## General Algebra II

 Lesson \#1 Unit 13
## Class Worksheet \#1

## For Worksheets \#1 \& \#2

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$


## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$

Given the length of one leg


Step 1: Analyze the problem and determine the key relationship needed to solve it.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$

Given the length of one leg and the length of the hypotenuse,


Step 1: Analyze the problem and determine the key relationship needed to solve it.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg


Step 1: Analyze the problem and determine the key relationship needed to solve it.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.


Step 1: Analyze the problem and determine the key relationship needed to solve it.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.


$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.

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$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.

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Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
x^{2}+81
$$

$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
x^{2}+81=121
$$

$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.

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x^{2}+81=121
$$



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$$
x^{2}+81=121
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40}
\end{gathered}
$$

$$
\mathbf{x} \approx
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40}
\end{gathered}
$$

$$
x \approx 6.32
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40} \\
x \approx 6.32 \text { or }
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40} \\
x \approx 6.32 \text { or } x \approx
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40}
\end{gathered}
$$



$$
x \approx 6.32 \text { or } x \approx-6.32
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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1. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40}
\end{gathered}
$$



$$
x \approx 6.32 \text { or } x \approx-5.3 / 2
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 1. } \mathrm{x} \approx 6.32
$$

Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+81=121 \\
x^{2}=40 \\
x= \pm \sqrt{40} \\
x \approx 6.32 \text { or } x \approx-6.82
\end{gathered}
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it. Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse,


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.
sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\sin 58^{\circ}=
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\sin 58^{\circ}=\frac{x}{x}
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\sin 58^{\circ}=\frac{x}{200}
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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\sin 58^{\circ}=\frac{x}{200}
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Step 1: Analyze the problem and determine the key relationship needed to solve it.
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$$
\sin 58^{\circ}=\frac{x}{200}
$$



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2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{aligned}
& \sin 58^{\circ}=\frac{x}{200} \\
& x=
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{aligned}
& \sin 58^{\circ}=\frac{x}{200} \\
& x=200
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{aligned}
& \sin 58^{\circ}=\frac{x}{200} \\
& x=200 \sin 58^{\circ}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{aligned}
& \sin 58^{\circ}=\frac{x}{200} \\
& x=200 \sin 58^{\circ} \\
& x \approx
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
2. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{gathered}
\sin 58^{\circ}=\frac{x}{200} \\
x=200 \sin 58^{\circ} \\
x \approx 169.61
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 2. } x \approx 169.61
$$

Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{gathered}
\sin 58^{\circ}=\frac{x}{200} \\
x=200 \sin 58^{\circ} \\
x \approx 169.61
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it. Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg,


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\mathbf{c}^{2}=\mathbf{a}^{2}+\mathbf{b}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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$$
\mathbf{c}^{2}=\mathbf{a}^{2}+\mathbf{b}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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$$
\mathbf{c}^{2}=\mathbf{a}^{2}+\mathbf{b}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for x .

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3. $\mathbf{x} \approx$ $\qquad$

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Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{array}{r}
\mathbf{x}^{2}=81 \\
c^{2}=\mathbf{a}^{2}+b^{2}
\end{array}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
x^{2}=81+16
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
x^{2}=81+16
$$



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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{aligned}
& x^{2}=81+16 \\
& x^{2}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
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x^{2}=81+16 \\
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x= \pm \sqrt{97} \\
x \approx
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85 \text { or }
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{array}{r}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85 \text { or } x \approx
\end{array}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

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3. $\mathbf{x} \approx$ $\qquad$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85 \text { or } x \approx-9.85
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85 \text { or } x \approx-9.65
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 3. } \mathrm{x} \approx 9.85
$$

Given the length of each leg, find the length of the hypotenuse using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}=81+16 \\
x^{2}=97 \\
x= \pm \sqrt{97} \\
x \approx 9.85 \text { or } x \approx-9.65
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathbf{x} \approx$ $\qquad$


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse,


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\cos 35^{\circ}=
$$


cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\cos 35^{\circ}=\underline{x}
$$

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\cos 35^{\circ}=\frac{x}{10}
$$


cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for x .

