Geometric Mean:

Proportions in which means are equal occur frequently in the field of geometry. For any two positive numbers, a & b, the geometric mean of a & b is the positive number x such that:

$$\frac{a}{x} = \frac{x}{b}$$

*** Note: $x = \sqrt{ab}$

For example: Find the geometric mean of 5 & 80.

     Solution: $\frac{5}{x} = \frac{x}{80}$ Place the x's and #'s in opposite places.

                         $x^2 = 400$ Cross Multiply

                         $\sqrt{x^2} = \sqrt{400}$ Take the square root of each side.

                         $x = 20$

Examples:

Find the geometric mean of each of the following sets of numbers:

1) 4 and 18   2) 4 and 9   3) 4 and 10   4) 4 and 12

5) 3 and 48   6) 7 and 56   7) 5 and 125   8) 9 and 24

9) 7 and 9   10) 6 and 333   11) 3 and 16   12) 4 and 49

13) √8 and √2   14) √28 and √9   15) 1/2 and 2   16) 5 and 1.25

17) 1 and 100   18) 11 and 1331