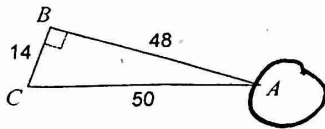


Extra Trig Practice odds

Find the value of each trigonometric ratio. not solving  
 set up ratio

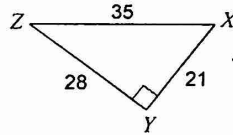
**Homework**

1)  $\sin A$



$$\sin A = \frac{14}{50} = \boxed{\frac{7}{25}}$$

2)  $\tan X$



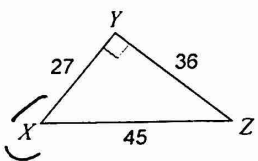
#1,3: set up ratio

#7-15: finding missing side

#17-19: finding angle

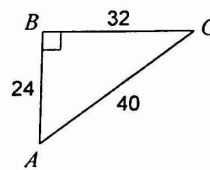
\*use inverse\*

3)  $\sin X$



$$\frac{36}{45} = \boxed{\frac{4}{5}}$$

4)  $\cos A$

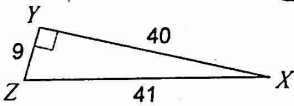


#21-25: find the missing side then use that to find area of the triangle

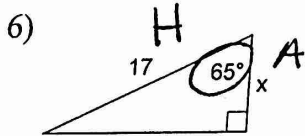
$$\text{Area} = \frac{1}{2} b \cdot h$$

5)  $\sin X$

$$\boxed{\frac{9}{41}}$$

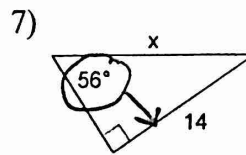


Find the missing side. Round to the nearest tenth.



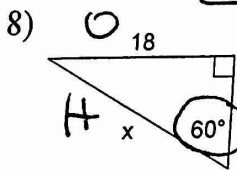
$$\cos 65 = \frac{x}{17}$$

$$x = 7.2$$



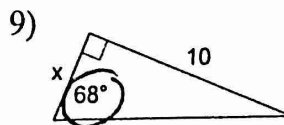
$$\sin 56 = \frac{14}{x}$$

$$x = \frac{14}{\sin 56} = \boxed{16.9}$$



$$\sin 60 = \frac{18}{x}$$

$$x = \frac{18}{\sin 60} = 20.8$$

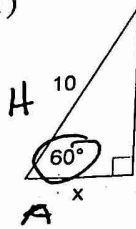


$$\tan 68 = \frac{10}{x}$$

$$x = \frac{10}{\tan 68}$$

$$x = 4.04$$

11)

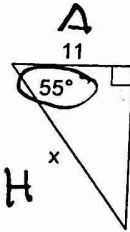


$$\cos 60 = \frac{x}{10}$$

$$x = 10 (\cos 60)$$

$$x = 5$$

13)

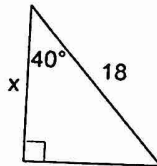


$$\cos 55 = \frac{11}{x}$$

$$x = \frac{11}{\cos 55}$$

$$x = 19.2$$

15)



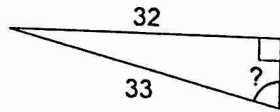
$$\cos 40 = \frac{x}{18}$$

$$x = 18 \cdot \cos(40)$$

$$x = 13.8$$

Round to the nearest degree. Use inverse trig ratios

17)

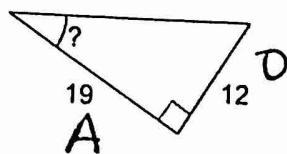


$$\sin x = \frac{32}{33}$$

$$\sin^{-1}\left(\frac{32}{33}\right) = x$$

$$x = 75.9^\circ$$

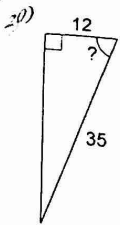
19)



$$\tan x = \frac{12}{19}$$

$$\tan^{-1}\left(\frac{12}{19}\right) = x$$

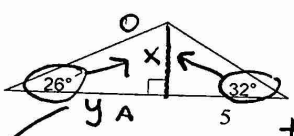
$$x = 32.3^\circ$$



\* I can help w/ these tmrw if needed \*

challenge → use trig ratios to find missing side then plug in values to calculate the next value. Round your final answer to the nearest tenth. *to find area*

21)



$$\text{Area} = \frac{1}{2}bh$$

$$\tan 26 = \frac{x}{y}$$

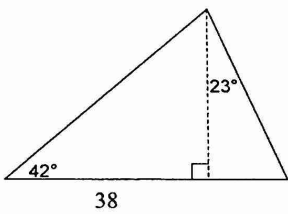
$$\tan 26 = \frac{3.12}{y}$$

$$\tan 32 = \frac{x}{5}$$

$$x = 5 \cdot \tan 32$$

$$x = 3.12$$

then find the other side next to "5" using 3.12



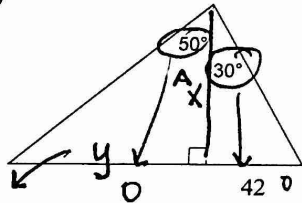
$$y = \frac{3.12}{\tan 26} = 2.3$$

now use those lengths to find area

x is the height  
 Base = y + 5 = 2.3 + 5  
 Base = 7.3

so  
 Area =  $\frac{1}{2} b \cdot h$   
 $A = \frac{1}{2} (7.3)(3.12)$   
 $A = 11.4$

23)



$$\tan 30 = \frac{42}{x}$$

$$x = \frac{42}{\tan 30} = 72.7$$

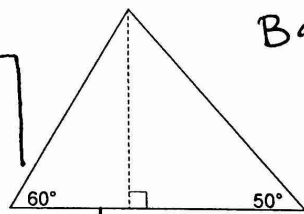
$$\tan 50 = \frac{y}{x}$$

$$\tan 50 = \frac{y}{72.7}$$

$$A = \frac{1}{2} (128.7)(72.7)$$

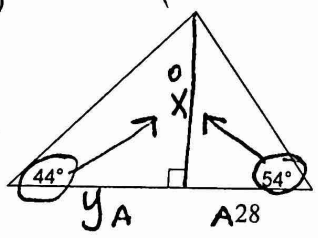
$$A = 4678.2$$

24)



$$y = 72.7 \cdot \tan 50 = 86.6$$

25)



$$\tan 54 = \frac{x}{28}$$

$$x = 28 \cdot \tan 54 = 38.5$$

$$\tan 44 = \frac{y}{x}$$

$$\tan 44 = \frac{y}{38.5}$$

$$A = \frac{1}{2} (67.9)(38.5)$$

$$A = 1307.075$$

$$y = 38.5 / \tan 44 \rightarrow 39.9$$

remember this is the entire bottom of the triangle

That problem was so much FUN!  
 #challenge