Lesson 6.3 Worksheet

Name: _____

Let $f(x) = 7x^{1/2} - 2$, $g(x) = -x^{1/2} + 4$, and $h(x) = -4x^{1/2} + 1$. Perform the indicated operation and state the domain.

1.) $f(x) + g(x)$

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

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

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

5.) $h(x) - f(x)$

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

Let $f(x) = 4x^2$, $g(x) = -3x^{4/3}$, and $h(x) = x^{1/2}$. Perform the indicated operation and state the domain.

7.) $f(x) \cdot g(x)$

8.) $f(x) \cdot h(x)$

9.) $h(x) \cdot g(x)$

10.) $\dfrac{f(x)}{g(x)}$

11.) $\dfrac{h(x)}{f(x)}$

12.) $\dfrac{h(x)}{g(x)}$

Let $f(x) = 2x + 3$, $g(x) = \frac{3}{x+1}$ and $h(x) = \frac{x+5}{2}$. Perform the indicated operation and state the domain.

13.) $f(g(x))$

14.) $g(h(x))$

15.) $f(h(x))$

16.) $g(f(x))$

17.) $h(f(x))$

18.) $g(g(x))$

Let $f(x) = 3x + 2$, $g(x) = -x^2$ and $h(x) = \frac{x-2}{5}$. Find the indicated value.

19.) $f(g(-3))$

20.) $g(f(2))$

21.) $h(f(-9))$

22.) $h(g(5))$

23.) $g(g(-5))$

24.) $h(h(-4))$