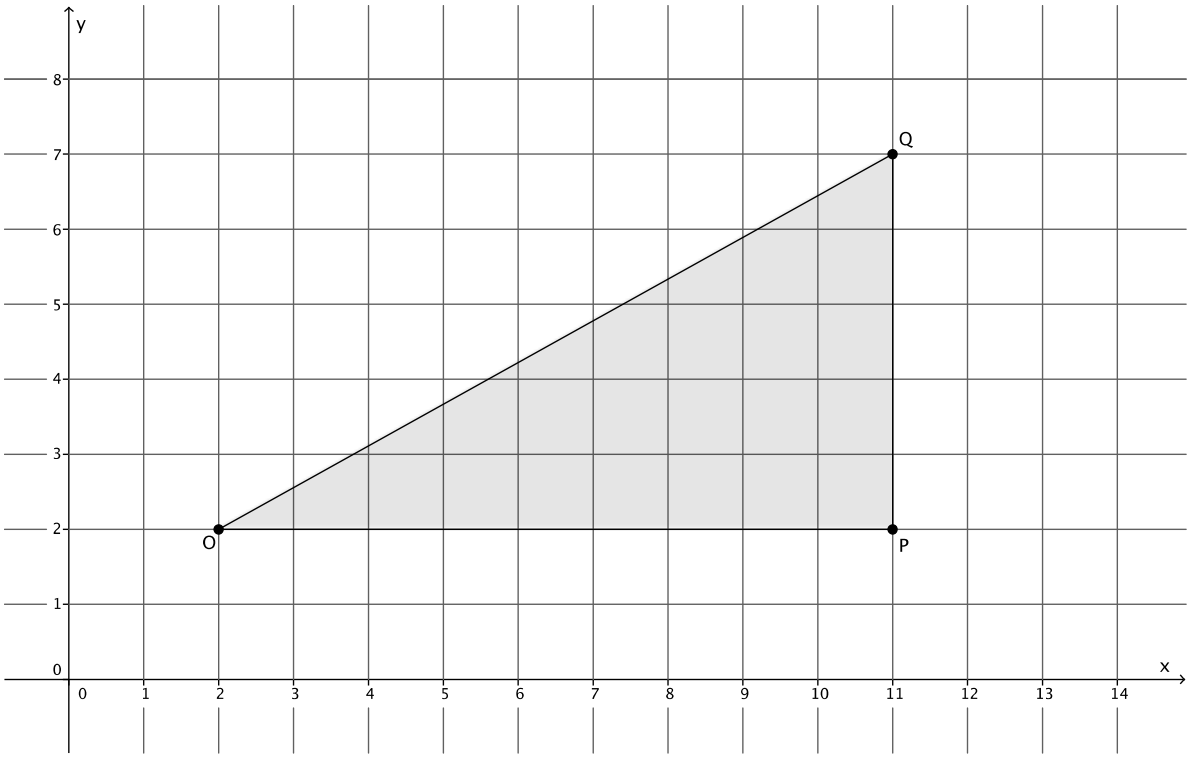
Grade 8 Module 3 End-of-Module Assessment 'A'

Name _____ Date _____

1. Use the diagram below to answer the questions that follow.



a. Dilate triangle ΔOPQ from center O and scale factor $r = \frac{3}{9}$. Label the image $\Delta OP'Q'$.

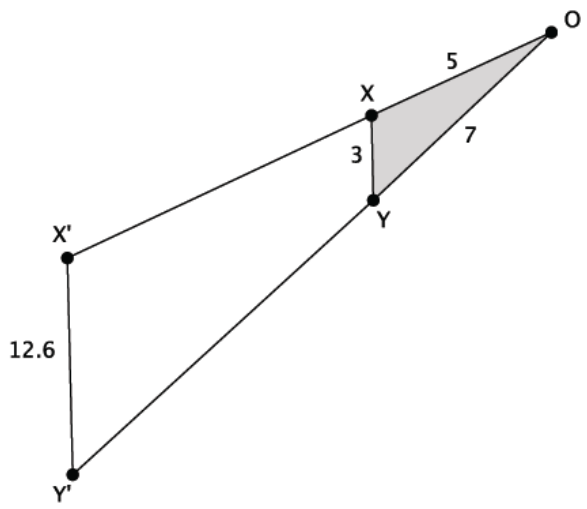
b. Find the coordinates of P' and Q'.

c. Are $\angle OQP$ and $\angle OQ'P'$ equal in measure? Explain.

d. What is the relationship between the lines PQ and $P'Q'$? Explain in terms of similar triangles.

e. If the length of segment $|OQ| = 9.8$ units, what is the length of segment $|OQ'|$? Explain in terms of similar triangles.

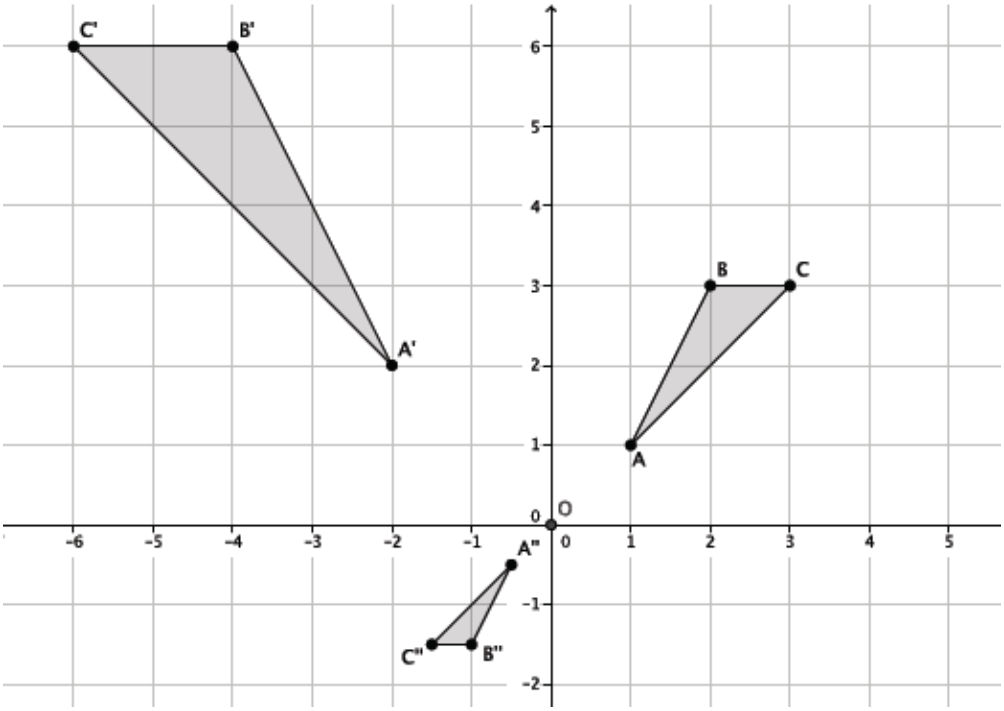
2. Use the diagram below to answer the questions that follow. The length of each segment is as shown: segment OX is 5 units, segment OY is 7 units, segment XY is 3 units, and segment $X'Y'$ is 15.9 units.



a. Suppose XY is parallel to $X'Y'$. Is triangle ΔOXY similar to triangle $\Delta OX'Y'$? Explain.

b. What is the length of segment OX'? Show your work.

3. Given $\Delta ABC \sim \Delta A'B'C'$ and $\Delta ABC \sim \Delta A''B''C''$ in the diagram below.



a. Describe the sequence that shows the similarity for ΔABC and $\Delta A''B''C''$.