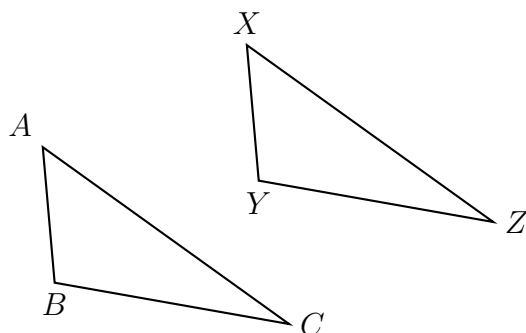


Name:

8-8 Homework: Similar triangles, dilation ratios

1. A translation maps triangle ABC onto triangle XYZ .



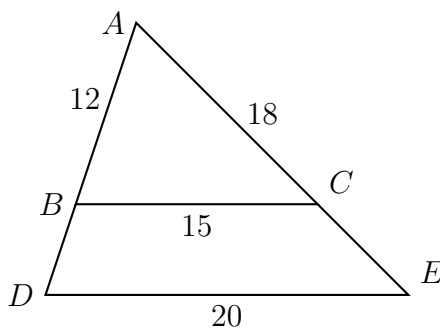
Circle the true statement(s). The \triangle s are ...

- (a) congruent, but not similar
- (b) similar, but not congruent
- (c) both congruent and similar
- (d) neither congruent nor similar

2. Given $\triangle JKL \sim \triangle MNO$. $m\angle K = 31^\circ$ and $m\angle M = 53^\circ$.
Find the measure of $\angle L$.

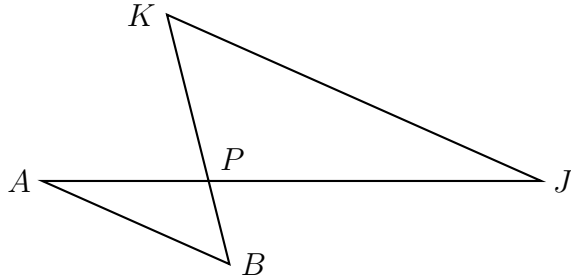
3. Triangle ABC is dilated with a scale factor of k centered at A , yielding $\triangle ADE$, as shown. Given $AB = 12$, $BC = 15$, $AC = 18$, and $DE = 20$.

Find AD , CE , and k (the scale factor).



4. Given $\triangle ABP$ and $\triangle JKP$ as shown below. $\overline{AB} \parallel \overline{JK}$ with $AB = 5$, $PA = 4$, $PB = 2$, and $PK = 5$.

Find PJ and JK .

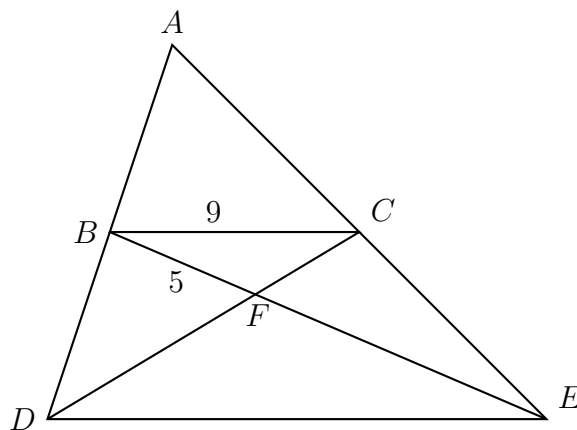


5. Triangle ADE and its midline \overline{BC} are drawn, with B the midpoint of \overline{AD} and C the midpoint of \overline{AE} . The two medians \overline{BE} and \overline{CD} are drawn, as shown, intersecting in point F , the centroid.

$\triangle FCB \sim \triangle FDE$ with scale factor $k = 2$.

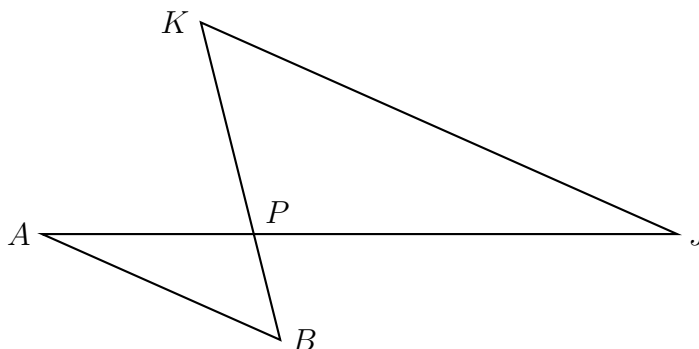
Given $BC = 9$, find DE .

Given $BF = 5$, find FE .

