$\qquad$
$\qquad$

1) Determine the length of the leg of 45-45-90 triangle with a hypotenuse length of 10 cm .
2) Determine the length of the hypotenuse of 45-45-90 triangle with a leg length of 40 cm .
3) For the triangle shown below solve for $x$.


10
4) Determine the values of the six trig functions for the following right triangle

$$
\begin{aligned}
& \sin \theta= \\
& \cos \theta= \\
& \tan \theta= \\
& \csc \theta= \\
& \sec \theta= \\
& \cot \theta=
\end{aligned}
$$

5) The ladders used by the San Jose Fire Department can be raised to a maximum angle of elevation of $62^{\circ}$. The ladder can be extended to 80 feet in length. The fire department has a regulation that the ladder must be able to reach the roof of every building in the city. In order to comply with the regulation, what is the tallest building that can be built in San Jose? Round to the nearest foot.
6) Solve for $x$. Round to the nearest hundredths:

7) Solve for $x$ :

8

8) Find the length of all sides and the measure of all angles for the triangle below.

A
b

a

