Name: Key

Special Right Triangles and Trig Ratios HW

1. Simplify the fractions, make sure there are no radicals in the denominator.

$\frac{7\sqrt{3}}{21}$ $\frac{\sqrt{3}}{3}$

$\frac{15\sqrt{2}}{45}$ $\frac{\sqrt{2}}{3}$

$\frac{45}{5\sqrt{3}}$ $\frac{9}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{9\sqrt{3}}{3}=3\sqrt{3}$

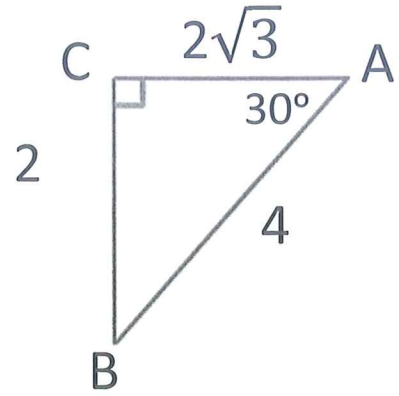
$\frac{8}{64\sqrt{2}}$ $\frac{1}{8\sqrt{2}}\cdot\frac{\sqrt{2}}{\sqrt{2}}=\frac{\sqrt{2}}{8\cdot 2}$ $=\frac{\sqrt{2}}{16}$

$\frac{21\sqrt{3}}{21}$ $=\sqrt{3}$

Directions: Find the exact trig ratio value. Simplify all radicals, simplify all fractions and make sure there is no radical in the denominator.

Special Right Triangle

2.



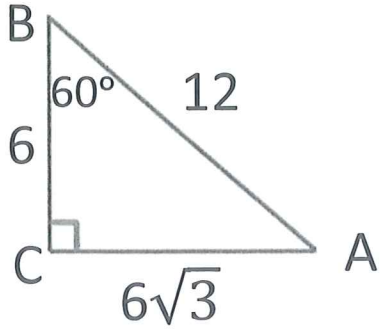
sin A = $\frac{2}{4}=\frac{1}{2}$ sin B = $\frac{2\sqrt{3}}{4}=\frac{\sqrt{3}}{2}$

cos A = $\frac{2\sqrt{3}}{4}=\frac{\sqrt{3}}{4}$ cos B = $\frac{2}{4}=\frac{1}{2}$

tan A = $\frac{2}{2\sqrt{3}}=\frac{1}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{3}}{\sqrt{9}}=\frac{\sqrt{3}}{3}$ tan B = $\frac{2\sqrt{3}}{2}=\sqrt{3}$

Special Right Triangle

3.



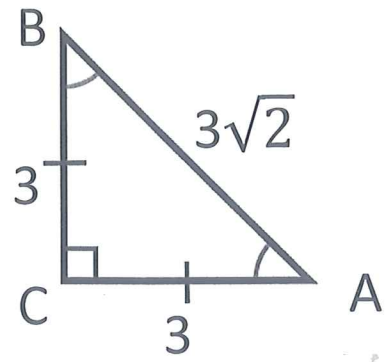
sin A = $\frac{6}{12}=\frac{1}{2}$ sin B = $\frac{6\sqrt{3}}{12}=\frac{\sqrt{3}}{2}$

cos A = $\frac{6\sqrt{3}}{12}=\frac{\sqrt{3}}{2}$ cos B = $\frac{6}{12}=\frac{1}{2}$

tan A = $\frac{6}{6\sqrt{3}}=\frac{1}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}$ $\frac{\sqrt{3}}{\sqrt{9}}=\frac{\sqrt{3}}{3}$ tan B = $\frac{6\sqrt{3}}{6}=\sqrt{3}$

Special Right Triangle

4.



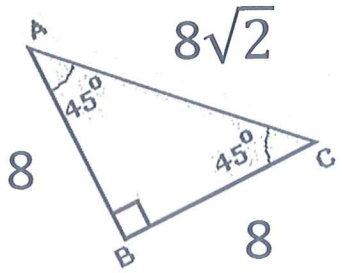
$\sin A = \frac{\sqrt{2}}{2}$ $\sin B = \frac{\sqrt{2}}{2}$

$\cos A = \frac{\sqrt{2}}{2}$ $\cos B = \frac{\sqrt{2}}{2}$

$\tan A = 1$ $\tan B = 1$

Special Right Triangle

5.

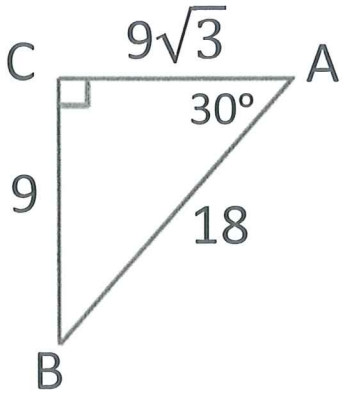


$\sin A = \frac{\sqrt{2}}{2}$ $\sin B = \frac{\sqrt{2}}{2}$

$\cos A = \frac{\sqrt{2}}{2}$ $\cos B = \frac{\sqrt{2}}{2}$

$\tan A = 1$ $\tan B = 1$

6. Special Right Triangle



$\sin A = \frac{1}{2}$ $\sin B = \frac{\sqrt{3}}{2}$

$\cos A = \frac{\sqrt{3}}{2}$ $\cos B = \frac{1}{2}$

$\tan A = \frac{\sqrt{3}}{3}$ $\tan B = \sqrt{3}$