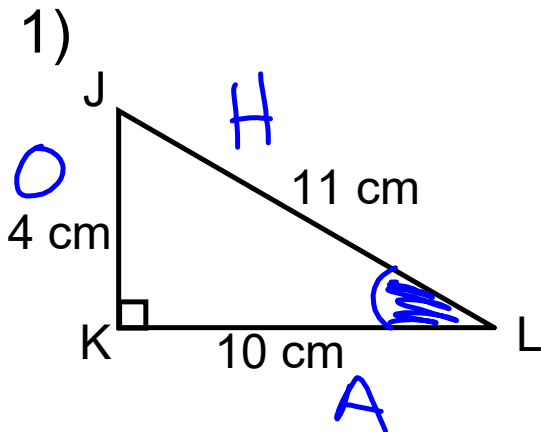


Hier... SOH CAH TOA

Trouve: (arrondis au millième près)

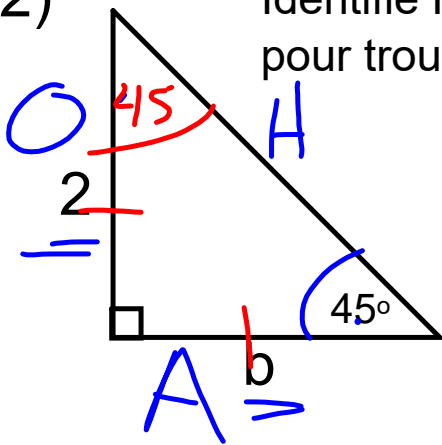


$$\sin(L) = \frac{O}{H} = \frac{4}{11} = 0,364$$

$$\cos(L) = \frac{A}{H} = \frac{10}{11} = 0,909$$

$$\tan(L) = \frac{O}{A} = \frac{4}{10} = 0,4$$

2) Identifie H, O et A, ensuite utilise sin, cos ou tan pour trouver b:



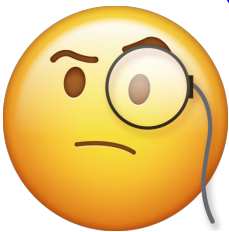
$$\tan 45 = \frac{O}{A}$$

$$1 = \frac{2}{A}$$

$$\sin 45 = \frac{O}{H}$$

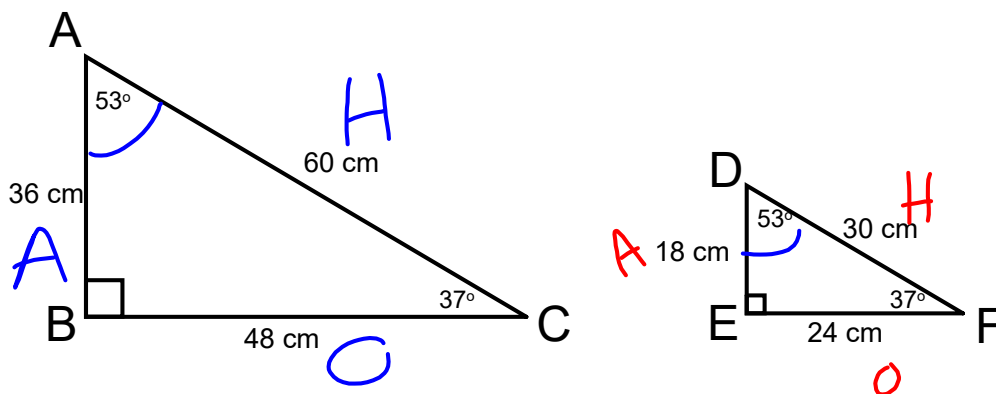
$$0,707 = \frac{2}{H}$$

$$A = 2$$



Pensez... si tu as un triangle rectangle et un des angles aigus est 45°, l'autre doit être aussi 45°... alors c'est un triangle isocèle, c'est pourquoi  $\tan(45^\circ) = 1$ , ça représente toujours un triangle isocèle, on divise un nombre par lui même!

Que remarques-tu des triangles dessous?



Compare les rapports de sin, cos et tan des angles A et D:

$$\sin(A) = \frac{\text{opp}}{\text{hyp}} = \frac{48}{60} = 0,8$$

$$\cos(A) = \frac{\text{adj}}{\text{hyp}} = \frac{36}{60} = 0,6$$

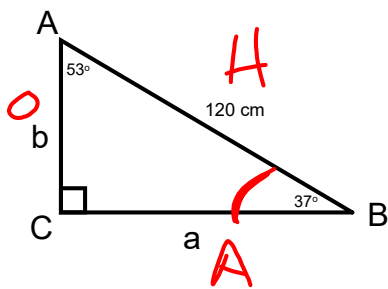
$$\tan(A) = \frac{\text{opp}}{\text{adj}} = \frac{48}{36} = 1,3$$

$$\sin(D) = \frac{\text{opp}}{\text{hyp}} = \frac{24}{30} = 0,8$$

$$\cos(D) = \frac{\text{adj}}{\text{hyp}} = \frac{18}{30} = 0,6$$

$$\tan(D) = \frac{\text{opp}}{\text{adj}} = \frac{24}{18} = 1,3$$

Si les triangles sont semblables, ça veut dire que les angles semblables sont congrus (le même).



