$\qquad$
7.4 Similar Triangles - Worksheet

1. Identify the similar triangles in the following diagrams. Equal angles are marked on the diagrams.
a)

a) $\triangle D O G \sim \triangle T A C$
b)

c)

b) $\triangle R U N \sim \triangle G U M$
2. A person who is 1.9 m tall has a shadow that is 1.5 m long.

At the same time, a flagpole has a shadow that is 8 m long.
Determine the height of the flagpole to the nearest tenth of a metre.
Draw a diagram.


$$
\frac{x}{1.9}=\frac{8}{1.5}
$$


3. A surveyor wants to determine the width of a river. She measures distances and angles on land, and sketches this diagram. What is the width of the river, PQ ?

$$
\begin{aligned}
& \frac{x}{20}=\frac{12}{15} \\
& \frac{15 x}{15}=\frac{240}{15} \\
& x=16
\end{aligned}
$$

4. Determine the length of $X Y$ in each pair of similar triangles.
a)


$$
\begin{aligned}
& \frac{x}{8}=\frac{6}{4} \\
& \frac{4 x}{4}=\frac{48}{4} \\
& x=12
\end{aligned}
$$

b)


$$
\frac{x}{2.5}=\frac{9.5}{5}
$$

$$
\begin{aligned}
\frac{5 x}{5} & =\frac{23.75}{5} \\
x & =4.75
\end{aligned}
$$

