## 6 total questions

The following triangles are similar. Find the measure of $x$.

$-x$

The lengths of the first triangle are 12,16 , and 20 . The shortest side of a similar triangle is 4.5 . What is the length of the longest side in the similar triangle?

$\frac{12}{20}=\frac{4.5}{8}$


$$
\frac{x}{20}=\frac{4.5}{12} \quad x=\frac{4.5 \cdot 20}{12}=\frac{90}{12}=7.5
$$

In two similar triangles the larger of the two triangles has a side length of 24 and the correlating side in the smaller is 16 . If the perimeter of the larger is 36 what is the perimeter of the smaller?

$$
\begin{aligned}
& \frac{24}{36}=\frac{16}{x} \quad \frac{16}{24}=\frac{x}{36} \\
& \frac{1}{3}=\frac{x}{36} \quad x=24
\end{aligned}
$$

What is the scale factor shown in the graph?


Which of the following must be true about the scale factor, $k$, and the dilations?
A. If $k>1$ then $R S$ is the image of $Y X$.
P. If $k<1$ then $R S$ is the image of MJ .
C. If $0<k<1$ then $R S$ is the image of $Y X$.
0. If $\mathrm{k}=1.5$ then YX is the image of RS .


Find the vertices of the shape after the following transformation and draw the image on the graph.

$$
\left(D_{1.5} \circ T_{\langle 2,-2\rangle}\right)(Q R S T)
$$



