Section 2: Rational expressions

Exercise level 1

1. Simplify

(i) $\dfrac{x^2-5x}{x-5}$ (ii) $\dfrac{x^2+6x-16}{(x-2)(x-8)}$

(iii) $\dfrac{x^2-a^2}{(x-a)^2}$ (iv) $\dfrac{v-3}{6-2v}$

2. Write as a single fraction in its simplest form

(i) $\dfrac{x^2+3x-4}{8}\times\dfrac{2}{3x-3}$ (ii) $\dfrac{3}{x+2}\times\dfrac{x^2-4x-12}{x^2-2x-24}$

3. Write as a single fraction in its simplest form

(i) $\dfrac{5c+15}{2}\div\dfrac{c^2-9}{4}$ (ii) $\dfrac{x^2-x}{2x+1}\div\dfrac{x^2+2x-3}{2x^2-3x-2}$

4. Express as a single fraction

(i) $\dfrac{x}{2}+\dfrac{3x}{5}$ (ii) $\dfrac{2}{3x}-\dfrac{1}{4x}$