## Trigonometry Worksheets

## Find the missing side length of a right triangle

Given right triangle GHI , with right angle at $\mathrm{H}, \mathrm{GH}=12.2$, and $\mathrm{m} \angle \mathrm{G}=28^{\circ}$, find the measures of the remaining sides and angle to the nearest tenth


Given right triangle $A B C$ with hypotenuse $A B=8.5$ and $m \angle A=$ $55^{\circ}$, find $A C$ and $B C$ to the nearest hundredth.


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## Find the missing side length of a right triangle

Given right triangle GHI , with right angle at $\mathrm{H}, \mathrm{GH}=12.2$, and $\mathrm{m} \angle \mathrm{G}=28^{\circ}$, find the measures of the remaining sides and angle to the nearest tenth.

$$
\begin{aligned}
\cos 28 & =\frac{12.2}{G I} \\
G I & =\frac{12.2}{\cos 28} \\
G I & \approx 13.8
\end{aligned}
$$

$$
\tan 28=\frac{I H}{12.2}
$$



$$
\begin{aligned}
& I H=12.2 \tan 28 \\
& I H \approx 6.5
\end{aligned}
$$

Given right triangle $A B C$ with hypotenuse $A B=8.5$ and $m \angle A=55^{\circ}$, find $A C$ and $B C$ to the nearest hundredth.

```
BC=8.5(\operatorname{sin}55)
BC\approx6.96
AC=8.5(cos 55)
AC \approx4.88
```

