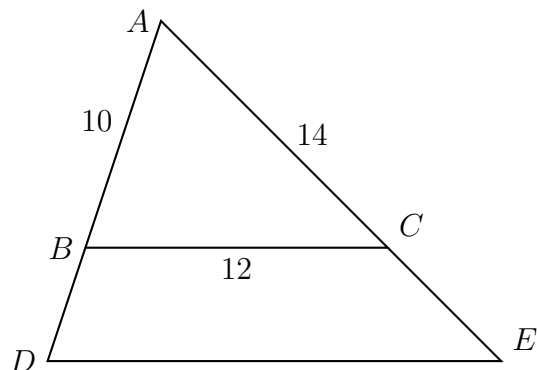


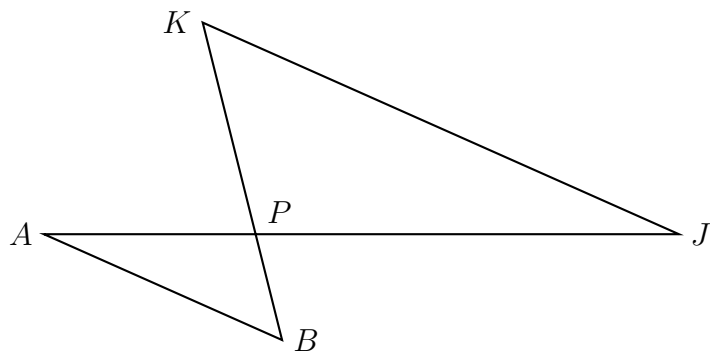
5.8 Do Now: Similar triangles, dilation ratios

1. 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 .



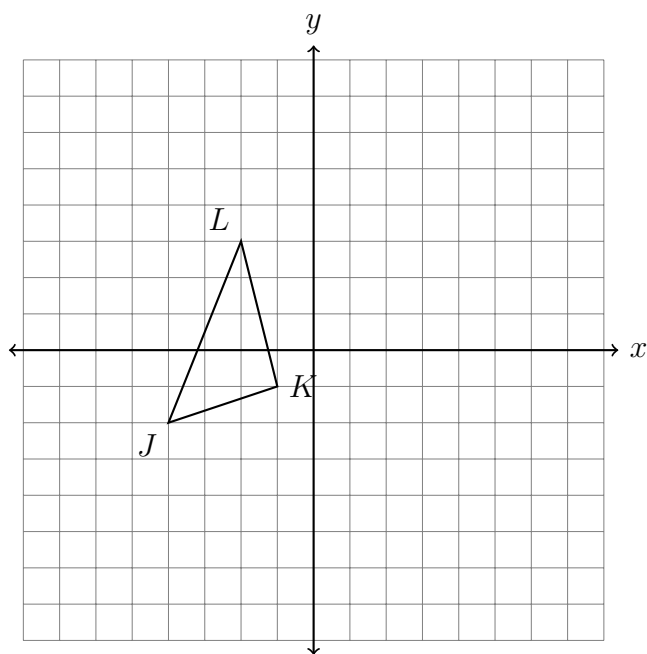
2. Given $\triangle ABP \sim \triangle JKP$ as shown below. $\overline{AB} \parallel \overline{JK}$. $AP = 5.7$, $JP = 11.4$, and $JK = 14.8$. Find AB .



3. Find the image of $A(-3, 1)$ after the translation $(x, y) \rightarrow (x + 4, y - 2)$.

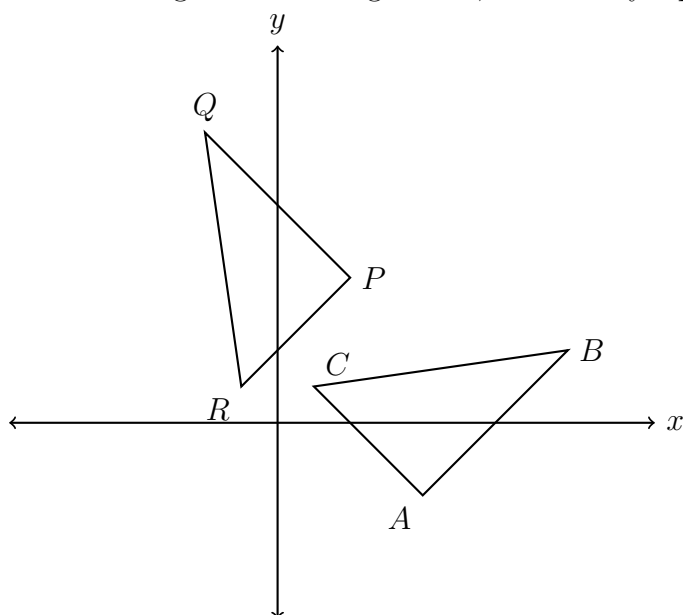
4. The vertices of $\triangle JKL$ have the coordinates $J(-4, -2)$, $K(-1, -1)$, and $L(-2, 3)$, as shown below.