On utilise les rapports trigonométrique pour trouver les côtés et angles manquants.

$$\sin(B) = \frac{\text{opp}}{\text{hyp}}$$

$$\cos(B) = \frac{\text{adj}}{\text{hyp}}$$

$$\sin 37 = \frac{b}{120}$$

$$\cos 37 = \frac{A}{120}$$

$$0,6018 = \frac{b}{120}$$

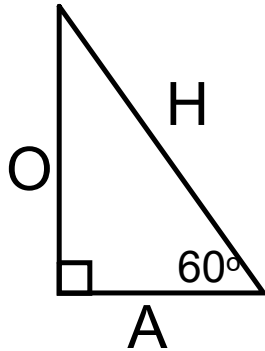
$$0,7986 = \frac{A}{120}$$

$$b = 72,2 \text{ cm}$$

$$A = 95,8 \text{ cm}$$

**COPIE:**

$$\cos(60^\circ) = 0,5$$

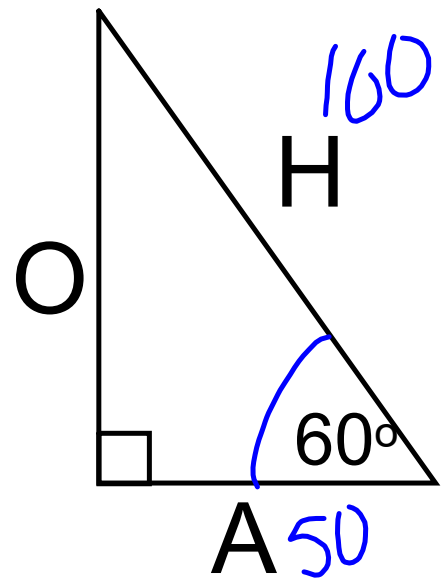
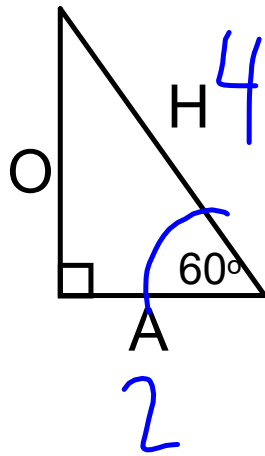
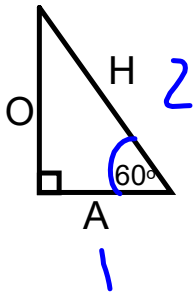


-cos: le rapport pour  $60^\circ$  entre  $A$  et  $H$  est  $0,5$

-pour un angle de  $60^\circ$ ,  $A$  divisé par  $H$  va toujours être égale à  $0,5$

$$\cos(60^\circ) = \frac{A}{H}$$

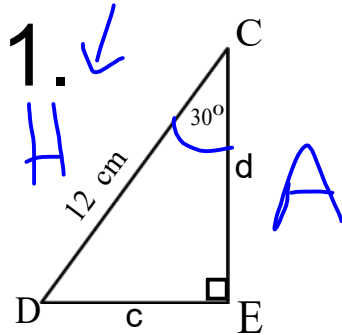
Quelles sont quelques possibilités pour  $A$  et  $H$ ?



Utiliser les rapports trigonométrique pour trouver un côté manquant:



sòh cah toa



- Identifie H, A et O
- Quel rapport trigonométrique utiliseras-tu pour trouver c?
- Quel rapport trigonométrique utiliseras-tu pour trouver d?
- Résous.

