## Trigonometry Worksheets <br> Area using Sine

Find the area of each triangle. Round each answer to the nearest tenth.


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Find the area of each triangle. Round each answer to the nearest tenth.


$$
\begin{aligned}
& \text { Area }=\frac{1}{2}(8)\left(6 \frac{1}{2}\right)(\sin 55) \\
& \text { Area }=26(\sin 55) \approx 21.3
\end{aligned}
$$

The area of the triangle is approximately 21.3 square units.


The included angle is $60^{\circ}$ by the angle sum of a triangle.

$$
\begin{aligned}
& \text { Area }=\frac{1}{2}(12)(6+6 \sqrt{3}) \sin 60 \\
& \text { Area }=6(6+6 \sqrt{3})\left(\frac{\sqrt{3}}{2}\right) \\
& \text { Area }=(36+36 \sqrt{3})\left(\frac{\sqrt{3}}{2}\right) \\
& \text { Area }=18 \sqrt{3}+18(3) \\
& \text { Area }=18 \sqrt{3}+54 \approx 85.2
\end{aligned}
$$

The area of the triangle is approximately 85.2 square units.

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