$$3\left(x^2-\frac{2}{3}\right)=4 \tag{1}$$

$$3x^2-2=4 \tag{2}$$

$$3x^2=6 \tag{3}$$

isolate the term with the variable

$$x^2=2 \tag{4}$$

$$\sqrt{x^2}=\sqrt{2} \tag{5}$$

$$|x|=\sqrt{2} \tag{6}$$

$$x=\pm\sqrt{2} \tag{7}$$

expand

This example is from MathMode.pdf of Herbert Voß

$$y=2x^2-3x+5$$

$$=2\left(\overbrace{x^2-\frac{3}{2}x+\left(\frac{3}{4}\right)^2}^{=0}-\left(\frac{3}{4}\right)^2+\frac{5}{2}\right)$$

$$=2\left(\left(x-\frac{3}{4}\right)^2+\frac{31}{16}\right)$$

$$y=2\left(x-\frac{3}{4}\right)^2+\frac{31}{8}$$

$2x^2-3x$ is the beginning of