## General Algebra II CWS \#1 Unit 13

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$$
\cos 35^{\circ}=\frac{x}{10}
$$



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Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\cos 35^{\circ}=\frac{x}{10}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=10
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=10 \cos 35^{\circ}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=10 \cos 35^{\circ} \\
& x \approx
\end{aligned}
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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4. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=10 \cos 35^{\circ} \\
& x \approx 8.19
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
4. $\mathrm{x} \approx 8.19$

Given the measure of an acute angle and the length of the hypotenuse, find the length of the leg adjacent the acute angle using the cosine ratio.

$$
\begin{aligned}
& \cos 35^{\circ}=\frac{x}{10} \\
& x=10 \cos 35^{\circ} \\
& x \approx 8.19
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle,


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.
cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.
$\cos 58^{\circ}=$
cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.
$\cos 58^{\circ}=\underline{20}$
cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\cos 58^{\circ}=\frac{20}{x}
$$

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for x .

## General Algebra II CWS \#1 Unit 13

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$$
\cos 58^{\circ}=\frac{20}{x}
$$



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$$
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$$



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Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{aligned}
& \cos 58^{\circ}=\frac{20}{x} \\
& x=
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

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5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{aligned}
& \cos 58^{\circ}=\frac{20}{x} \\
& x=\xrightarrow{20}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{aligned}
& \cos 58^{\circ}=\frac{20}{x} \\
& x=\frac{20}{\cos 58^{\circ}}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{aligned}
& \cos 58^{\circ}=\frac{20}{x} \\
& x=\frac{20}{\cos 58^{\circ}} \\
& x \approx
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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5. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{gathered}
\cos 58^{\circ}=\frac{20}{x} \\
x=\frac{20}{\cos 58^{\circ}} \\
x \approx 37.74
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 5. } x \approx 37.74
$$

Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the hypotenuse using the cosine ratio.

$$
\begin{gathered}
\cos 58^{\circ}=\frac{20}{x} \\
x=\frac{20}{\cos 58^{\circ}} \\
x \approx 37.74
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle,


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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\tan 27^{\circ}=
$$


tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\tan 27^{\circ}=\underline{x}
$$


tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\tan 27^{\circ}=\frac{x}{8}
$$


tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for x .

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
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Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\tan 27^{\circ}=\frac{x}{8}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\tan 27^{\circ}=\frac{x}{8}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan 27^{\circ}=\frac{x}{8} \\
& x=
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan 27^{\circ}=\frac{x}{8} \\
& x=8
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan 27^{\circ}=\frac{x}{8} \\
& x=8 \tan 27^{\circ}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan 27^{\circ}=\frac{x}{8} \\
& x=8 \tan 27^{\circ} \\
& x \approx
\end{aligned}
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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6. $x \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{gathered}
\tan 27^{\circ}=\frac{x}{8} \\
x=8 \tan 27^{\circ} \\
x \approx 4.08
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
6. $x \approx 4.08$

Given the measure of an acute angle and the length of the leg adjacent to the acute angle, find the length of the leg opposite the acute angle using the tangent ratio.

$$
\begin{gathered}
\tan 27^{\circ}=\frac{x}{8} \\
x=8 \tan 27^{\circ} \\
x \approx 4.08
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $x \approx$ $\qquad$


7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $x \approx$ $\qquad$


7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle


7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle,


7
4
Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse


7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.


