

(Continued ---- Find the LCM)

c) m^2-5m+6 , m^2-4m+4

$$m^2-5m+6 = (m-2)(m-3)$$

$$m^2-4m+4 = (m-2)(m-2)$$

$$LCM = (m-2)^2(m-3)$$

9) Add or subtract (as required) and simplify.

$$a) \frac{7}{60} + \frac{5}{24} = \frac{7}{60} \cdot \frac{2}{2} + \frac{5}{24} \cdot \frac{5}{5} = \frac{14}{120} + \frac{25}{120} = \frac{39}{120} = \frac{13}{40}$$

$$60 = 2 \cdot 30 = 2 \cdot 2 \cdot 15 = 2 \cdot 2 \cdot 3 \cdot 5$$

$$24 = 2 \cdot 12 = 2 \cdot 2 \cdot 6 = 2 \cdot 2 \cdot 2 \cdot 3$$

$$LCM = 2^3 \cdot 3 \cdot 5$$

$$= 120$$

$$b) \frac{2}{x+1} + \frac{2}{x-1} = \frac{2}{x+1} \cdot \frac{x-1}{x-1} + \frac{2}{x-1} \cdot \frac{x+1}{x+1}$$

$$= \frac{2(x-1) + 2(x+1)}{(x-1)(x+1)} = \frac{2x-2+2x+2}{(x-1)(x+1)}$$

$$= \frac{4x}{(x-1)(x+1)}$$

$$c) \frac{x}{3x+6} + \frac{2x}{x^2-4} = \frac{x}{3(x+2)} + \frac{2x}{(x-2)(x+2)}$$

$$= \frac{x}{3(x+2)} \cdot \frac{x-2}{x-2} + \frac{2x}{(x-2)(x+2)} \cdot \frac{3}{3}$$

$$= \frac{x(x-2) + 2x \cdot 3}{3(x+2)(x-2)} = \frac{x^2-2x+6x}{3(x+2)(x-2)} = \frac{x^2+4x}{3(x+2)(x-2)}$$