Apply a translation of $(x, y) \rightarrow (x + 7, y + 2)$ to $\triangle JKL$ yielding the triangle $\triangle J'K'L'$. List its coordinates in a table and plot it on the set of axes below, labeling the vertices.



5. 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.



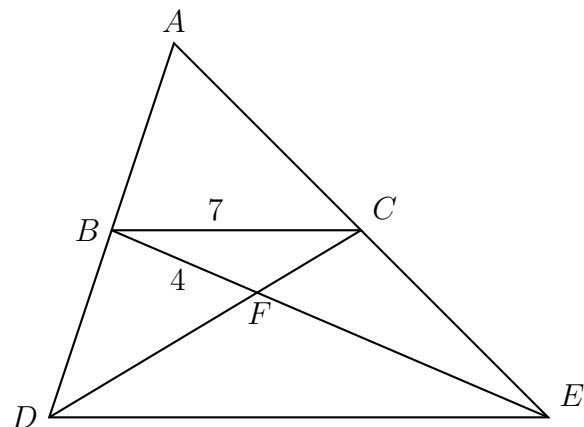
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6. Triangle ADE and its midline \overline{BC} are drawn, with B the midpoint of \overline{AD} and C the midpoint of \overline{AE} . The two medians \overline{BE} and \overline{CD} are drawn, as shown, intersecting in point F , the centroid.

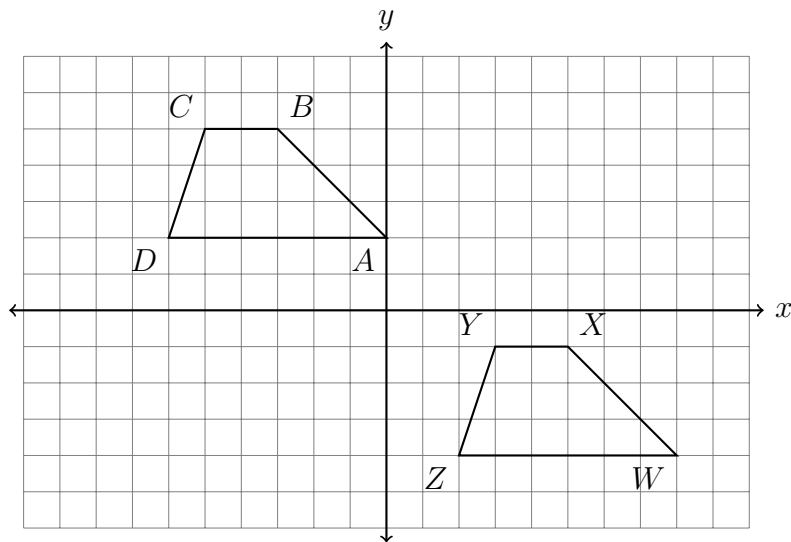
$\triangle FCB \sim \triangle FDE$ with scale factor $k = 2$.

Given $BC = 7$, find DE .

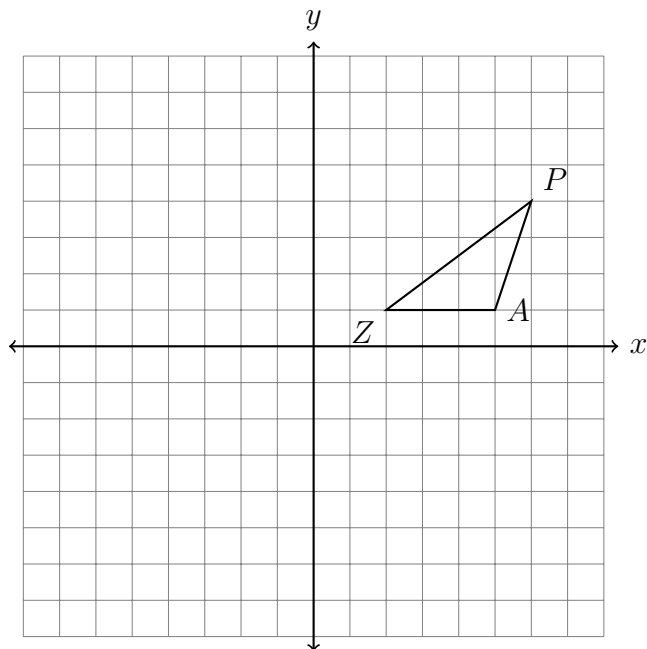
Given $BF = 4$, find FE .



7. The trapezoid $ABCD$, shown below, undergoes a rigid transformation carrying it onto trapezoid $WXYZ$. State the transformation. (be specific)



8. Apply a rotation of 90° counterclockwise to $\triangle ZAP$. Plot and label $\triangle Z'A'P'$ on the axes below and make a table listing its coordinates.



9. In $\triangle ABC$ shown below, $m\angle A = (3x + 13)^\circ$, $m\angle B = (4x + 4)^\circ$, and $m\angle C = (2x - 8)^\circ$. What is $m\angle A$?

