

PRINTABLE VERSION

Quiz 14

Question 1

Given

$$f(x) = 9x + 1$$

$$g(x) = x^2 + 7x$$

Find $(f \circ g)(5)$.

- a) 2438
- b) 261
- c) 539
- d) 541
- e) 33
- f) None of the above

Question 2

Given

$$f(x) = 2x + 5$$

$$g(x) = x^2 + 11x$$

Find $(f - g)(4)$.

- a) 47
- b) 57
- c) 32
- d) -47
- e) 81
- f) None of the above

Question 3

Given the following functions, find $(f + g)(x)$.

$$f(x) = \frac{1}{5x}$$

$$g(x) = \frac{1}{11x}$$

- a) $\frac{1}{55x}$
- b) $\frac{55}{x}$
- c) $\frac{16}{5x}$
- d) $\frac{16}{55x}$
- e) $\frac{5x}{11}$
- f) None of the above

Question 4

Given the following functions, find $(g \circ f)(x)$.

$$f(x) = \sqrt{x}$$

$$g(x) = 9x - 5$$

- a) $3\sqrt{x} - 5$
- b) $3x - 5$
- c) $9\sqrt{x} - 5$
- d) $\sqrt{9x - 5}$
- e) None of the above

Question 5

Given the following functions, find $g(f(8))$.

$$f(x) = \frac{1}{x - 6}$$

$$g(x) = \frac{1}{x}$$

- a) -8
- b) -2
- c) 6
- d) -6
- e) 2
- f) None of the above

Question 6

Given

$$f(x) = 8x + 9$$

$$g(x) = x^2 + 7x$$

Find $(fg)(2)$.

- a) 288
- b) -70
- c) 43
- d) 450
- e) -250
- f) None of the above

Question 7

Given

$$f(x) = 8x$$

$$g(x) = x^2 - x$$

Find $(g \circ f)(x)$.

- a) $64x^2 - 8x$
- b) $8x^3 - 8x$
- c) $x^2 - x$

- d) $8x - 8$
- e) $8x^2 - 8x$
- f) None of the above

Question 8

Given the following function, find $f(x + 1)$.

$$f(x) = 2x^2 - 10x$$

- a) $2x^2 + 6x - 8$
- b) $2x^2 - 6x + 12$
- c) $2x^2 - 6x - 8$
- d) $2x^2 + 6x + 12$
- e) $2x^2 - 9x - 8$
- f) None of the above

Question 9

Given the following functions, find $(f \circ g)(x)$.

$$f(x) = \frac{8x - 2}{9x - 7}$$

$$g(x) = -9x + 1$$

- a) $\frac{8}{9}$
- b) $\frac{-72x + 18}{9x - 7}$
- c) $\frac{72x + 2}{81x + 7}$
- d) $\frac{-63x + 11}{9x - 7}$
- e) $\frac{72x - 6}{81x - 2}$
- f) None of the above

Question 10

Given

$$f(x) = x^2 + 4$$

$$g(x) = \sqrt{x + 3}$$

$$h(x) = 2x + 1$$

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

- a) $4\sqrt{11}$
- b) 56
- c) 27
- d) 43
- e) 20
- f) None of the above