TRIGONOMETRY WORKSHEET 1

Keep two decimal places when it is applicable.

1. Find the sin, cos or tan value of each angle.

a) $\sin 30°$ = _____ b) $\cos 45°$ = _____ c) $\sin 55°$ = _____ d) $\tan 67°$ = _____

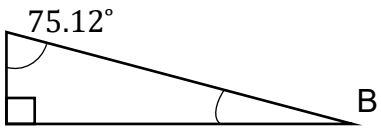
2. Find the angle for each sin, cos and tan value.

a) $\sin\theta = 0.219$ b) $\cos\theta = 0.122$ c) $\sin\theta = 0.857$ d) $\tan\theta = 2.53$

θ = _____ θ = _____ θ = _____ θ = _____

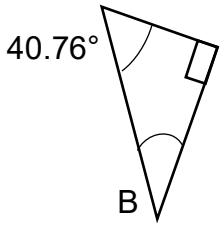
3. What is the value of angle B for each triangle

a)



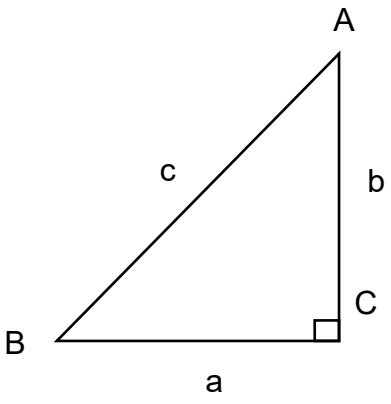
∠B = _____

b)



∠B = _____

4. Find the adjacent, opposite and hypotenuse sides.



For angle $\angle A$:

Adjacent side: _____ Opposite side: _____

Hypotenuse: _____

For angle $\angle B$:

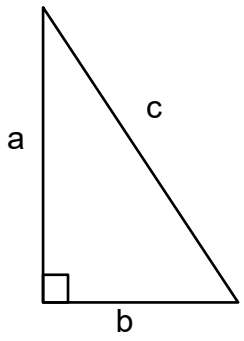
Adjacent side: _____ Opposite side: _____

Hypotenuse: _____

TRIGONOMETRY WORKSHEET 1

5. Pythagorean Theorem

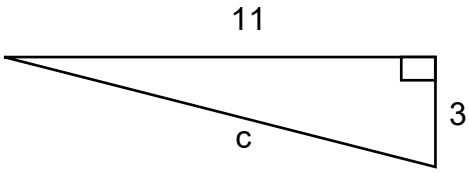
I.



$c^2 =$ _____ $a^2 =$ _____

$c =$ _____ $a =$ _____

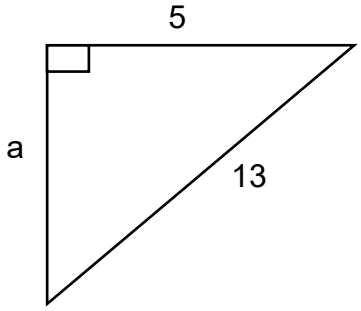
II.



What is the length of c?

_____

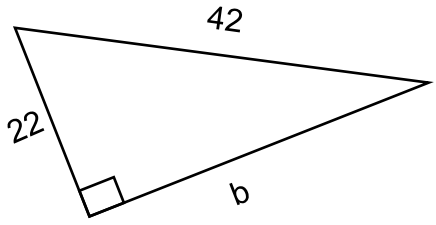
III.



What is the length of a?

_____

IV.

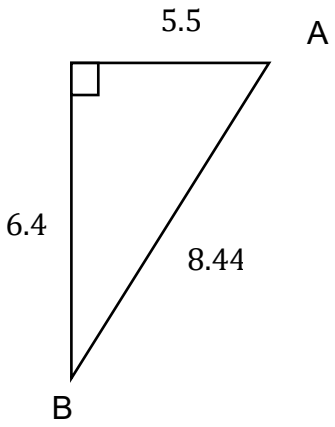


What is the length of b?

