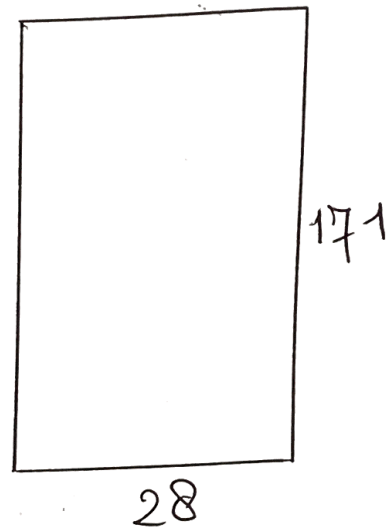
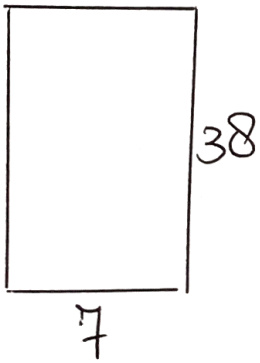
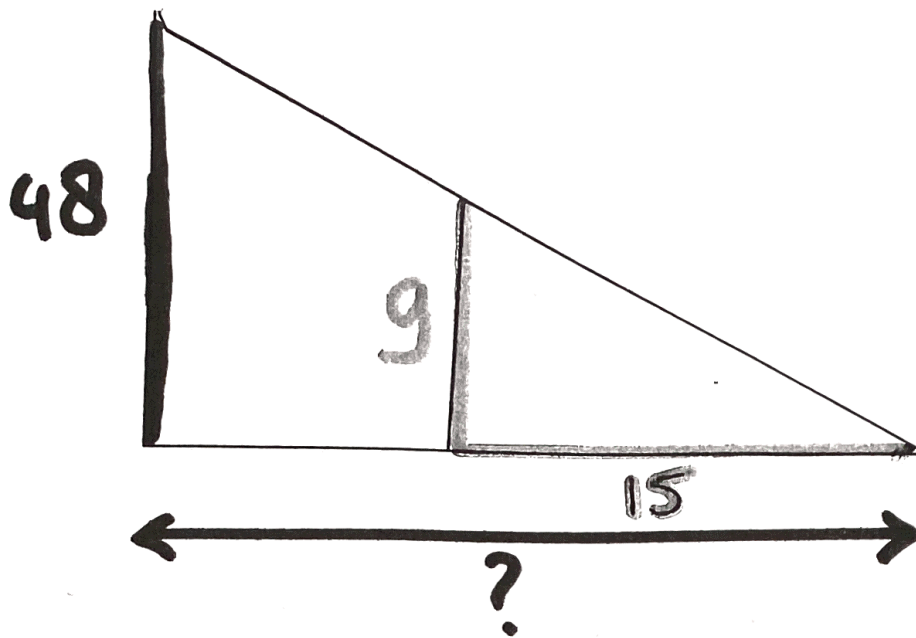


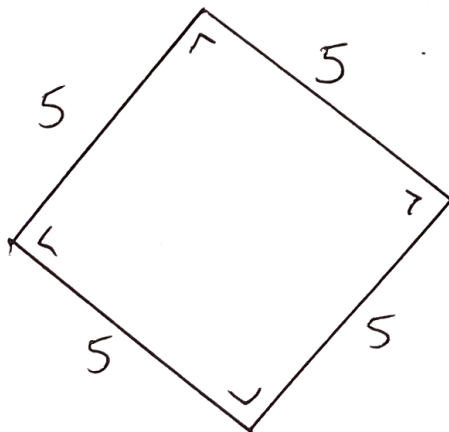
## **Extra oefening met antwoorden**

### **6.3. Redeneren en tekenen**

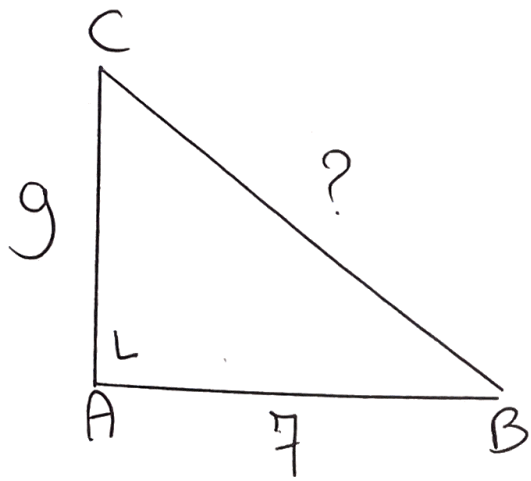
- **6.3.1. Symmetrie en evenwijdigheid**
- **6.3.2. Vergroten en verkleinen**
- **6.3.3. Stelling van Pythagoras**
- **6.3.4. Sinus, cosinus en tangens**



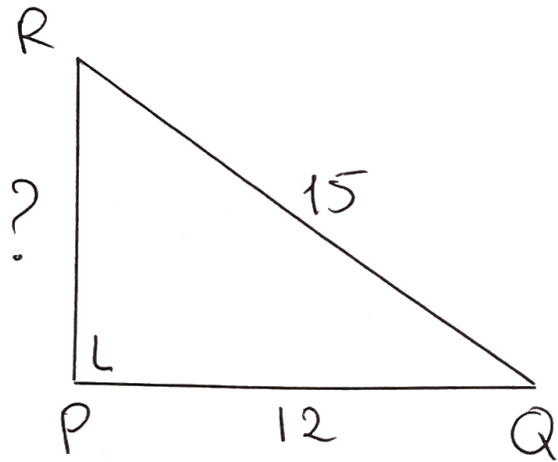
vergroting ?



