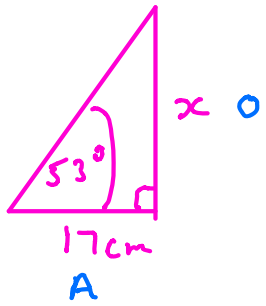
## Trigonometry Practice

1)




$\tan = \frac{O}{A}$

$\tan 53° = \frac{x}{17}$

$17 \tan 53° = x$

$x = 22.6\text{ cm}$

2)


$\cos = \frac{A}{H}$

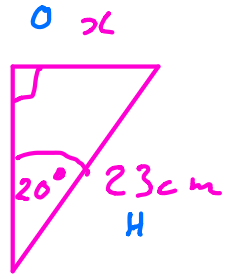
$\cos 61° = \frac{9}{x}$

$x \cos 61° = 9$

$x = \frac{9}{\cos 61°}$

$x = 18.6\text{ cm}$

3)



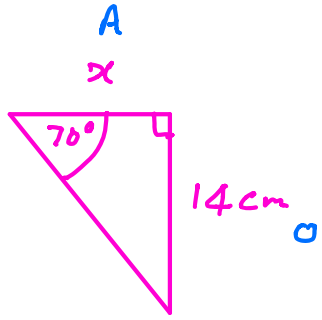

$\sin = \frac{O}{H}$

$\sin 20° = \frac{x}{23}$

$23 \sin 20 = x$

$x = 7.9\text{ cm}$

4)




$\tan = \frac{O}{A}$

$\tan 70° = \frac{14}{x}$

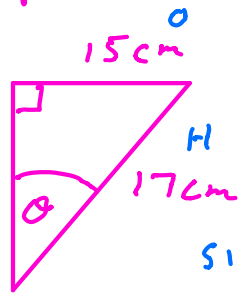
$x \tan 70° = 14$

$x = \frac{14}{\tan 70°}$

$x = 5.1\text{ cm}$

## Finding Angles

### Example 1

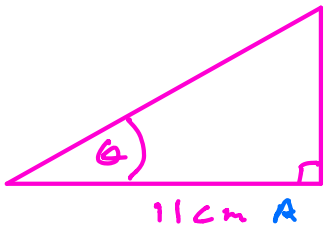



$\sin = \frac{O}{H}$

$\sin \theta = \frac{15}{17}$

$\theta = \sin^{-1}\left(\frac{15}{17}\right) = 61.9°$

### Example 2



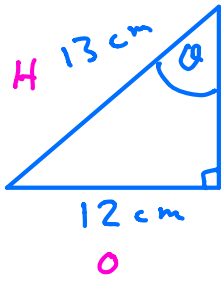

$\tan = \frac{O}{A}$

$\tan \theta = \frac{4}{11}$

$\theta = \tan^{-1}\left(\frac{4}{11}\right) = 20.0°$

# Exercise

1)



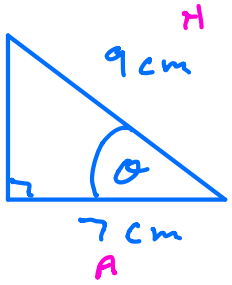

$\sin = \frac{O}{H}$

$\sin\theta = \frac{12}{13}$

$\theta = \sin^{-1}\left(\frac{12}{13}\right)$

$\theta = 67.4^\circ$

2)



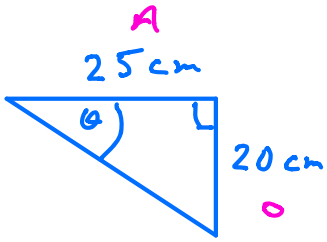

$\cos = \frac{A}{H}$

$\cos\theta = \frac{7}{9}$

$\theta = \cos^{-1}\left(\frac{7}{9}\right)$

$\theta = 38.9^\circ$

3)




$\tan = \frac{O}{A}$

$\tan\theta = \frac{20}{25}$

$\theta = \tan^{-1}\left(\frac{20}{25}\right)$

$\theta = 38.7^\circ$