Solve the following equations by any method:

1. $2x^2+3x=6$

$2x^2+3x-6=0$

$a=2 \quad b=3 \quad c=-6$

$x=\frac{-3\pm\sqrt{3^2-4(2)(-6)}}{2(2)}=\frac{-3\pm\sqrt{57}}{4}$

$x=\frac{-3\pm\sqrt{57}}{4}$

2. $8x^2-6x+1=0$

$(2x-1)(4x-1)=0$

$2x-1=0 \quad +1\ +1 \quad \frac{2x}{2}=\frac{1}{2}$

$4x-1=0 \quad +1\ +1 \quad \frac{4x}{4}=\frac{1}{4}$

$x=\frac{1}{2} \quad x=\frac{1}{4}$

$8x^2$, $-6x$, $-\frac{1}{2}=\frac{-4}{8}$, $-\frac{2}{8}=-\frac{1}{4}$

3. $2x^2+7x-15=0$ $a=2 \quad b=7 \quad c=-15$

$x=\frac{-7\pm\sqrt{7^2-4(2)(-15)}}{2(2)}=\frac{-7\pm\sqrt{169}}{4}$

$x=\frac{-7\pm13}{4}$ $x=-5,\ 1.5$

4. $2x^2-32=0$

$+32 \quad +32$

$\frac{2x^2}{2}=\frac{32}{2}$

$\sqrt{x^2}=\sqrt{16}$

$x=\pm4$

5. $10x^2=8x$

$-8x \quad -8x$

$10x^2-8x=0 \quad a=10 \quad b=-8 \quad c=0$

$x=\frac{+8\pm\sqrt{(-8)^2-4(10)(0)}}{2(10)}=\frac{8\pm\sqrt{64}}{20}$

$x=\frac{8\pm8}{20}=0,\ 0.8$

6. $5=-2x+x^2$

$-5 \quad -5$

$x^2-2x-5=0 \quad a=1 \quad b=-2 \quad c=-5$

$x=\frac{2\pm\sqrt{(-2)^2-4(1)(-5)}}{2(1)}=\frac{2\pm\sqrt{24}}{2}$

$x=\frac{2\pm2\sqrt{6}}{2}=1\pm\sqrt{6}$

7. $3x^2-192=0$

$+192 \quad +192$

$3x^2=192$

$\sqrt{x^2}=\sqrt{64}$

$x=\pm8$

8. $3x^2-2x=8$

$-8 \quad -8$

$3x^2-2x-8$

$(3x+4)(x-2)=0$

$3x+4=0 \quad -4\ -4 \quad \frac{3x}{3}=\frac{-4}{3}$

$x-2=0 \quad +2\ +2$

$x=2$

$x=-\frac{4}{3}$

-24, $-2=\frac{-6}{3}$, $\frac{4}{3}$, -2