

b) Add fractions. Simplify.

$$\frac{(2x-1)(x-7) + (x+3)(3x+1)}{(3x+1)(x+4)(x-7)} = \frac{2x^2 - 15x + 7 + 3x^2 + 10x + 3}{(3x+1)(x+4)(x-7)}$$

$$= \frac{5x^2 - 5x + 10}{(3x+1)(x+4)(x-7)} = \frac{5(x^2 - x + 2)}{(x+4)(x-7)(3x+1)}$$

← cannot be factored

c) Simplify

$$\frac{2}{x+4} - \frac{4x - x^2}{x^2 - 16} = \frac{2(x-4)}{(x+4)(x-4)} - \frac{x(4-x)}{(x+4)(x-4)} = \frac{2x - 8 - 4x + x^2}{(x+4)(x-4)}$$

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