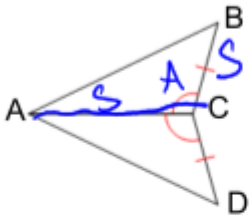
Warm-Up

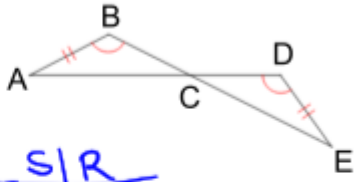
Day 2: RTT

1. Prove $\triangle ABC \cong \triangle ADC$



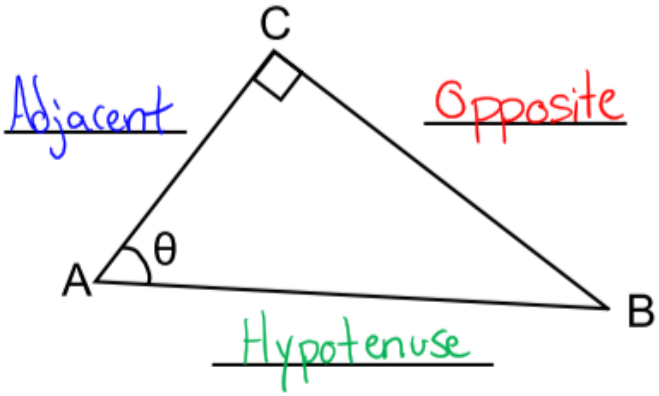
S	R
$\overline{BC} \cong \overline{DC}$	Given
$\angle ACD \cong \angle ACB$	Given
$\overline{AC} \cong \overline{AC}$	Reflexive Property
$\triangle ABC = \triangle ADC$	SAS

2. Prove $\triangle ABC \cong \triangle EDC$



S	R
$\overline{AB} \cong \overline{ED}$	Given
$\angle ABC \cong \angle EDC$	Given
$\angle BCA \cong \angle DCE$	Vertical $\angle$'s Thm.
$\triangle ABC \cong \triangle EDC$	AAS

Recap what you found



$\sin(\theta) = \frac{Opp}{Hyp}$

$\cos(\theta) = \frac{Adj}{Hyp.}$

$\tan(\theta) = \frac{Opp}{Adj}$

How can we remember this?

SOH - CAH - TOA

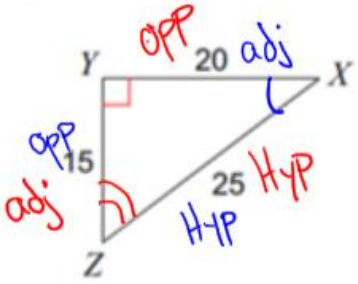
i P y o d y a p d

n P. P. s j P. n P j

Practice Together

Identify the sine, cosine, and tangent of both acute angles.

1)



$\sin(x) = \frac{15}{25}$

$\cos(x) = \frac{20}{25}$

$\tan(x) = \frac{15}{20}$

$\sin(z) = \frac{20}{25}$

$\cos(z) = \frac{15}{25}$

$\tan(z) = \frac{20}{15}$

Note:

$\sin(x) = \cos(z)$

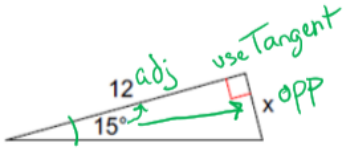
$\cos(x) = \sin(z)$

Tangent functions are reciprocals of each other.

So what's the point of RTT?

Find the value of x. SOH-CAH-TOA

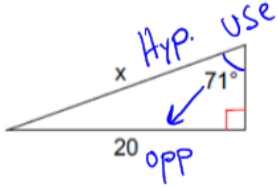
5)



$\tan(15) = \frac{x}{12}$

$x = 12 \cdot \tan(15)$

6)



$\sin(71) = \frac{20}{x}$

$x \cdot \sin(71) = 20$

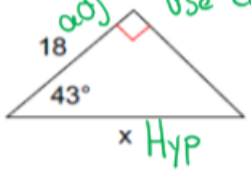
$\frac{x \cdot \sin(71)}{\sin(71)} = \frac{20}{\sin(71)}$

$x = \frac{20}{\sin(71)}$

Note:
Angle always goes with the trig. function.

Do problems 7, 9, 11

7)



use cosine

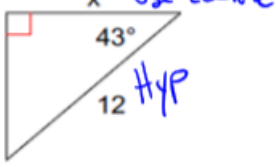
$\cos(43) = \frac{18}{x}$

$x \cdot \cos(43) = 18$

$\frac{x \cdot \cos(43)}{\cos(43)} = \frac{18}{\cos(43)}$

$x = \frac{18}{\cos(43)} =$

9)

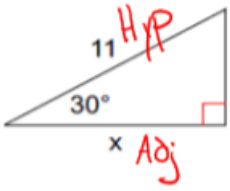


use cosine

$\cos(43) = \frac{x}{12}$

$x = 12\cos(43) =$

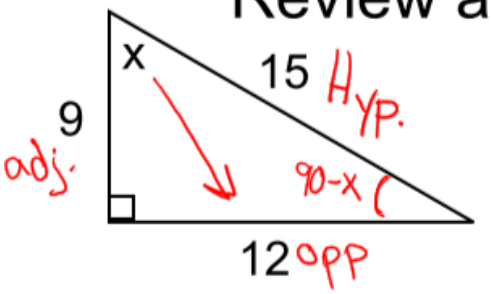
11)



$\cos(30) = \frac{x}{11}$

$x = 11 \cdot \cos(30) =$

Review and think



What is the sin(x)?

$\sin(x) = \frac{12}{15} = \frac{3}{5}$

What is the cos(x)?

$\cos(x) = \frac{9}{15}$

What is the sin(90-x)?

$\sin(90-x) = \cos(x)$ so $\sin(90-x) = \frac{9}{15}$