→ O

$$\sin 30 = \frac{O}{H}$$

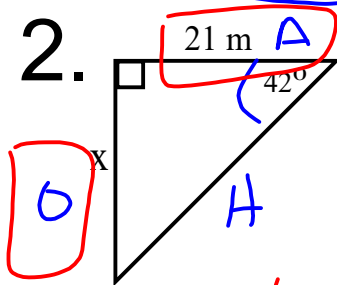
$$0,5 = \frac{c}{12}$$

$$c = 6 \text{ cm}$$

$$\cos 30 = \frac{A}{H}$$

$$0,866 = \frac{d}{12}$$

$$d = 10,4 \text{ cm}$$



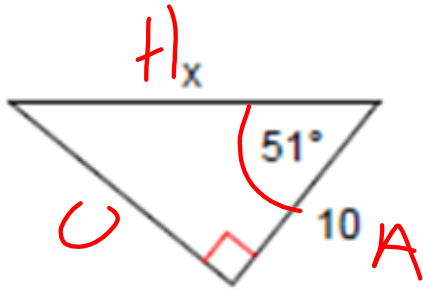
- Identifie H, A et O
- Quel rapport trigonométrique utiliseras-tu pour trouver x?
- Résous.

$$\tan 42 = \frac{O}{A}$$

$$0,9004 = \frac{x}{21}$$

$$x = 18,9 \text{ m}$$

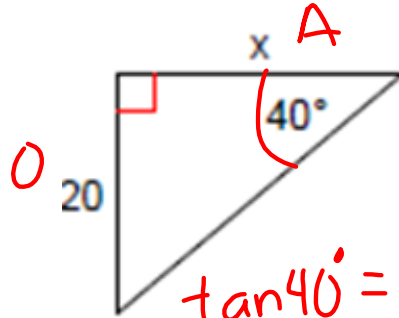
Que fait on quand notre x est dans le denominateur?....



$$\cos 51 = \frac{A}{H}$$

$$0,6293 = \frac{10}{x}$$

$$x = 15,9$$



$$\tan 40 = \frac{20}{x}$$

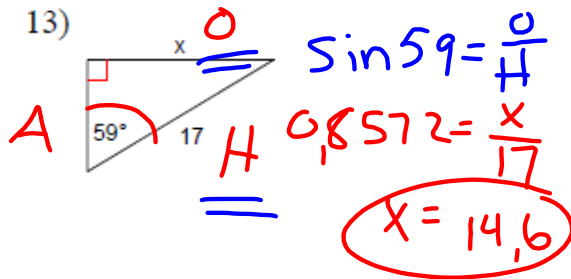
$$0,8391 = \frac{20}{x}$$

$$x = 23,8$$

Pratique:

$$x = 15,9$$

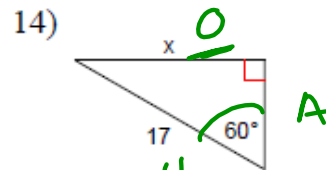
Trouve le côté manquant. Arrondis au dixième près.



$$\sin 59 = \frac{O}{H}$$

$$0,8572 = \frac{x}{17}$$

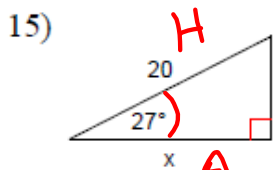
$$x = 14,6$$



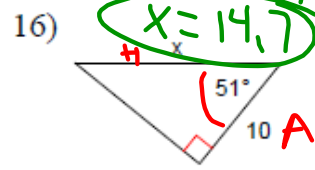
$$\sin 60 = \frac{O}{H}$$

$$0,866 = \frac{x}{17}$$

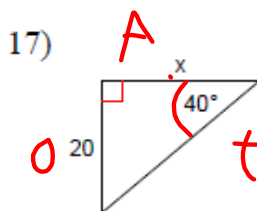
$$x = 14,7$$



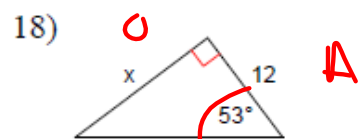
$$\cos 27 = \frac{A}{H}$$



$$\cos 51 = \frac{A}{H}$$

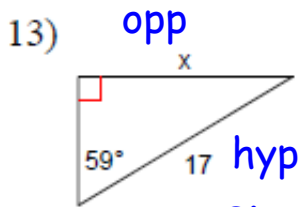


$$\tan 40 = \frac{O}{A}$$

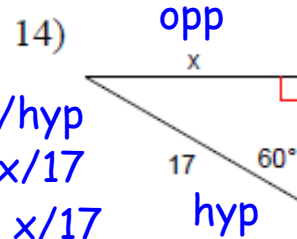


$$\tan 53 = \frac{O}{A}$$

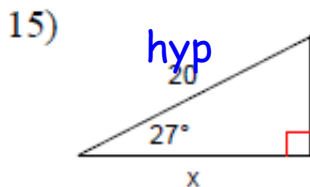
Find the missing side. Round to the nearest tenth.



