10^{th} Maths - Chapter 4

This is Problem-1(ii) from Exercise 4.2
Find the roots of the following quadratic equations by factorisation:
$2x^2 + x - 6 = 0$
Solution:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1}$$

$$x = \frac{-1 \pm \sqrt{1^2 - 4 \times 2 \times -6}}{2 \times 2} \tag{2}$$

$$x = \frac{-1 \pm \sqrt{1 - 4 - 12}}{4} \tag{3}$$

$$x = \frac{-1 \pm \sqrt{49}}{4} \tag{4}$$

$$x = \frac{-1 \pm 7}{4} \tag{5}$$

$$x = \frac{-1 + 7}{4} \tag{6}$$

$$x = \frac{6}{4} \tag{7}$$

$$x = \frac{3}{2} \tag{8}$$

$$OR \tag{9}$$

$$x = \frac{-1 - 7}{4} \tag{10}$$

$$x = \frac{-8}{4} \tag{11}$$

$$x = -2 \tag{12}$$