Math-3 Name_____ ID: 1

SM3 HW #4-1 (combining functions)

Period____

Perform the indicated operation.

1) $g(x) = -2x + 5$
$h(x) = x + 3$
Find $(g + h)(x)$

2) $h(x) = x^3 - x$
$g(x) = 4x - 4$
Find $(h + g)(-4)$

3) $g(x) = x - 3$
$f(x) = -3x - 5$
Find $(g - f)(x)$

4) $f(n) = 3n + 5$
$g(n) = 4n + 1$
Find $(f \cdot g)(n)$

5) $g(t) = -3t - 3$
$f(t) = 2t - 5$
Find $(g \cdot f)(-5)$

6) $g(x) = x - 2$
$f(x) = x^2 - 4$
Find $\left(\frac{g}{f}\right)(x)$

7) $g(t) = 3t + 4$
$h(t) = -t + 2$
Find $\left(\frac{g}{h}\right)(-2)$

8) $g(t) = 4t - 5$
$h(t) = t - 2$
Find $(-4g - 5h)(t)$

9) $g(x) = x^2 + x$
$h(x) = 3x$
Find $(-3g + 5h)(-5)$

10) $h(x) = 4x - 3$
$g(x) = x^2 + 3$
Find $(h - g)(1)$

11) $h(n) = n + 5$
$g(n) = n^3 + n$
Find $(h \cdot g)(n)$

12) $h(x) = x^2 - 1$
$g(x) = x - 5$
Find $(h \cdot g)(x)$

Find the "zeroes" of the equations.

13) $y = x^2 - 24$

14) $y = 2x^2 + 16$

15) What is the equation of a line through: $(5, 7)$ and perpendicular to the line $y = \frac{2}{3}x - 5$

16) Find the zeroes.

$y = -3(x - 4)^2 + 6$

17) Find the zeroes.

$y = 4(x + 5)^2 + 36$