Pre-Quiz Function and Composition

Name: _____

A# _____

$f(x) = x^2 - 7x$ $g(x) = 4x$ $h(x) = \sqrt{x-5}$ $k(x) = 7x - 5$

Perform the following function operations and simplify given the following functions:

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

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

3. $(g \cdot k)(x)$

4. $(k \circ g)(x)$

5. $(f \circ g)(-2)$

6. $h\left(g\left(x\right)\right)$

Use composition to determine if $f(x)$ and $g(x)$ are inverses. Show your algebra

7. Given $f(x) = 5x - 7$ $g(x) = \frac{1}{5}x - \frac{7}{5}$

Find the inverse of the following functions

8. $f(x) = \sqrt{x-7}$

9. $f(x) = 3(x - 7)^2 + 5$

10. $f(x) = 9x - 10$