

Name:

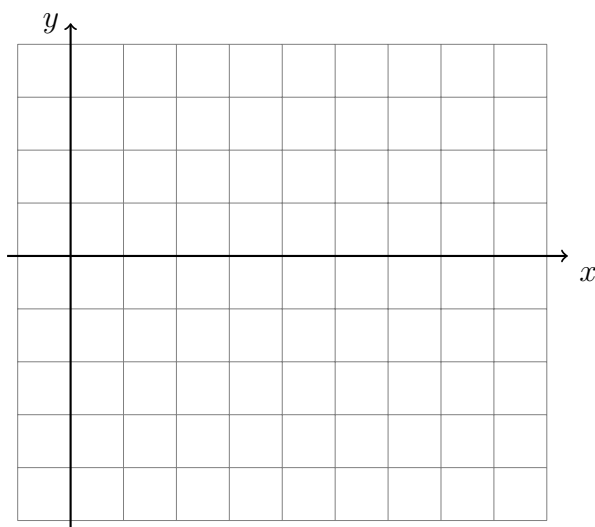
BECA / Dr. Huson / Geometry 7 Similarity

7.3 Classwork: Scale applications**CCSS.HSG.SRT.B.5**

- Plot on the grid points representing these cities: Port-au-Prince is located at $(3, -2)$ and Caracas is located at $(6, -4)$. Washington DC is located at $(3, 1)$ and New York City is located at $(6, 2)$. Scale factor: 1 grid unit = 300 kilometers.

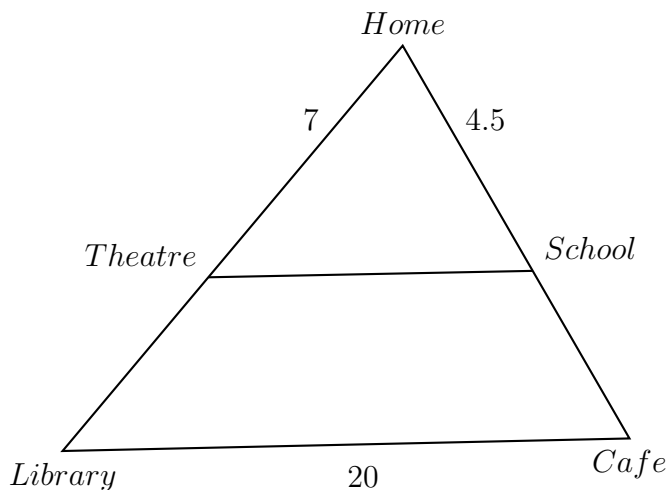
Solve the distance between each pair of cities in grid units *and* kilometers.

- New York City and Caracas.
- Port-au-Prince and Washington DC.
- Port-au-Prince and Caracas.



- Dr. Huson's classroom is 24.5 feet wide. A model of the classroom is 4 inches wide. What is the scale factor?
- A model of BECA has a scale of 1 in : 4 ft. If the real BECA is 332 feet wide then how wide is the model BECA?
- Boston and New York City are 147 cm apart from each other on a map. How far apart are the two cities in real life? The map's key tells you that 3 cm is 7 km.

5. Triangle HTS , where $H = \text{Home}$, is dilated with a scale factor of $k = 1.75$ centered at H , yielding $\triangle HLC$, as shown. Given $HT = 7$ km, $HS = 4.5$ km, and $LC = 20$ km.
- (a) Student A walks from school to the theatre and then walks to the library. How many kilometers did student A walk?
- (b) Student B walks decides to walk from school to the cafe and then walk back home. How many kilometers did student B walk?



6. Reflect $\triangle ABC$ across the y -axis. Then, dilate $\triangle A'B'C'$ by a factor of $k = 1.5$ centered at the origin to produce $\triangle A''B''C''$. Plot and label the two triangles in the graph below.

