1. Given $g(x) = x - 3x^2$, simplify each function.
(a) $g(-4)$ (b) $g(2a)$

2. Given $f(x) = 2x^2$ and g$(x) = 5x + 6$, simplify each function.
(a) $(f \circ g)(x)$ (b) $(g \circ f)(x)$

3. Given $f(x) = \frac{2}{x-3}$ and $g(x) = x - 4$, simplify the following.
(a) $f(x) + g(x)$ (b) $\frac{g(x)}{f(x)}$

4. Graph:
(a) $y + 4x \leq 12$ (b) $x - 2 = 0$

(c) $-8 < 2x + y < 4$ (d) $-y > -30x - 90$

5. Find the zeros for $g(x) = \frac{2}{3}x + 6$.

6. State the domain and range of the relation $\{(8,4),(1,1),(2,3),(8,9),(6,7)\}$. Then, state whether the relation is a function and support your answer.

7. Find the equation in standard form of a line through (3,4) and (4,6).

8. Find the slope of a line parallel to $5x - 8y - 4 = 0$.

9. Find the equation in slope-intercept form of a line perpendicular to $-x + 5y = -3$ and passing through the origin.

10. Find the equation in standard form of a line parallel to $4x - 9y = -23$ and passing through (18, -15).

11) ~~Find the first 3 iterates of $f(x) = x^2 + 1$ using the given value $x_0 = 1$.~~ **SKIP**

12) State the domain of the following functions.

(a) $f(x) = \dfrac{2}{6-x}$ 　　　　　　　　　(b) $g(x) = \dfrac{x^2}{x^2-16}$

13) Write an equation in slope-intercept form given a point that passes through (2, -3) and slope of -4.