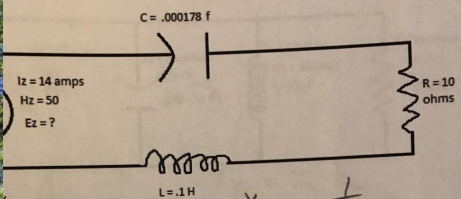




Determine source voltage and the angle of lead or lag by means of a vector diagram for the following circuit:



$$L = 2\pi f L$$

$$= 2\pi(50)(0.1)$$

$$= 31.4 \Omega$$

$$X_C = \frac{1}{2\pi f C}$$

$$= \frac{1}{2\pi(50)(0.000178)}$$

$$= 17.8 \Omega$$

$$X_L = 31.4 - 17.88$$

$$= 13.52 \Omega$$

$$Z = \sqrt{R^2 + X_L^2}$$

$$= \sqrt{10^2 + 13.52^2}$$

$$= 16.8 \Omega$$

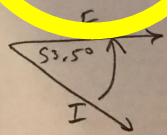
$$E_z = I_z Z$$

$$= (14)(16.8)$$

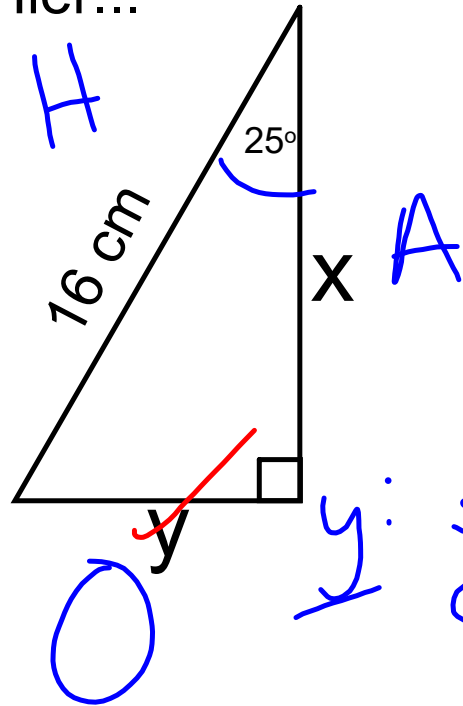
$$= 235.2 \text{ V}$$

$$\tan \theta = \frac{13.52}{10}$$

$$\theta = 53^\circ$$



Hier...



Trouve x et y SOH CAH
(n'utilise pas Pythagore) TOA

y: $\sin 25 = \frac{O}{H}$
 $0,4226 = \frac{y}{16}$

$y = 6,8 \text{ cm}$

x: $\cos 25 = \frac{A}{H}$
 $0,9063 = \frac{x}{16}$

$x = 14,5 \text{ cm}$

Utiliser les rapports trigonométrique pour trouver un angle manquant:



soh cah toa

Comment puis-je calculer l'angle, si je connais la valeur trigonométrique d'un rapport?

Tu dois utiliser "l'inverse" ou "2e fonction" bouton de ta calculatrice... ensuite pousse "enter"

$$\cos \alpha = 0,2248$$

$$\alpha = 77^\circ$$

"alpha" - lettre grèque qui représente un angle

theta - θ

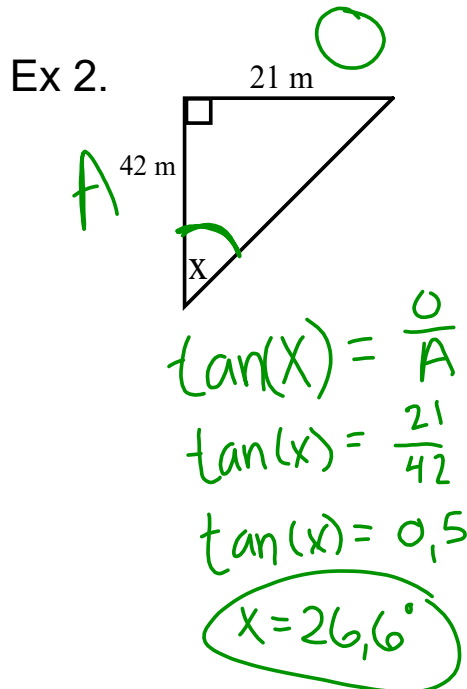
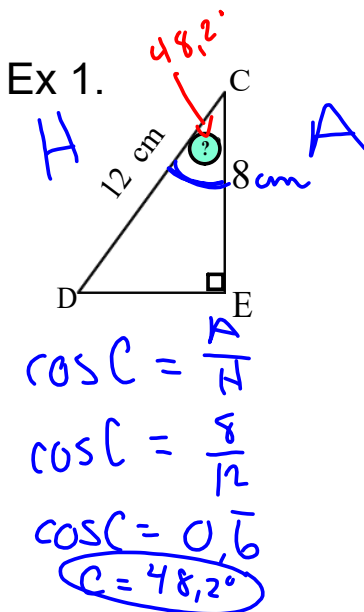
Trouve l'angle:

