

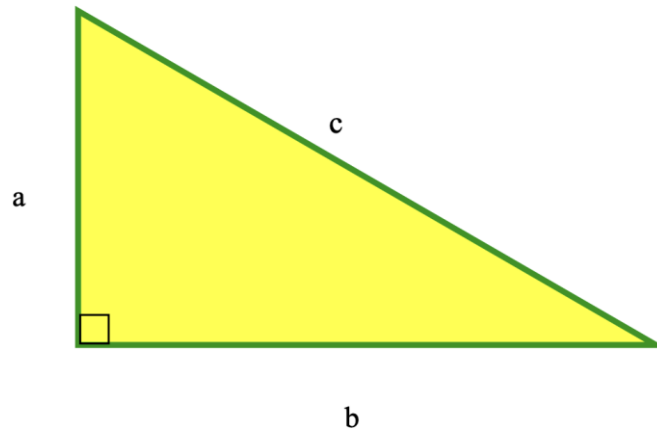
Math 1030 #18c

Problem Solving with Geometry

Triangles

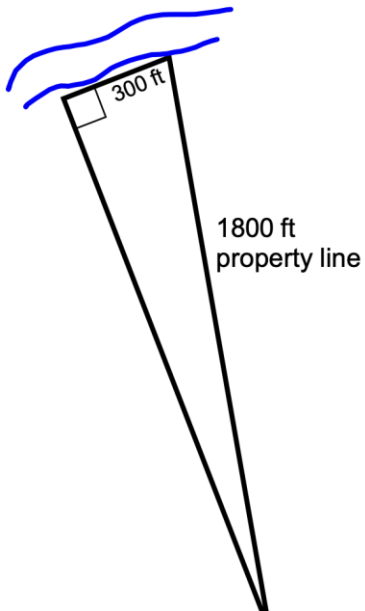
Pythagorean Theorem: In a right triangle, the square of the hypotenuse is equal to the sums of the squares of the two legs.

$$a^2 + b^2 = c^2$$



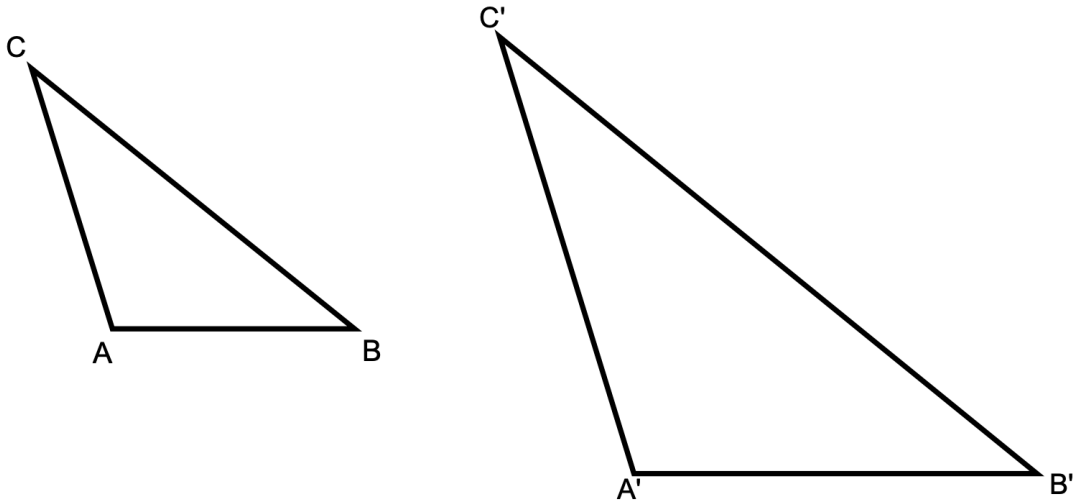
EX 1:

Determine the acres in this piece of river front property. 1 acre = 43,560ft².



Similar Triangles

Similar triangles have the same shape. Their corresponding angles are equal in measure. Their sides are proportional. That is, the ratios of corresponding sides are equal.



EX 2:

If the sides of the smaller triangle above are (from shortest to longest) 8 cm, b cm, 12 cm and the sides of the larger triangle are c' cm, 15 cm and 20 cm, find the measures of all sides of both triangles.

EX 3:

The shadow cast by a 5 ft 8 inch person is 8 ft. How tall is the light post which casts a 12 foot shadow?

EX 4:

If a skateboard ramp is to have a slope of $\frac{5}{12}$ and takes the skater from ground level to ten feet high, how long is the board necessary to do that?