7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.
sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.
sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.
sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\sin 28^{\circ}=
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
7. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\sin 28^{\circ}=\frac{7}{}
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\sin 28^{\circ}=\frac{7}{x}
$$

sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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$$

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Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\sin 28^{\circ}=\frac{7}{x}
$$



7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
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$$

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Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

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\sin 28^{\circ}=\frac{7}{x}
$$



7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
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$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{aligned}
& \sin 28^{\circ}=\frac{7}{x} \\
& x=
\end{aligned}
$$



7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{aligned}
& \sin 28^{\circ}=\frac{7}{x} \\
& x=\xrightarrow{7}
\end{aligned}
$$



7

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{aligned}
& \sin 28^{\circ}=\frac{7}{x} \\
& x=\frac{7}{\sin 28^{\circ}}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

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Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{aligned}
& \sin 28^{\circ}=\frac{7}{x} \\
& x=\frac{7}{\sin 28^{\circ}} \\
& x \approx
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } \mathbf{x} \approx
$$

$\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{gathered}
\sin 28^{\circ}=\frac{7}{x} \\
x=\frac{7}{\sin 28^{\circ}} \\
x \approx 14.91
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 7. } x \approx 14.91
$$

Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the hypotenuse using the sine ratio.

$$
\begin{gathered}
\sin 28^{\circ}=\frac{7}{x} \\
x=\frac{7}{\sin 28^{\circ}} \\
x \approx 14.91
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse,


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg


Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.


$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.


$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for x .

## General Algebra II CWS \#1 Unit 13

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Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
x^{2}+49
$$



$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for x .

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
x^{2}+49=144
$$



$$
\mathbf{a}^{2}+\mathbf{b}^{2}=\mathbf{c}^{2}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

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x^{2}+49=144
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$$



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8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

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8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x=
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
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## General Algebra II CWS \#1 Unit 13

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8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95}
\end{gathered}
$$



$$
x \approx 9.75
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx 9.75 \text { or }
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx 9.75 \text { or } x \approx
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx 9.75 \text { or } x \approx-9.75
\end{gathered}
$$

Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathbf{x} \approx$ $\qquad$
Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx 9.75 \text { or } x \approx-9 \times .5
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
8. $\mathrm{x} \approx 9.75$

Given the length of one leg and the length of the hypotenuse, find the length of the other leg using the Pythagorean theorem.

$$
\begin{gathered}
x^{2}+49=144 \\
x^{2}=95 \\
x= \pm \sqrt{95} \\
x \approx 9.75 \text { or } x \approx-9 \times .5
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it. Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle,


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathbf{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.
tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.
tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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9. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.
tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$


Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{gathered}
\tan 70^{\circ}= \\
\text { tangent of the acute angle }=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
9. $\mathrm{x} \approx$ $\qquad$
Given the measure of an acute angle and the length of the leg opposite the acute angle, find the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{gathered}
\tan 70^{\circ}=\frac{8}{} \\
\text { tangent of the acute angle }=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}
\end{gathered}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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& x=\xrightarrow[8]{8}
\end{aligned}
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\begin{aligned}
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& x=\frac{8}{\tan 70^{\circ}}
\end{aligned}
$$



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$$
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\tan 70^{\circ}=\frac{8}{x} \\
x=\frac{8}{\tan 70^{\circ}} \\
x \approx 2.91
\end{gathered}
$$



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10. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle


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10. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse


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10. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg adjacent to the acute angle


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10. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg adjacent to the acute angle using the cosine ratio.


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Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg adjacent to the acute angle using the cosine ratio.

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

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$$
\cos x^{\circ}=
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$$
\cos x^{\circ}=\underline{6}
$$

cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$


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10. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg adjacent to the acute angle using the cosine ratio.

$$
\cos x^{\circ}=\frac{6}{8}
$$


cosine of the acute angle $=\frac{\text { length of the adjacent leg }}{\text { length of the hypotenuse }}$

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$$
\begin{aligned}
& \cos x^{\circ}=\frac{6}{8} \\
& x=\cos ^{-1}(3 / 4)
\end{aligned}
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$$
\begin{aligned}
& \cos x^{\circ}=\frac{6}{8} \\
& x=\cos ^{-1}(3 / 4) \\
& x \approx 41.41^{\circ}
\end{aligned}
$$



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11. $\mathrm{x} \approx$ $\qquad$


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11. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle


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Find the measure of an acute angle, given the length of the hypotenuse


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Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg opposite the acute angle


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sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$

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$$
\sin x^{\circ}=
$$


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Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg opposite the acute angle using the sine ratio.

$$
\sin x^{\circ}=\underline{2}
$$


sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$

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11. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg opposite the acute angle using the sine ratio.

$$
\sin x^{\circ}=\frac{2}{5}
$$


sine of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the hypotenuse }}$

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& x=
\end{aligned}
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Step 3: Solve for $\mathbf{x}$.

## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
11. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the hypotenuse and the length of the leg opposite the acute angle using the sine ratio.

$$
\begin{aligned}
& \sin x^{\circ}=\frac{2}{5} \\
& x=\sin ^{-1}(2 / 5)
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
Step 2: Substitute the current values in to the equation.
Step 3: Solve for $\mathbf{x}$.

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$$
\begin{aligned}
& \sin x^{\circ}=\frac{2}{5} \\
& x=\sin ^{-1}(2 / 5) \\
& x \approx 23.58^{\circ}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
12. $\mathrm{x} \approx$ $\qquad$


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Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.
12. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle


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12. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the leg opposite the acute angle


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12. $\mathrm{x} \approx$ $\qquad$
Find the measure of an acute angle, given the length of the leg opposite the acute angle and the length of the leg adjacent to the acute angle using the tangent ratio.
tangent of the acute angle $=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}$


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$$
\begin{gathered}
\tan x^{\circ}= \\
\text { tangent of the acute angle }=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}
\end{gathered}
$$



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Find the measure of an acute angle, given the length of the leg opposite the acute angle and the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{gathered}
\qquad \tan x^{\circ}=\underline{6} \\
\text { tangent of the acute angle }=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}
\end{gathered}
$$



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$$
\begin{gathered}
\qquad \tan x^{\circ}=\frac{6}{2} \\
\text { tangent of the acute angle }=\frac{\text { length of the opposite leg }}{\text { length of the adjacent leg }}
\end{gathered}
$$



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$$
\tan x^{\circ}=\frac{6}{2}
$$



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$$
\begin{aligned}
& \boldsymbol{\operatorname { t a n }} x^{\circ}=\frac{6}{2} \\
& x=
\end{aligned}
$$



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$$
\begin{aligned}
& \tan x^{\circ}=\frac{6}{2} \\
& x=\tan ^{-1}(
\end{aligned}
$$



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Find the measure of an acute angle, given the length of the leg opposite the acute angle and the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan x^{\circ}=\frac{6}{2} \\
& x=\tan ^{-1}(3)
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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$$
\text { 12. } \mathrm{x} \approx
$$

$\qquad$
Find the measure of an acute angle, given the length of the leg opposite the acute angle and the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan x^{\circ}=\frac{6}{2} \\
& x=\tan ^{-1}(3) \\
& x \approx 71.57^{\circ}
\end{aligned}
$$



Step 1: Analyze the problem and determine the key relationship needed to solve it.
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## General Algebra II CWS \#1 Unit 13

Find the value of $x$ in each of the following. You must show the equation you used to find $x$. The drawings are not to scale. Round your solutions to the nearest hundredth.

$$
\text { 12. } \mathrm{x} \approx 41.41^{\circ}
$$

Find the measure of an acute angle, given the length of the leg opposite the acute angle and the length of the leg adjacent to the acute angle using the tangent ratio.

$$
\begin{aligned}
& \tan x^{\circ}=\frac{6}{2} \\
& x=\tan ^{-1}(3) \\
& x \approx 71.57^{\circ}
\end{aligned}
$$



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$$
\begin{aligned}
& \text { GOOd IUCK On WORKSheet \#1 } \\
& \qquad \begin{array}{c}
x=\tan ^{-1}(3) \\
x \approx 71.57^{\circ}
\end{array} \\
& \qquad \frac{x^{\circ} \quad \square}{2}
\end{aligned}
$$

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