10^{th} Maths - Chapter 4

This is Problem-1(iii) from Exercise 4.2
$\left(\sqrt{2}x^2 + 7x + 5\sqrt{2}\right) = 0$
Solution:

$$\tag{1}$$

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

$$\tag{3}$$

$$x = \frac{-7 \pm \sqrt{-7^2 - 4 \times \sqrt{2} \times 5\sqrt{2}}}{2 \times \sqrt{2}} \tag{4}$$

$$\tag{5}$$

$$x = \frac{-7 + \sqrt{49 - 40}}{2\sqrt{2}} \tag{6}$$

$$\tag{7}$$

$$x = \frac{-7 + \sqrt{9}}{2\sqrt{2}} \tag{8}$$

$$\tag{9}$$

$$x = \frac{-4}{2\sqrt{2}} \tag{10}$$

$$\tag{11}$$

$$x = \frac{-4 \times 2\sqrt{2}}{2\sqrt{2} \times 2\sqrt{2}} \tag{12}$$

$$\tag{13}$$

$$x = \frac{-8\sqrt{2}}{8} \tag{14}$$

$$\tag{15}$$

$$x = -\sqrt{2} \tag{16}$$

$$\tag{17}$$

or

$$\tag{18}$$

$$x = \frac{-7 - \sqrt{49 - 40}}{2\sqrt{2}} \tag{19}$$

$$\tag{20}$$

$$x = \frac{-7 - \sqrt{9}}{2\sqrt{2}} \tag{21}$$

$$\tag{22}$$

$$x = \frac{-10}{2\sqrt{2}} \tag{23}$$

$$\tag{24}$$

$$x = \frac{-10 \times 2\sqrt{2}}{2\sqrt{2} \times 2\sqrt{2}} \tag{25}$$

$$\tag{26}$$

$$x = \frac{-20\sqrt{2}}{8} \tag{27}$$

$$\tag{28}$$

$$x = \frac{-5}{\sqrt{2}} \tag{29}$$