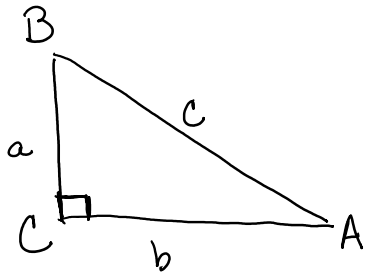
4.2 Day 1

Friday, February 8, 2019 8:41 AM

# Right Triangle Trig..




$\sin A = \frac{a}{c} = \frac{opp}{hyp}$ $\quad \csc A = \frac{c}{a} = \frac{hyp}{opp}$

$\cos A = \frac{b}{c} = \frac{adj}{hyp}$ $\quad \sec A = \frac{c}{b} = \frac{hyp}{adj}$

$\tan A = \frac{a}{b} = \frac{opp}{adj}$ $\quad \cot A = \frac{b}{a} = \frac{adj}{opp}$

$\csc A = \frac{1}{\sin A}$ $\quad \sec A = \frac{1}{\cos A}$

$\tan A = \frac{\sin A}{\cos A}$ $\quad \cot A = \frac{\cos A}{\sin A}$

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3, 4, 5

5, 12, 13

7, 24, 25

9, 40, 41

8, 15, 17

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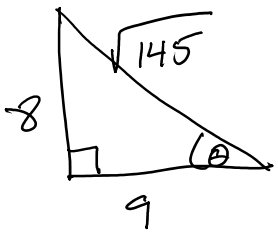
$\tan\theta = \frac{8}{9}$ $\quad \theta$ = acute angle




$\cos\theta = \frac{9}{\sqrt{145}}$ $\quad \sec\theta = \frac{\sqrt{145}}{9}$

$\sin\theta = \frac{8}{\sqrt{145}}$ $\quad \csc\theta = \frac{\sqrt{145}}{8}$

$\cot\theta = \frac{9}{8}$

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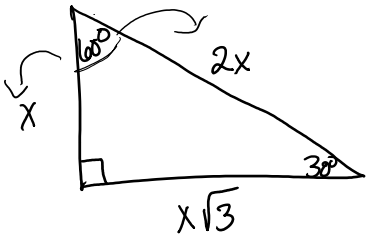
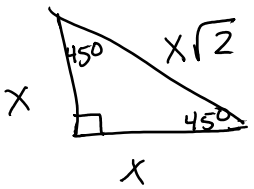
## Special Rt $\triangle$s




$\sin 60^\circ = \frac{x\sqrt{3}}{2x} = \frac{\sqrt{3}}{2}$

$\sec \pi/4 = \frac{x\sqrt{2}}{x} = \sqrt{2}$

$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2}$

$\tan \frac{\pi}{6} = \frac{1}{\sqrt{3}}$ $\quad \csc \frac{\pi}{6} = 2$

$\cos \theta = \frac{1}{2}$

$\cot \theta = \frac{\sqrt{3}}{3} = \frac{1}{\sqrt{3}}$ $\quad \frac{x}{x\sqrt{3}} = \frac{adj}{opp}$

$\theta = 60^\circ = \pi/3$

$\theta = 60^\circ = \frac{\pi}{3}$

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calculator

$\cos 61^\circ$

$\sec 61^\circ = \frac{1}{\cos 61^\circ}$

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$(\cos\theta, \sin\theta)$