

Consider these function definitions for problems 1 - 10:

$$f(x) = x^2 \quad g(x) = \sqrt{x} \quad h(x) = 5x + 1 \quad p(x) = \frac{3}{x} \quad q(x) = 2x$$

Compute the following.

1) $f(z+8)$

2) $g(f(5))$

3) $f(g(5))$

4) $g(p(12))$

5) $(f \circ f \circ f)(5)$

6) $(q \circ q \circ q \circ q \circ q \circ q \circ q \circ q \circ q)(1)$

7) $f(x+h)$

8) $\frac{f(x+h) - f(x)}{h}$

9) $h^{-1}(x)$

10) $p^{-1}(x)$

11) $(p \circ f)(4.12)$

12) $(p \circ f \circ h \circ g)(71.93)$