Section 3.3 and 3.4 – Checking Your understanding

Answer the following four questions, show as many steps as you need to, write clearly and neatly.

1. Perform the indicated operations, assume non zero denominators.

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

2. Perform the indicated operations, assume non zero denominators.

$$\frac{2x+8}{x^2+5x+6}-\frac{x-1}{x^2+3x+2}-\frac{x+5}{x^2+4x+3}$$

3. Simplify the combined operations.

$$\left(1-\frac{4}{x^2}\right)\div\left(\frac{2}{x^2}-\frac{1}{x}\right)$$

4. Simplify the Combined Operation

$$\frac{\frac{x}{x^2-4}-\frac{2x}{x^2+x-6}}{\frac{2x}{x^2+x-6}-\frac{x}{x^2-4}}$$