_____

TRIGONOMETRY WORKSHEET 1

6. Find the sin, cos and tan value, then the angles



$\angle A = \sin^{-1}(\_\_\_\_\_)$ $\angle B = \sin^{-1}(\_\_\_\_\_)$

$= \_\_\_\_\_$ $= \_\_\_\_\_$

$\angle A = \cos^{-1}(\_\_\_\_\_)$ $\angle B = \cos^{-1}(\_\_\_\_\_)$

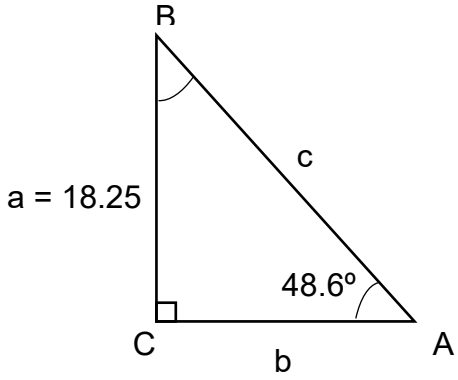
$= \_\_\_\_\_$ $= \_\_\_\_\_$

$\angle A = \tan^{-1}(\_\_\_\_\_)$ $\angle B = \tan^{-1}(\_\_\_\_\_)$

$= \_\_\_\_\_$ $= \_\_\_\_\_$

7. Find the missing pieces as indicated

I.

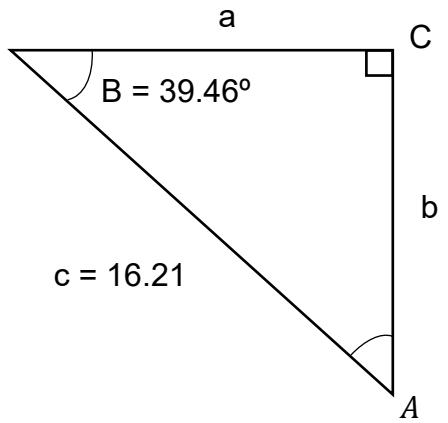


$\angle B = \_\_\_\_\_$

$b = \_\_\_\_\_$

$c = \_\_\_\_\_$

II.



$\angle A = \_\_\_\_\_$

$a = \_\_\_\_\_$

$b = \_\_\_\_\_$

TRIGONOMETRY WORKSHEET 1

Answer Key:

1.	a) =0.5	b) =0.707	c) =0.819	d) =2.356
2.	a) θ=12.65°	b) θ=82.99°	c) θ=58.98°	d) θ=68.43°
3.	a) ∠B=14.88°	b) ∠B=49.24°		
4.	For angle ∠A Adjacent side: b Opposite side: a Hypotenuse: c	For angle ∠B Adjacent side: b Opposite side: a Hypotenuse: c		
5.	I. $c^2 = a^2 + b^2$ $c = \sqrt{a^2 + b^2}$ $a^2 = c^2 - b^2$ $a = \sqrt{c^2 - b^2}$	II. c=11.40	III. a=12	IV. b=35.78
6.	$\angle A = \sin^{-1}\left(\frac{6.4}{8.44}\right) = 49.31°$ $\angle A = \cos^{-1}\left(\frac{5.5}{8.44}\right) = 49.33°$ $\angle A = \tan^{-1}\left(\frac{6.4}{5.5}\right) = 49.33°$		$\angle B = \sin^{-1}\left(\frac{5.5}{8.44}\right) = 40.67°$ $\angle B = \cos^{-1}\left(\frac{6.4}{8.44}\right) = 40.69°$ $\angle B = \tan^{-1}\left(\frac{5.5}{6.4}\right) = 40.67°$	
7.	I. $\angle B = 41.4°$ $b = 16.09$ $c = 24.33$		II. $\angle A = 50.54°$ $a = 12.52$ $b = 10.30$	