1. Sin A = 0,1245 A = 7°
 $\sin \theta = 0,1245$
2. Cos B = 0,8792 B = 28°
3. Tan A = 42,8912 A = 89°
4. Sin A = 1,011 A = Erreur

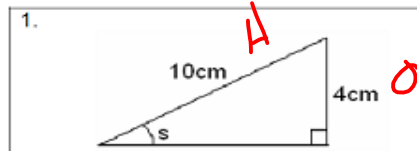


Étapes:

- a. Identifie H, A et O
- b. Quel rapport trigonométrique utiliseras-tu pour trouver l'angle indiqué?
- d. Résous.



Pratique:

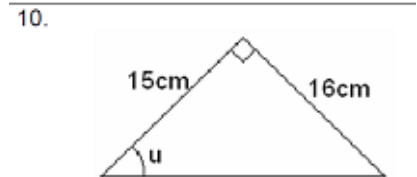
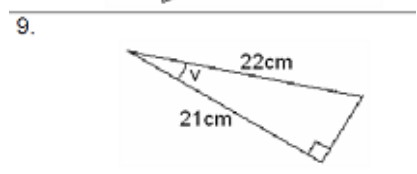
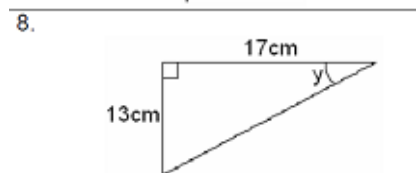
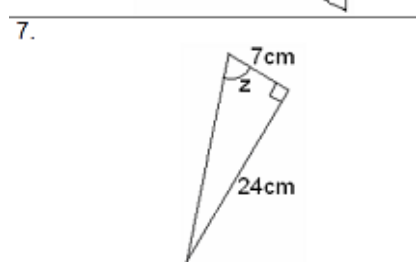
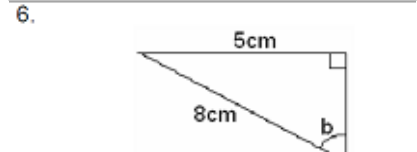
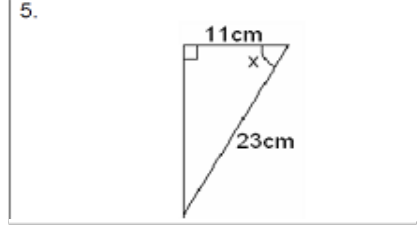
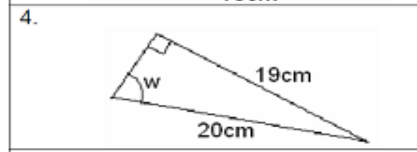
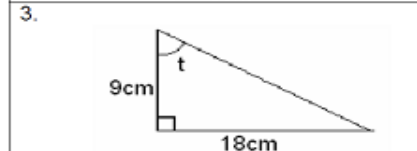
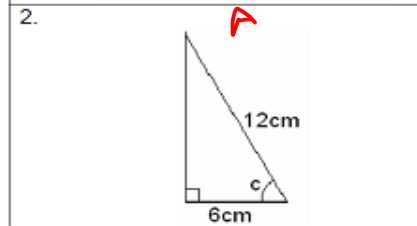


$$\sin(s) = \frac{O}{H}$$

$$\sin(s) = \frac{4}{10}$$

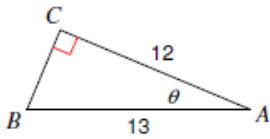
$$\sin(s) = 0,4$$

$$s = 23,6^\circ$$

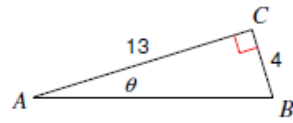


Trouve la mesure de chaque angle indiqué au dixième près

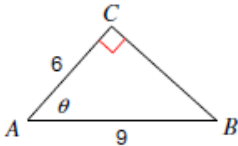
1)



