

Ex 1.11

$$1) x^2 + 19x + 18 \stackrel{SP}{=} \underline{(x+18)(x+1)}$$

$$2) x^2 - 4x + 4 \stackrel{PR}{=} \underline{(x-2)^2}$$

$$3) 2x^2 + 5x - 3 \stackrel{\Delta}{=} 2(x - \frac{1}{2})(x+3) = \underline{(2x-1)(x+3)}$$

$$\Delta = 25 + 24 = 49$$

$$x_{1,2} = \frac{-5 \pm 7}{4} = \begin{cases} + \frac{2}{4} = \frac{1}{2} \\ - \frac{12}{4} = -3 \end{cases}$$

$$4) 3x^2 - 5x + 2 \stackrel{\Delta}{=} 3(x-1)(x - \frac{2}{3}) = \underline{(x-1)(3x-2)}$$

$$\Delta = 25 - 24 = 1$$

$$x_{1,2} = \frac{5 \pm 1}{6} = \begin{cases} + \frac{1}{6} \\ - \frac{4}{6} = -\frac{2}{3} \end{cases}$$

$$5) 4x^2 - 20x + 25 \stackrel{PR}{=} \underline{(2x-5)^2}$$

$$6) x^2 - 9 \stackrel{PR}{=} \underline{(x+3)(x-3)}$$

$$7) x^2 - \frac{4}{9} \stackrel{PR}{=} \underline{(x + \frac{2}{3})(x - \frac{2}{3})}$$

$$8) 9x^2 - 5x \stackrel{HEE}{=} \underline{x(9x-5)}$$

$$9) 8x^2 + 6x + 1 \stackrel{\Delta}{=} \underbrace{8}_{4 \cdot 2} (x + \frac{1}{4})(x + \frac{1}{2}) = \underline{(4x+1)(2x+1)}$$

$$\Delta = 36 - 32 = 4$$

$$x_{1,2} = \frac{-6 \pm 2}{16} = \begin{cases} + \frac{-4}{16} = -\frac{1}{4} \\ - \frac{-8}{16} = -\frac{1}{2} \end{cases}$$

$$10) \frac{1}{3}x^2 - x + 4$$

$$\Delta = 1 - 4 \cdot \frac{1}{3} \cdot 4 = 1 - \frac{16}{3} = -\frac{13}{3} < 0 \Rightarrow \underline{\text{pas factorisable}}$$