

LESSON
9-4

Practice B
Operations with Functions

Use the following functions for Exercises 1–18.

$$f(x) = \frac{1}{2x}$$

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

$$h(x) = x - 8$$

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

Find each function.

1. $(gk)(x)$

2. $(g + h)(x)$

3. $(g - h)(x)$

4. $(fg)(x)$

5. $(gh)(x)$

6. $\left(\frac{f}{g}\right)(x)$

Find each value.

7. $g(k(9))$

8. $h(g(-3))$

9. $g(h(-3))$

10. $k(h(12))$

11. $f(g(4))$

12. $f(h(1))$

Write each composite function. State the domain of each.

13. $f(g(x))$

14. $h(g(x))$

15. $h(k(x))$

16. $f(k(x))$

17. $k(g(x))$

18. $k(h(x))$

Solve.

19. A retail shoe store manager sets the price of shoes at twice his cost. The shoe store is now offering a 40% discount on all shoes.

a. Write a composite function for the price of a pair of shoes after the discount.

b. If a pair of shoes cost the manager \$25, what is the sale price?
