**For #'s 1-6, let $f(x) = x^{\frac{1}{2}} + 2$, $g(x) = 3x^{\frac{1}{2}} - 1$, and $h(x) = -2x^{\frac{1}{2}} + 3$.**

**Perform the indicated operation and then state the domain.**

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

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

_____  Domain:_____        _____  Domain:_____

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

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

_____  Domain:_____        _____  Domain:_____

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

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

_____  Domain:_____        _____  Domain:_____

**For #'s 7-12, let $f(x) = 4x^{\frac{3}{2}}$, $g(x) = 2x^{\frac{1}{3}}$, and $h(x) = -6x^{\frac{1}{2}}$.**

**Perform the indicated operation and then state the domain.**

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

8.  $f(x) * h(x)$

_____  Domain:_____        _____  Domain:_____

9.  $h(x) * g(x)$

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

_____  Domain:_____        _____  Domain:_____

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

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

_____  Domain:_____        _____  Domain:_____

**For #'s 13-18, let $f(x) = 2x + 3$, $g(x) = x^2$, and $h(x) = \frac{3}{x-2}$.**

**Perform the indicated operation and then state the domain.**

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

14. $f(x) * h(x)$

_____ Domain:_____    _____ Domain:_____

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

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

_____ Domain:_____    _____ Domain:_____

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

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

_____ Domain:_____    _____ Domain:_____