Practice – 1

Once you feel confident with limits, secants, and tangents, complete problems 1 to 3. 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. Find the slope of the secant line passing through the $f(x) = x^2 - 2x$ at $x = 1$ and $x = 3$.

2. Use the slope of a tangent limit formula to determine the slope of the line tangent to the curve $f(x) = x^2 - 7x + 7$ at $x = 3$.

3. For the curve $y = \frac{1}{x^2}$, determine the slope of the tangent line through the point $(1, 1)$.