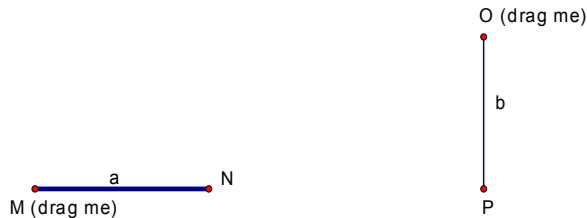


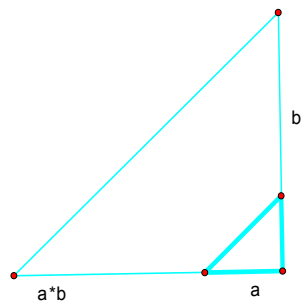
When asked to construct a segment of length $a \cdot b$ (construction #4), wasn't sure how to think about the length $a \cdot b$ in terms of the other lengths. The first thing I thought of when I saw $a \cdot b$ was the area of a rectangle. However, I didn't know if there would be a way to represent the area in terms of a line.

The givens for this construction are: segments of length a and b .



What did you understand when you understood “it” better?

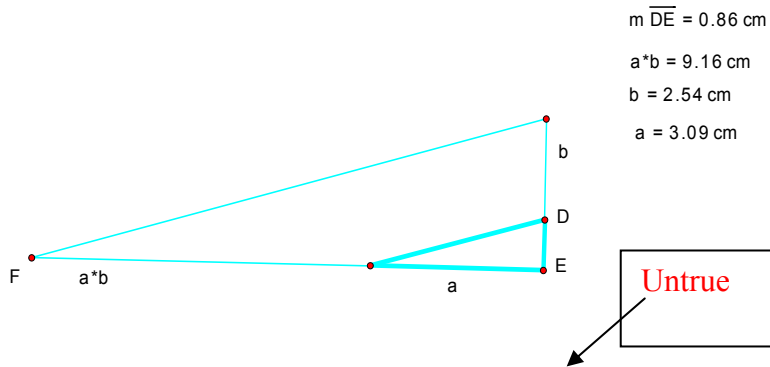
After discussing this construction in class, I understood a little better what needed to be done to construct the desired segment. That is why I placed segments MN and OP in this fashion. This way I was able to think of them as sides of similar triangles, one being a scalar of the other of multiple b .



I constructed the similar triangles by beginning with a smaller right triangle and then extending the sides. I created a parallel line to the hypotenuse and created the intersections of the parallel line to the extended sides. Knowing the properties of triangles, I knew these were similar. After this construction, I had a side of length $a \cdot b$. It is the side that is adjacent to segment with length a .

It is not enough that you feel confident that something is true. You must help the reader (student) to feel confident that what you are saying is true.

You've named a side " $a \cdot b$ ". That is not the same as having a side whose length is the product of a and b . If you examine the measures (next diagram) of a and b , they are 2.54 and 3.09 inches. $2.54 \cdot 3.09$ is 7.8386. So, the length of the segment is not $a \cdot b$.



If line segments in first section are moved, the above triangles will continue to have same lengths. To show that length $a*b$ is in fact correct, segment DE should be taken to be of length 1. This means that all the other lengths should be scaled to length of DE

$$\frac{a*b}{m \overline{DE}} = 10.69$$

When calculated the length of EF truly is $a*b$

$$\frac{b}{m \overline{DE}} = 2.97$$

$$\frac{a}{m \overline{DE}} = 3.60$$

This statement is poorly formed. What do you mean that a length is “correct” if it must be changed to be correct?

Why should segment DE be taken to be of length 1?

7/10.