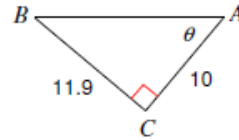
2)



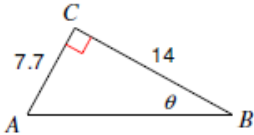
3)



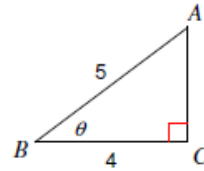
4)



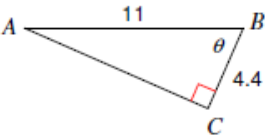
5)



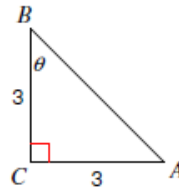
6)



7)

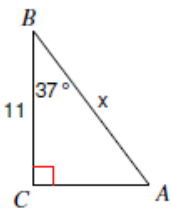


8)

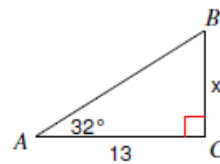


Trouve la mesure de chaque côté indiqué au dixième près

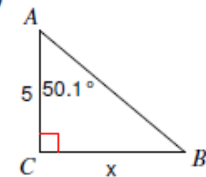
9)



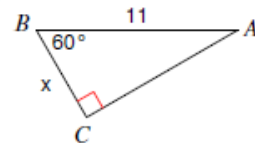
10)



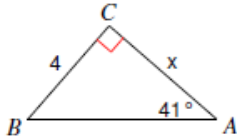
11)



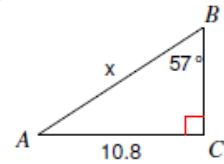
12)



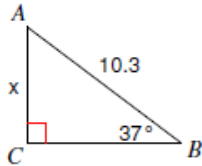
13)



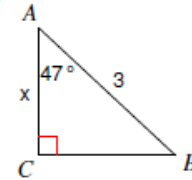
14)



15)

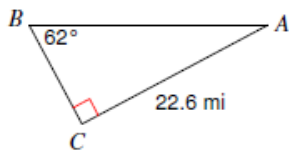


16)

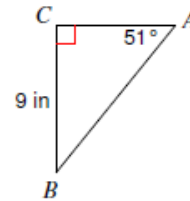


Résous chaque triangle. Arrondis au dixième près

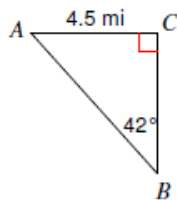
17)



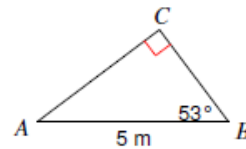
18)



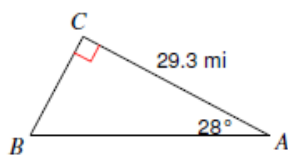
19)



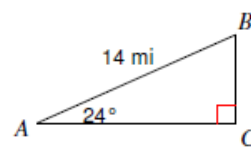
20)



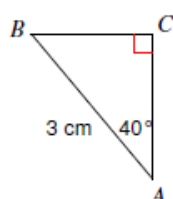
21)



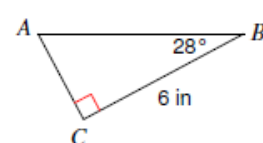
22)



23)



24)



1. 24°

6. 39°

2. 60°

7. 74°

3. 63°

8. 37°

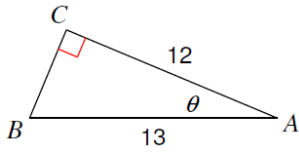
4. 72°

9. 17°

5. 61°

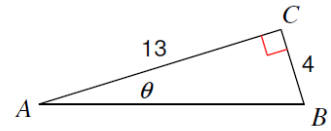
10. 47°

1)



