

(Take it that none of the denominators are equal to zero)

Q1. Simplify the following:

$$(i) \frac{(3x+1)^2}{(3x+1)(2x+5)}$$

$$(ii) \frac{4x-8}{x^2-3x+2}$$

$$(iii) \frac{2x+2}{(x+1)^2}$$

$$(iv) \frac{m^2+10m+25}{m^2-25}$$

Q2. Write the following as single fractions in their simplest form:

$$(a) \frac{a}{2} + \frac{b}{3}$$

$$(b) \frac{3a+4}{2} - \frac{a}{5}$$

$$(c) \frac{3}{x+1} + \frac{2}{x}$$

$$(d) \frac{5x}{y} - \frac{4}{3x^2}$$

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

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

$$(g) \frac{a}{b} \times \frac{c}{d}$$

$$(h) \frac{2a}{3} \div \frac{5}{8b}$$

$$(i) \frac{3t^2}{2} \times \frac{4}{5t}$$

$$(j) \frac{4fg}{5} \div \frac{3g^2}{2}$$