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:

$$
\begin{aligned}
& && (1)\\
x &= \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} && (2)\\
& && (3)\\
x &= \frac{-1 \pm \sqrt{1^2 - 4 \times 2 \times -6}}{2 \times 2} && (4)\\
& && (5)\\
x &= \frac{-1 \pm \sqrt{1 - 4 -12}}{4} && (6)\\
& && (7)\\
x &= \frac{-1 \pm \sqrt{49}}{4} && (8)\\
& && (9)\\
x &= \frac{-1 \pm 7}{4} && (10)\\
& && (11)\\
x &= \frac{-1 + 7}{4} && (12)\\
& && (13)\\
x &= \frac{6}{4} && (14)\\
& && (15)\\
x &= \frac{3}{2} && (16)\\
OR & && (17)\\
& && (18)\\
x &= \frac{-1 - 7}{4} && (19)\\
& && (20)\\
x &= \frac{-8}{4} && (21)\\
& && (22)\\
x &= -2 && (23)
\end{aligned}
$$