396}}{2}$

$X=\frac{-2\pm\sqrt{400}}{2}$

$\frac{-2\pm\sqrt{16}\sqrt{25}}{2}$

$\frac{-2\pm 4\cdot 5}{2}$

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

$\frac{18}{2} \quad \frac{-22}{2}$

$X=9, -11$

(14)

$X^2+6x=-15$

$x^2+6x+15=0$

$a=1 \quad b=6 \quad c=15$

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

$4(1)(15)=60$

$\frac{-6\pm\sqrt{36-60}}{2}$

$\frac{-6\pm i\sqrt{24}}{2}$ ☺

$\sqrt{4}\sqrt{6}$

$=\frac{-6\pm 2i\sqrt{6}}{2}$

$-3\pm i\sqrt{6}$ ☺

Warm-up

① Solve by factoring

$x^2+5x+6=0$

② Solve by CTS

$x^2+6x-1=0$

③ Sslve by Quad Formula

$2x^2+10x+12=0$