6.01 – Combining and Composing I

Name _____

Use the functions to the right
To perform the operations specified:

Function Bank

$b(x) = x^3 - x^2 - x + 1$
$f(x) = x^2 - 3x + 2$
$g(x) = x - 2$
$h(x) = 2x^2 - 2x - 12$
$p(x) = 2x + 4$
$r(x) = x - 3$
$t(x) = x^2 - 36$
$u(x) = x + 6$
$w(x) = x - 1$

$(f + h)(x) =$

$(b + f)(x) =$

$(f - h)(x) =$

$(f - b)(x) =$

$(ru)(x) =$

$(pb)(x) =$

$\frac{f(x)}{g(x)} =$ $\left(\frac{t}{u}\right)(x) =$ $\left(\frac{b}{w}\right)(x) =$

Compose the functions as directed.
Remember, you won't get a numerical answer; you'll get something like: $f\big(g(x)\big) = x^2 - 7x + 14$

$g\big(p(x)\big) =$ $p\big(u(x)\big) =$

$t\big(u(x)\big) =$ $p\big(t(x)\big) =$