

PRECALCULUS CLASS PRACTICE  
Sec. 2.1 Functions

NAME \_\_\_\_\_  
MOD \_\_\_\_\_

1.  $f(x) = \frac{x^2 - 6}{x^2}$  FIND: a)  $f(x - 2)$

b)  $f(3x)$

2. FIND the DOMAIN of each function:

a)  $g(x) = \frac{x}{x^2 - 5x + 6}$

b)  $h(x) = \frac{|x|}{\sqrt{x}}$

c)  $t(x) = \sqrt{10 - x}$

3. FIND the difference quotient of each function:  $\frac{f(x+h) - f(x)}{h}$

a)  $f(x) = -6x + 1$

b)  $f(x) = 2x^2 - 3x + 5$

4. Find  $f + g$ ,  $f - g$ ,  $f \cdot g$ , and  $\frac{f}{g}$  for each pair of functions and state each domain.

a)  $f(x) = 2x^2 + 3$ ;  $g(x) = 4x^3 + 1$

b)  $f(x) = \frac{4}{x}$ ;  $g(x) = \sqrt{x+1}$

5. If  $f(x) = \frac{2x - B}{3x + 4}$  and  $f(2) = \frac{1}{2}$ , what is the value of  $B$ ?