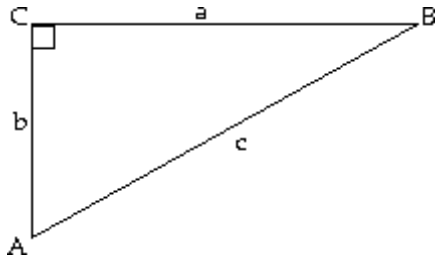


Name _____

PLEASE SHOW ALL YOUR WORK CLEARLY:Solve the right triangle for all missing sides and angles .(find the exact values)

1)



$$b = 3$$

$$B = 30^\circ$$

2) Simplify the following expression so that no quotient appear in the final expression:

$$\frac{\sin^2 x - \cos^2 x}{1 - \cot^2 x}$$

3) Verify the given identity :

$$\frac{1 + \tan x}{1 + \cot x} = \tan x$$

4) Verify the identity :

$$\frac{\tan x - \sin (-x)}{1 + \cos x} = \tan x$$

- 5) Solve the following equation algebraically:

$$\cos x + 1 = \sin x \quad ; \quad 0 \leq x < 2\pi \quad (\text{Start by squaring both sides})$$

- 6) Solve the equation algebraically :

$$\sin 2x + 2\sin x = 0 \quad ; \quad 0 \leq x < 2\pi$$

7) Solve the following equation :

$$\sin^{-1} x + \tan^{-1} \sqrt{3} = \frac{2\pi}{3}$$

8) Find the exact value of :

$$\cos \left(\sin^{-1} \frac{3}{5} + \cos^{-1} \frac{5}{3} \right)$$

- 9) Find the exact values of the given expressions in radian measures :

a) $\sec^{-1}(-2)$

b) $\csc^{-1}\left(\frac{2\sqrt{3}}{3}\right)$

- 10) Use a graphing calculator to evaluate the following expressions
to four decimal places:

a) $\cot^{-1}(-3)$

b) $\csc^{-1}(5)$