

**Errata** - Please note that the rectangles on pages 78 and 79 should be reversed.  
Thank you.

Barnstone Studios



### Master Guide Tip:

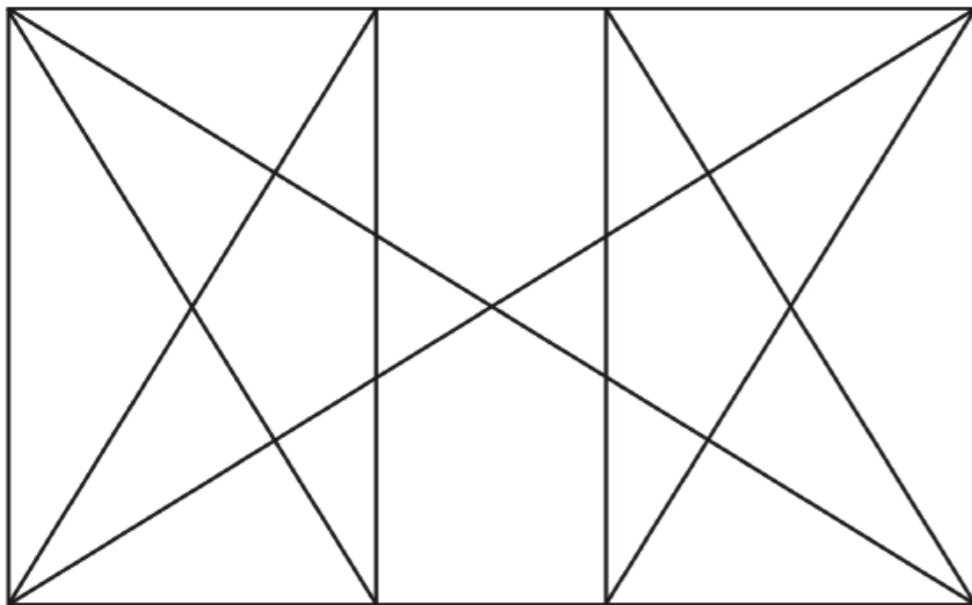
Don't shade your bottles individually and independent of each other. Work in zones beginning with the first bottle and all that surrounds it in a rough circle. This will allow you to key the values quickly across all three bottles at the beginning and make fewer mistakes.

### Introduction to New Concepts:

Golden Section rectangle and Root Rectangle Series.

There are several rectangles available to aid you in designing your work. The proportions of your chosen rectangle should suit the proportions of your subject and vice versa. The Golden Section and various root rectangles each provide a different set of angles and divisions that will unify and strengthen your work when paired with the appropriate subject. As examples, on the blackboard Myron demonstrates some specific benefits that are gained for portrait, still-life, figure and seascape when paired with the classic rectangles best suited for that purpose.

#### The Golden Section rectangle (or 1:1.618)



The Golden Section has mesmerized artists, architects, musicians, mathematicians, and philosophers since ancient times. Many civilizations from the Egyptians to the Greeks have been fascinated by the qualities inherent in the Golden Section and its relationship

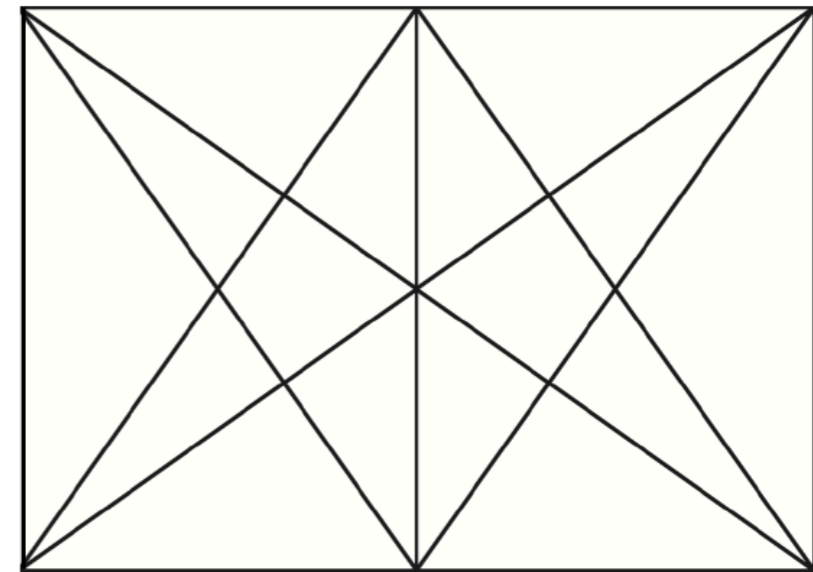
Introduction to Drawing & Design

with growing forms in nature. As discoveries were made, people believed they now understood God's system of design. So, they purposefully repeated these relationships to elevate their design works to something deserving as a holy offering.

The Golden Section ratio has unique harmonic properties. In mathematics, when 'a+b is to a as a is to b,' then these quantities are in the golden ratio (1:1.618) and are harmonically balanced. In other words, although these two lengths are unequal, they form a rhythmic balance with one another as part of a logarithmic growth sequence.

The Golden Section is also known as the sacred cut, golden mean, divine rectangle, the rectangle of the whirling squares, and the phi ratio. Nature itself is reflected in the phi ratio, and by using calipers you can see how your body is also designed on the same set of ratios.

#### The Root-2 rectangle ( $\sqrt{2}$ or 1:1.4142)



According to Jay Hambidge, a root rectangle is a rectangle in which the ratio of the longer side to the shorter is the square root of an integer, such as  $\sqrt{2}$ ,  $\sqrt{3}$ , etc. The root-2 rectangle is constructed by extending two opposite sides of a square to the length of the square's diagonal.



### Master Guide Tip:

When you're thinking about the new arrangement in a root-2 for your bottles, do a gesture drawing (or five) of the possible placement like Myron does on the blackboard.