Practice – 1

Once you feel confident with integration by partial fractions when the denominator has distinct linear factors or linear factors that repeat, complete problems 1 to 4. Check your answers by going to the Solutions tab in Moodle.

Instructions: Answer each of the following practice questions on a separate piece of paper. Step by step solutions are provided under the Solutions tab. You will learn the material more thoroughly if you complete the questions before checking the answers.

1. For the rational expression $\frac{2x}{x^2-25}$,

   a. resolve $\frac{2x}{x^2-25}$ into two fractions, and

   b. evaluate $\int \frac{2x}{x^2-25}\,dx$.

2. Find $\int \frac{15-4x}{x^2+5x}\,dx$.

3. Resolve $\frac{3x+1}{x^2+2x+1}$ into two fractions.

4. Evaluate $\int \frac{6-x}{(x-2)^2}\,dx$.