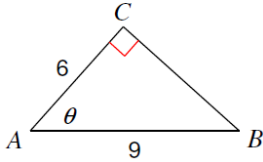
22.6°

2)



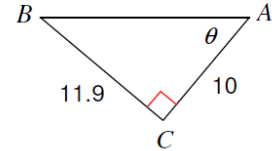
17.1°

3)



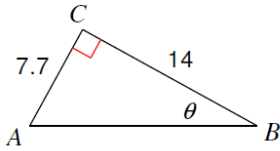
48.2°

4)



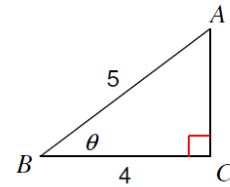
50°

5)



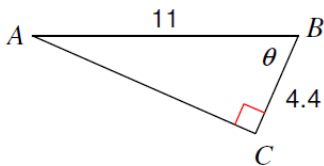
28.8°

6)



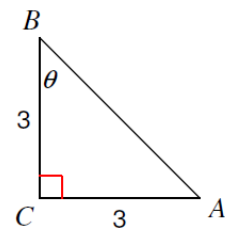
36.9°

7)



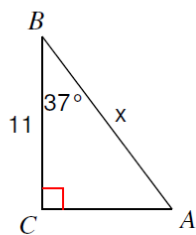
66.4°

8)



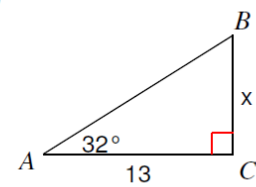
45°

9)



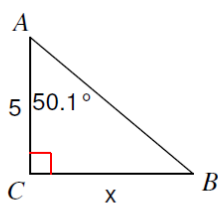
13.8

10)



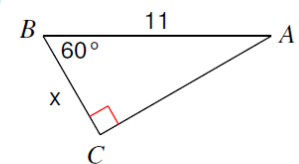
8.1

11)



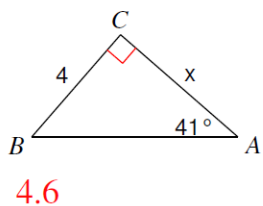
6

12)

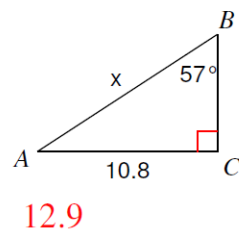


5.5

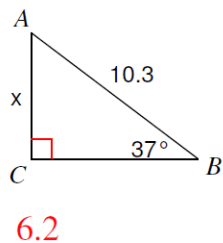
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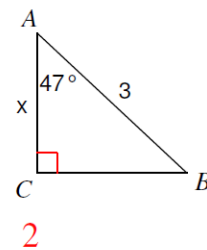
14)



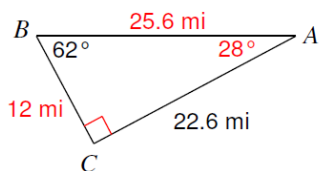
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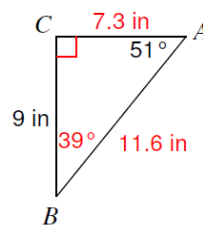
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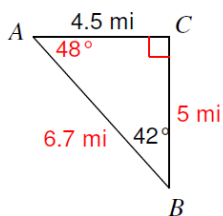
17)



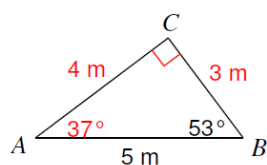
18)



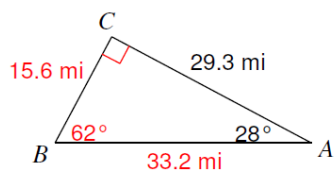
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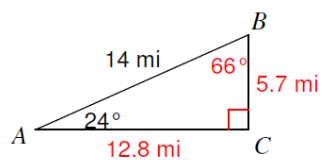
20)



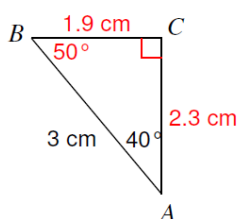
21)



22)



23)



24)