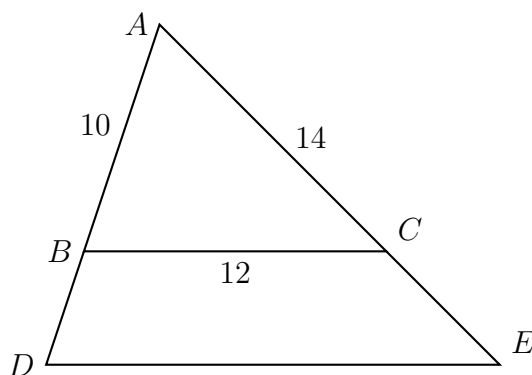


8-3 Homework: Similar triangles, dilation ratios

1. Given $\triangle ABP$ and $\triangle JKP$ as shown below. $\overline{AB} \parallel \overline{JK}$. $AP = 5.7$, $JP = 11.4$, and $JK = 14.8$. Find AB .

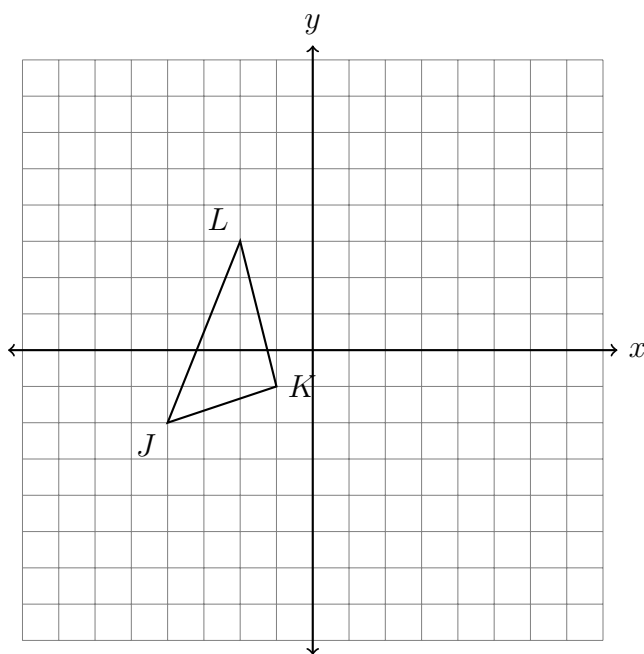


2. Triangle ABC is dilated with a factor of $\frac{3}{2}$ centered at A , yielding $\triangle ADE$, as shown. Given $AB = 10$, $BC = 12$, and $AC = 14$. Find AD , AE , and DE .



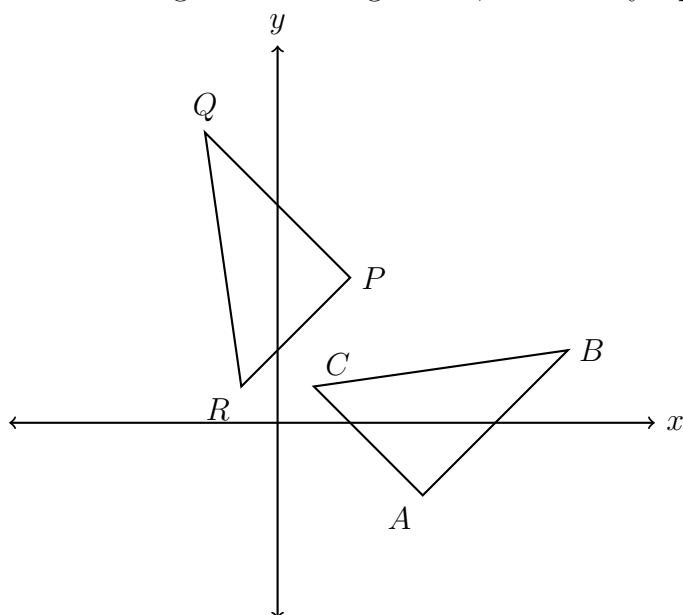
3. The vertices of $\triangle JKL$ have the coordinates $J(-4, -2)$, $K(-1, -1)$, and $L(-2, 3)$, as shown below.

Apply a translation of $(x, y) \rightarrow (x + 7, y + 2)$ to $\triangle JKL$ and then reflect the image across the x -axis. Draw both images $\triangle J'K'L'$ and $\triangle J''K''L''$ on the set of axes below, labeling the vertices.



4. A rotation of 90° is applied to $\triangle ABC$, mapping it onto $\triangle PQR$, as shown.

Which triangle has the larger area, or are they equal? Justify your answer.



Name:

5. Using a compass and straightedge, construct the perpendicular bisector of $\overline{BB'}$
What transformation has been applied to map $\triangle ABC$ on to $\triangle A'B'C'$?

