Unit 1A Precalculus Lesson 4, Practice 1

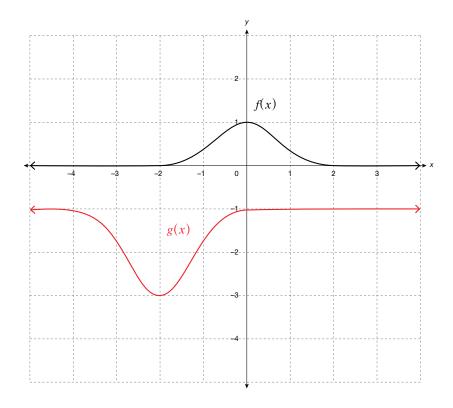


Practice - 1

Once you feel confident with transformations, 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. The graph of the function $f(x) = \sqrt{x}$ is stretched vertically by a factor of $\frac{1}{3}$, translated down 2 units and left 4 units. State the equation and the domain of the transformed function, g(x).
- 2. The following transformations are applied, in the order given, to $f(t) = t^2$. Determine the equation of the resulting function after each transformation, and sketch the graph of each.
 - i. Vertical stretch by a factor of 2
 - ii. Horizontal stretch by a factor of 3
 - iii. Reflection in the *t*-axis
 - iv. Horizontal translation 4 units right
 - v. Vertical translation 1 unit up
- 3. The graphs of f(x) and g(x) are shown below. Identify the transformations applied to f(x) to obtain the graph of g(x). Write the equation of the function g(x).



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