MATHS·SCHOOL

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Name:

Simplify the following

a) $\frac{3}{x} + \frac{2}{x+2}$

$$\frac{5x+6}{x(x+2)}$$

g) $\frac{5}{x} - \frac{7}{x-1}$

$$\frac{-2x-5}{x(x-1)}$$

b) $\frac{2}{x} + \frac{3}{x+5}$

$$\frac{5x+10}{x(x+5)}$$

h) $\frac{1}{x+2} + \frac{2}{x+5}$

$$\frac{3x+9}{(x+5)(x+2)}$$

c) $\frac{4}{x} + \frac{2}{x-5}$

$$\frac{6x-20}{x(x-5)}$$

i) $\frac{3}{x+3} - \frac{2}{x+1}$

$$\frac{x-3}{(x+3)(x+1)}$$

d) $\frac{5}{2x} + \frac{4}{x+3}$

$$\frac{13x+15}{2x(x+3)}$$

j) $\frac{5}{x-3} - \frac{4}{x+2}$

$$\frac{x+22}{(x-3)(x+2)}$$

e) $\frac{2}{5x} + \frac{3}{x-1}$

$$\frac{17x-2}{5x(x-1)}$$

k) $\frac{5x}{x+2} + \frac{3}{x-4}$

$$\frac{5x^2-17x+6}{(x-4)(x+2)}$$

f) $\frac{4}{x} - \frac{6}{x-2}$

$$\frac{-2x-8}{x(x-2)}$$

l) $\frac{x+6}{x-1} + \frac{x+3}{x-4}$

$$\frac{2x^2+4x-27}{(x-4)(x-1)}$$

Exam question:

a) Factorise $x^2 + 4x + 3$ $(x+3)(x+1)$

b) Hence simplify $\frac{2}{x+1} + \frac{3}{x^2+4x+3}$ $$\frac{2x+9}{(x+3)(x+1)}$$