**USUAL EQUATIONS – worksheet 2**

1. Solve.
a) $2-3\left(x+1\right)=5(x+3)$ b) $\left(2x+3\right)\left(x-5\right)=2x^{2}-6x+1$

c) $\frac{3}{7}x-5=\frac{2}{3}(x+1)$ d) $\frac{5\left(x-3\right)}{6}=\frac{2}{3}(x+2)$
2. Solve (try to vary the methods used):
a) $x^{2}+5x+4=0$ b) $6x^{2}-7x-5=0$

c) $3(x-5)^{2}-27=0$ d) $\left(2x-1\right)\left(3x+2\right)=1$
3. Solve algebraically
a) $\left|x^{2}-2x\right|=1$ b) $\left|x+5\right|=4x-1$

c) $\frac{4x-1}{x+2}-\frac{x+1}{x-2}=\frac{x^{2}-4x+24}{x^{2}-4}$ d) $\frac{x^{2}+x+2}{x+1}-x=\frac{x^{2}-5}{x^{2}-1}$

e) $4+\sqrt{x-1}=x-3$ f) $\sqrt{x^{2}-10x+1}=5$