

Q2 HW6 - *Show all work. All work on looseleaf. Date_____ Period_____

Find the discriminant of each quadratic equation then state the number and type of solutions.

1) $-9b^2 - 6b + 9 = 10$

2) $5v^2 + 5v - 2 = -2$

3) $x^2 + 2x + 6 = 5$

4) $6x^2 + 9x + 16 = 7$

Solve each equation with the quadratic formula. Check all solutions unless they are conjugates, in that case you only need to check one of the conjugate pairs.

5) $2x^2 - 7x = -6$

6) $2b^2 - 60 = -7b$

7) $2n^2 = -4 - 2n$

8) $8x^2 + 6x = -5$

9) $3r^2 + 3r = -5$

10) $6n^2 + 3n = -6$

Perform the indicated operation.

11) $g(n) = 2n - 4$
 $h(n) = 4n - 5$
Find $(g + h)(n)$

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

13) $f(x) = 4x + 3$
 $g(x) = x - 2$
Find $(f \cdot g)(x)$

14) $g(x) = x + 1$
 $h(x) = 4x - 1$
Find $(g \cdot h)(x)$

15) $g(n) = -4n + 3$
 $h(n) = -4n - 4$
Find $\left(\frac{g}{h}\right)(n)$

16) $f(t) = 4t$
 $g(t) = t + 2$
Find $(f \circ g)(t)$

17) $f(n) = 4n - 1$
 $g(n) = n^3 + 2$
Find $(f \circ g)(n)$

18) $h(t) = t^2 - 1$
 $g(t) = 2t$
Find $(h \circ g)(t)$