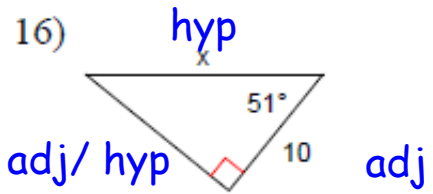
$$\begin{aligned} \text{Sin} &= \text{opp/hyp} \\ \text{Sin } 59 &= x/17 \\ 0.8572 &= x/17 \\ x &= 14.6 \end{aligned}$$



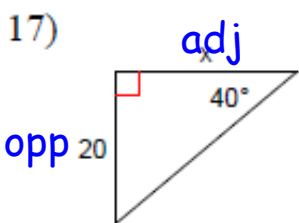
$$\begin{aligned} \text{Sin} &= \text{opp/hyp} \\ \text{Sin } 60 &= x/17 \\ 0.8660 &= x/17 \\ x &= 14.7 \end{aligned}$$



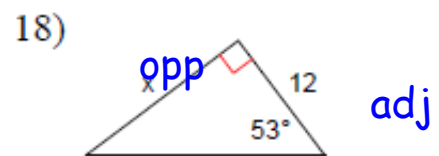
$$\begin{aligned} \text{Cos} &= \text{adj/hyp} \\ \text{Cos } 27 &= x/20 \\ 0.8910 &= x/20 \\ x &= 17.8 \end{aligned}$$



$$\begin{aligned} \text{Cos} &= \text{adj/hyp} \\ \text{Cos } 51 &= 10/x \\ 0.6293 &= 10/x \\ x &= 15.9 \end{aligned}$$

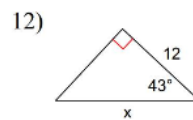
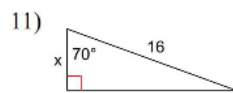
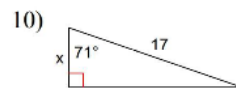
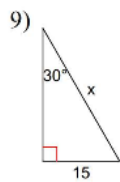
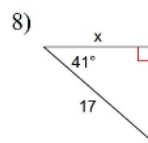
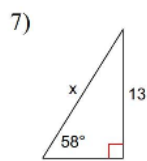
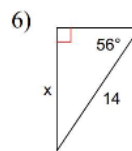
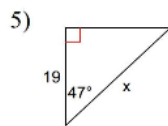
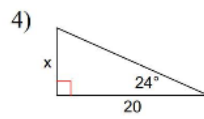
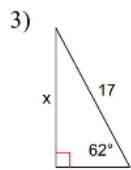
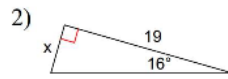
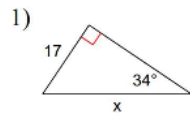


$$\begin{aligned} \text{Tan} &= \text{opp/adj} \\ \text{Tan } 40 &= 20/x \\ 0.8391 &= 20/x \\ x &= 23.8 \end{aligned}$$

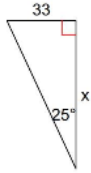


$$\begin{aligned} \text{Tan} &= \text{opp/adj} \\ \text{Tan } 53 &= x/12 \\ 1.3270 &= x/12 \\ x &= 15.9 \end{aligned}$$

**Find the missing side. Round to the nearest tenth.**

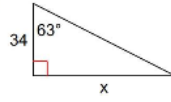


13)



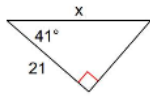
- A) 48.6      B) 90.1  
C) 70.8      D) 15.4

14)



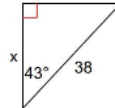
- A) 17.3      B) 95.7  
C) 66.7      D) 59.6

15)



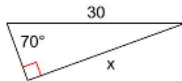
- A) 26.4      B) 13.9  
C) 27.8      D) 15.8

16)



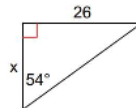
- A) 32.8      B) 27.8  
C) 23.4      D) 52.0

17)



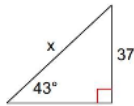
- A) 29.1      B) 41.5  
C) 28.2      D) 31.9

18)



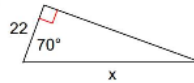
- A) 35.8      B) 10.4  
C) 18.9      D) 17.5

19)



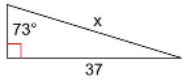
- A) 25.2      B) 65.5  
C) 30.9      D) 54.3

20)



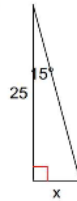
- A) 64.3      B) 44.9  
C) 7.5      D) 33.7

21)



- A) 21.0      B) 36.6  
C) 38.7      D) 35.4

22)



- A) 6.7      B) 5.6  
C) 93.3      D) 6.9



Answers to

1) 30.4  
5) 27.9  
9) 30.0  
13) C  
17) C  
21) C

2) 5.4  
6) 11.6  
10) 5.5  
14) C  
18) C  
22) A

3) 15.0  
7) 15.3  
11) 5.5  
15) C  
19) D

4) 8.9  
8) 12.8  
12) 16.4  
16) B  
20) A