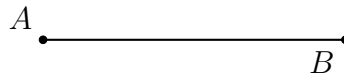


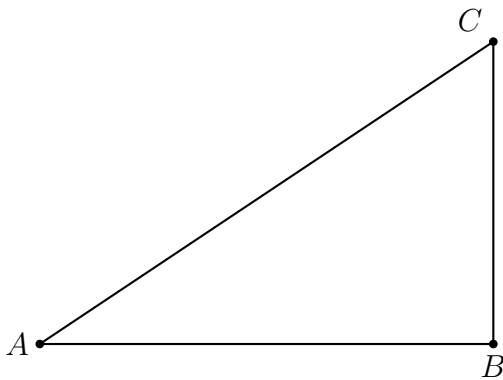
**5.1 Classwork: Construction of a dilation**

Use only a compass and straightedge for these classical constructions.

1. Construct a line segment  $\overline{AB'}$  that is twice the length of  $\overline{AB}$ ,  $AB' = 2 \times AB$ .  
(Do not measure with a ruler. Leave all construction marks.)



2. Construct a triangle  $\triangle AB'C'$  with sides twice the length of  $\triangle ABC$ , that is  $AB' = 2 \times AB$ ,  $AC' = 2 \times AC$ , and  $B'C' = 2 \times BC$ .



**Dilate a triangle with a center of dilation**

3. Perform a dilation centered at  $P$  with a scale factor  $k = 2$ .  
Make a table of the two triangles' side lengths, showing their ratios.

