

$$10) 2x^2 - 3x - 5 = 0$$

$$\text{here } a=2, b=-3, c=-5$$

$$D = b^2 - 4ac$$

$$= (-3)^2 - 4 \times 2 \times (-5)$$

$$= 9 + 40$$

$$= 49$$

$$x = \frac{-b \pm \sqrt{D}}{2a}$$

$$= \frac{3 \pm \sqrt{49}}{2 \times 2}$$

$$= \frac{3 \pm 7}{2 \times 2}$$

$$x = \frac{3+7}{4}, \quad x = \frac{3-7}{4}$$

$$= \frac{10}{4} \quad = \frac{-4}{4}$$

$$= \frac{5}{2} \quad = -1$$

$$11) 5x^2 + 13x + 8 = 0$$

$$D = 13^2 - 4 \times 5 \times 8$$

$$= 169 - 160$$

$$= 9$$

$$x = \frac{-b + \sqrt{D}}{2a}, \quad x = \frac{-b - \sqrt{D}}{2a}$$

$$= \frac{-13 + \sqrt{9}}{2 \times 5}$$

$$= \frac{-13 + 3}{10}$$

$$= \frac{-10}{10}$$

$$= -1$$

$$= \frac{-13 - \sqrt{9}}{2 \times 5}$$

$$= \frac{-13 - 3}{10}$$

$$= \frac{-16}{10}$$

$$= \frac{-8}{5}$$

$$111) -3x^2 + 5x + 12 = 0$$

$$D = 5^2 - 4 \times (-3) \times (12)$$

$$= 25 + 144$$

$$= 169$$

$$x = \frac{-b - \sqrt{D}}{2a},$$

$$= \frac{-5 - \sqrt{169}}{2 \times (-3)}$$

$$= \frac{-5 - 13}{-6}$$

$$= \frac{-18}{-6}$$

$$= 3$$

$$x = \frac{-b + \sqrt{D}}{2a}$$

$$= \frac{-5 + \sqrt{169}}{2 \times (-3)}$$

$$= \frac{-5 + 13}{-6}$$

$$= \frac{8}{-6}$$

$$= \frac{-4}{3}$$

$$112) -x^2 + 7x - 10 = 0$$

$$D = 7^2 - 4 \times (-1) \times (-10)$$

$$= 49 - 40$$

$$= 9$$

$$x = \frac{-b + \sqrt{D}}{2a}$$

$$= \frac{-7 + \sqrt{9}}{2 \times (-1)}$$

$$= \frac{-7 + 3}{-2}$$

$$= \frac{-4}{-2}$$

$$= 2$$

$$x = \frac{-b - \sqrt{D}}{2a}$$

$$= \frac{-7 - \sqrt{9}}{2 \times (-1)}$$

$$= \frac{-7 - 3}{-2}$$

$$= \frac{-10}{-2}$$

$$= 5$$