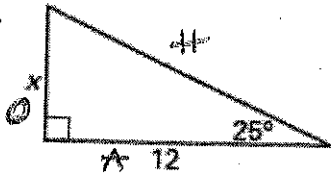


Name: _____

Date: _____

Using Trig Ratios to Find the Missing Side or Angle of a Right Triangle

S 1.

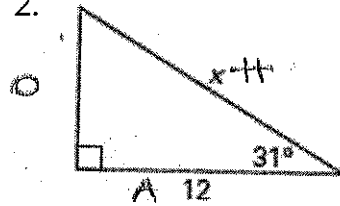


$$\tan 25^\circ = \frac{x}{12}$$

$$12 \tan 25 = x$$

$$5.6 = x$$

S 2.



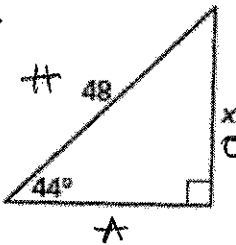
$$\cos 31 = \frac{12}{x}$$

$$x = \frac{12}{\cos 31}$$

$$x = 14$$

$$= 13.9996$$

S 3.

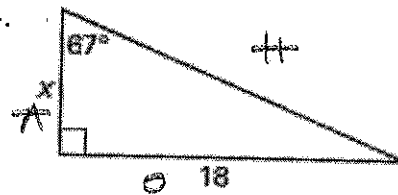


$$\sin 44 = \frac{x}{48}$$

$$48 \sin 44 = x$$

$$33.34 = x$$

S 4.

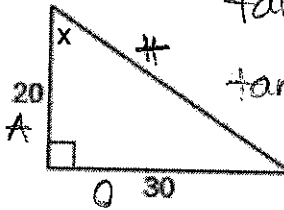


$$\tan 67 = \frac{x}{18}$$

$$x = \frac{18}{\tan 67}$$

$$x = 7.64$$

A 5.

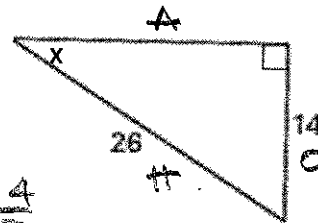


$$\tan x = \frac{20}{30}$$

$$\tan^{-1}\left(\frac{20}{30}\right) = x$$

$$36.3^\circ = x$$

A 6.

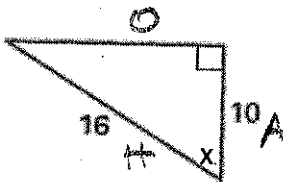


$$\sin x = \frac{14}{26}$$

$$\sin^{-1}\left(\frac{14}{26}\right) = x$$

$$32.6^\circ = x$$

A 7.

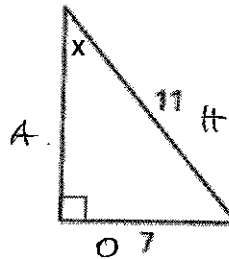


$$\cos x = \frac{10}{16}$$

$$\cos^{-1}\left(\frac{10}{16}\right) = x$$

$$x = 51.31^\circ$$

A 8.

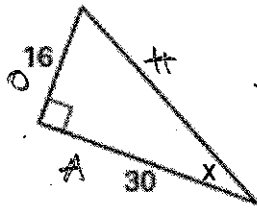


$$\sin x = \frac{7}{11}$$

$$\sin^{-1}\left(\frac{7}{11}\right) = x$$

$$39.5 = x$$

A 9.

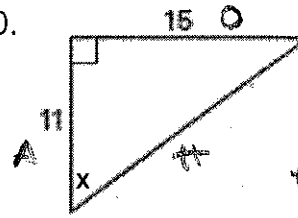


$$\tan x = \frac{16}{30}$$

$$\tan^{-1}\left(\frac{16}{30}\right) = x$$

$$28^\circ = x$$

A 10.

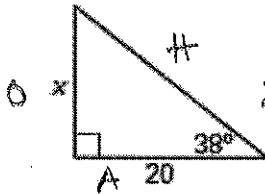


$$\tan x = \frac{15}{11}$$

$$\tan^{-1}\left(\frac{15}{11}\right) = x$$

$$53.7^\circ = x$$

S 11.

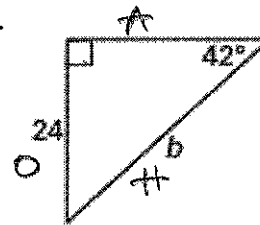


$$\tan 38 = \frac{x}{20}$$

$$20 \tan 38 = x$$

$$15.63 = x$$

S 12.

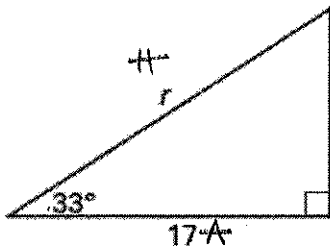


$$\sin 42 = \frac{24}{b}$$

$$b = \frac{24}{\sin 42}$$

$$b = 35.87$$

S 13.

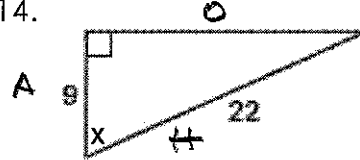


$$\cos 33 = \frac{17}{r}$$

$$r = \frac{17}{\cos 33}$$

$$r = 20.27$$

A 14.

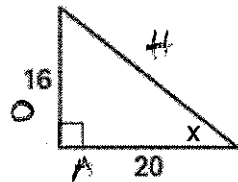


$$\cos x = \frac{9}{22}$$

$$\cos^{-1}\left(\frac{9}{22}\right) = x$$

$$x = 65.9^\circ$$

A 15.

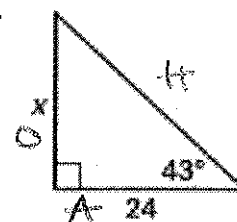


$$\tan x = \frac{16}{20}$$

$$\tan^{-1}\left(\frac{16}{20}\right) = x$$

$$38.7^\circ = x$$

S 16.

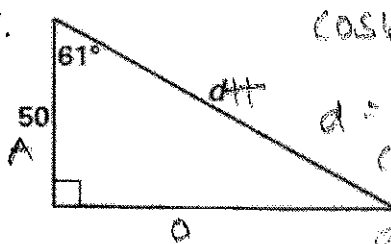


$$\tan 43 = \frac{x}{24}$$

$$24 \tan 43 = x$$

$$29.38 = x$$

S 17.

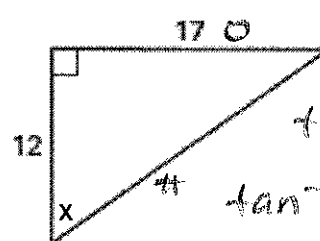


$$\cos 61 = \frac{50}{d}$$

$$d = \frac{50}{\cos 61}$$

$$d = 103.13$$

A 18.



$$\tan x = \frac{17}{12}$$

$$\tan^{-1}\left(\frac{17}{12}\right) = x$$

$$54.8^\circ = x$$