Name: _____ Block: _____

Variable Interactions

For each of the formulas given, describe the effect of each of the changes listed.

1. $a^2 = 2b$

   (a) What happens to b if a is doubled?

   (b) What happens to a if b is doubled?

2. $\frac{5ab^2}{de^3} = f$

   (a) What happens to f if b is tripled?

   (b) What happens to f if e is doubled?

   (c) What happens to f if e is cut in half?

3. $\dfrac{\sqrt{ab}}{3cd^2} = e$

   (a) What happens to e if b is tripled?

   (b) What happens to e if d is doubled?

4. $F_g = \dfrac{Gm_1m_2}{d^2}$

   (a) What happens to the force of gravity (F_g) if either mass (m_1 or m_2) is doubled?

   (b) What happens to the force of gravity if *both* masses are doubled?

   (c) What happens to the force of gravity if the distance between the centers of the masses (d) is tripled?