Does A **really equal** $\frac{bh}{2}$?

CTTI

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In this problem assume that scissors-congruent figures have the same area and that the area of a rectangle is the product of the base time the height.

Show that the product of the base times the height of a triangle does *not* depend on which base you choose.

More precisely, describe how to transform each figure below into the next so that the area is clearly the same. Then use diagrams 1,3, and 5 to conclude $(AB)(CD) = (AC)(BJ) = (BC)(AM)$.
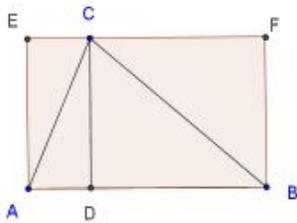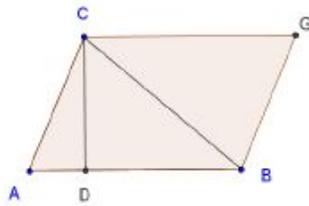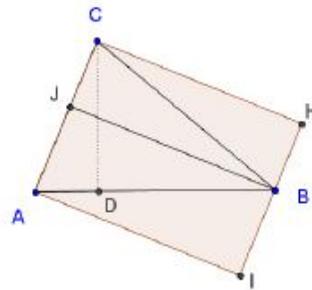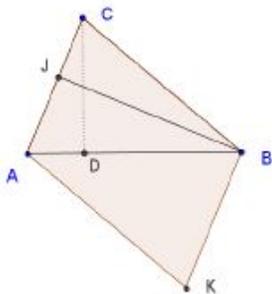

Figure 1   Figure 2   Figure 3

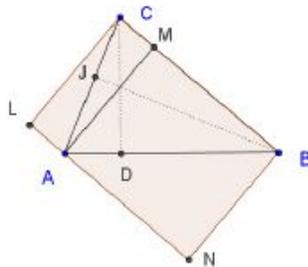Figure 4   Figure 5