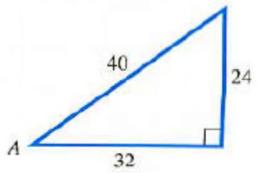
[redacted] Name (Key)

1. Find the exact values for sin A, cos A, and tan A in the figure.



Sin A = $\frac{24}{40} = \frac{3}{5}$

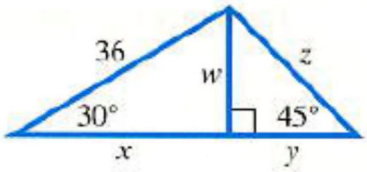
Cos A = $\frac{32}{40} = \frac{4}{5}$

Tan A = $\frac{24}{32} = \frac{3}{4}$

2. Find exact values of the trigonometric functions to complete the table.

θ	sin θ	cos θ	tan θ	cot θ	sec θ	csc θ
30°	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{3}}{3}$	$\sqrt{3}$	$\frac{2\sqrt{3}}{3}$	2
45°	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	1	1	$\sqrt{2}$	$\sqrt{2}$
60°	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$	$\frac{\sqrt{3}}{3}$	2	$\frac{2\sqrt{3}}{3}$

3 and 4) Find the exact variable for each variable.



3) w = 18 x = $18\sqrt{3}$

4) y = 18 z = $18\sqrt{2}$

32, 18

Find exact values of the six trigonometric functions for each angle. Rationalize denominators when applicable.

5. 135°

Sin = $\frac{\sqrt{2}}{2}$ Csc = $\sqrt{2}$

Cos = $-\frac{\sqrt{2}}{2}$ Sec = $-\sqrt{2}$

Tan = -1 Cot = -1

$\frac{2}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{2\sqrt{2}}{2}$

6. $-150°$

Sin = $-\frac{1}{2}$ Csc = -2

Cos = $\frac{-\sqrt{3}}{2}$ Sec = $\frac{-2\sqrt{3}}{3}$

Tan = $\frac{\sqrt{3}}{3}$ Cot = $\sqrt{3}$

7. 1020°

Sin = $-\frac{\sqrt{3}}{2}$ Csc = $\frac{-2\sqrt{3}}{3}$

Cos = $\frac{1}{2}$ Sec = 2

Tan = $-\sqrt{3}$ Cot = $-\frac{\sqrt{3}}{3}$

60°

Find all values of θ in the interval $[0°, 360°)$ that have the given function value.

8. $\sin\theta = \frac{\sqrt{3}}{2}$

9. $\sec\theta = -\sqrt{2}$

8) 60°, 120°

9) 135°, 225°

Use a calculator to approximate each value.

10. $\sin 42° 18'$

.6730

11. $\sec(-212° 12')$

-1.1818

Use a calculator to find the value of θ in the interval $[0°, 90°]$ that satisfies each statement.

12. $\tan\theta = 2.6743210$

$\theta = 69.497888°$

13. $\csc\theta = 2.3861147$

$\frac{1}{\sin\theta} = 2.\ldots$

$\frac{1}{2.\ldots} = \sin\theta$

$\theta = 24.772332\ldots$

$\sin^{-1}\left(\frac{1}{2.\ldots}\right) = \theta$

Determine whether each statement is true *or* false.

14. $\sin(60° + 30°) = \sin 60° + \sin 30°$

$\sin 90 = \frac{\sqrt{3}}{2} + \frac{1}{2}$. False

$1 \neq$

15. $\tan(90° - 35°) = \cot 35°$

$\tan 55 = \cot 35$ TRUE