

# Composition of Functions

Write the composition of the functions given.

Given:  $f(x) = 2x + 7$      $g(x) = x^2$      $h(x) = x - 1$

**Example:**

$$\begin{aligned} g(h(x)) &= (x-1)^2 \\ &= x^2 - x - x + 1 \\ g(h(x)) &= x^2 - 2x + 1 \end{aligned}$$

1.  $f(g(x))$

2.  $g(f(x))$

3.  $h(g(x))$

4.  $f(h(x))$

5.  $h(f(x))$

6.  $f(g(h(x)))$

7.  $h(g(f(x)))$

8.  $f(f(x))$