2207

(a) $(2x)^2 + 15^2 = 17^2$

$(2x)^2 = 17^2 - 15^2$

$(2x)^2 = (17+15)(17-15)$

$(2x)^2 = 64$

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

$2x = \pm 8$

$x = \pm 4$

Svar: $x_1 = -4,\ x_2 = 4$

(b) $3x = x^2$

$x^2 - 3x = 0$

$x(x-3) = 0$

$x = 0$ eller $x - 3 = 0$

$x = 3$

Svar: $x_1 = 0,\ x_2 = 3$

(c) $4(x-1)^2 + \frac{1}{3} = \frac{7}{9}$

$4(x-1)^2 = \frac{7}{9} - \frac{1 \cdot 3}{3 \cdot 3}$

$4(x-1)^2 = \frac{4}{9}$

$(x-1)^2 = \frac{1}{9}$

$(x-1) = \pm\sqrt{\frac{1}{9}}$

$\sqrt{\frac{1}{9}} = \frac{\sqrt{1}}{\sqrt{9}} = \frac{1}{3}$

$(x-1) = \pm\frac{1}{3}$

$x - 1 = -\frac{1}{3}$ eller $x - 1 = \frac{1}{3}$

$x_1 = \frac{2}{3}$ $\qquad$ $x_2 = \frac{4}{3}$ (Svar)