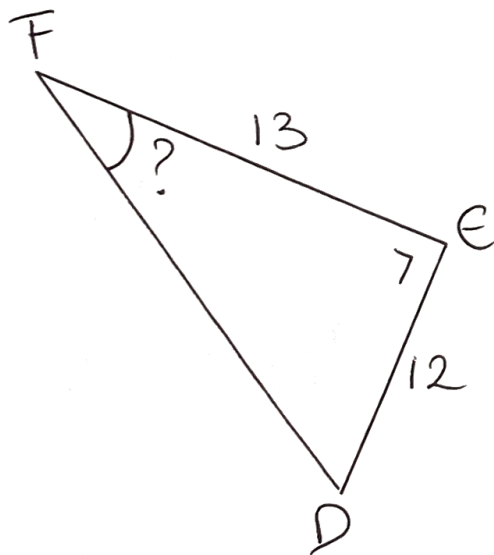
- \* hoeveel symmetrie-assen ?
- \* teken de sym.-assen
- \* draaihoek ?



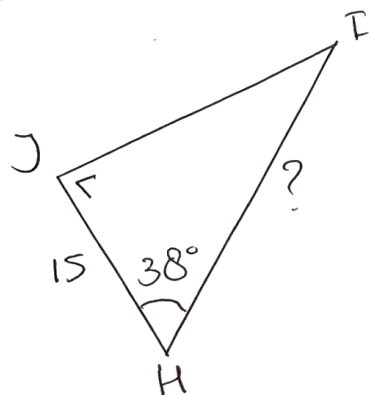
$$BC = ?$$



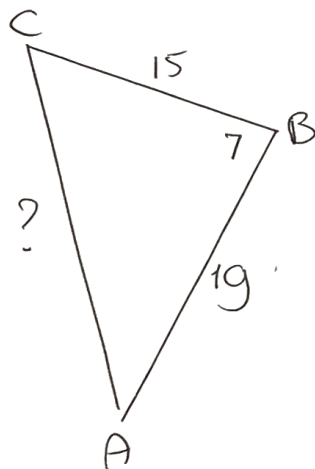
$$PR = ?$$



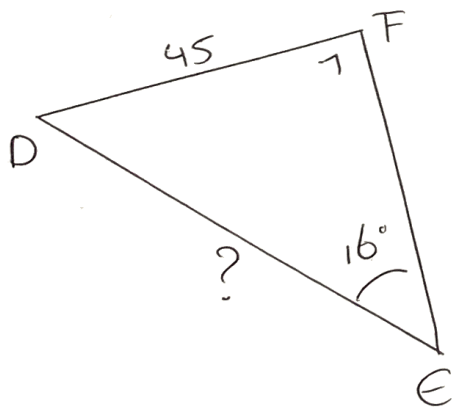
$$\angle F = ?$$



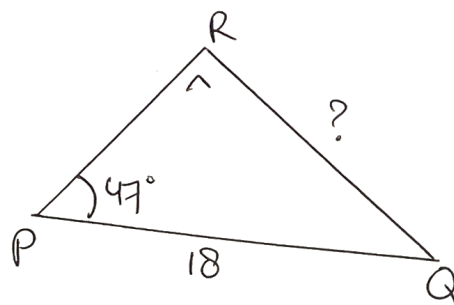
$$HI = ?$$



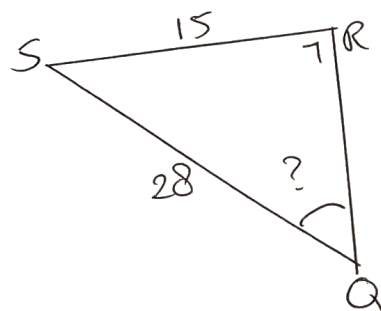
$$BC = ?$$



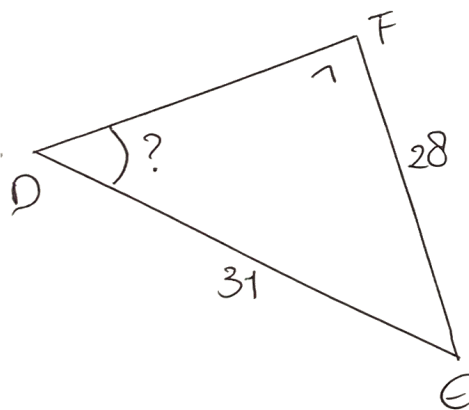
$$ED = ?$$



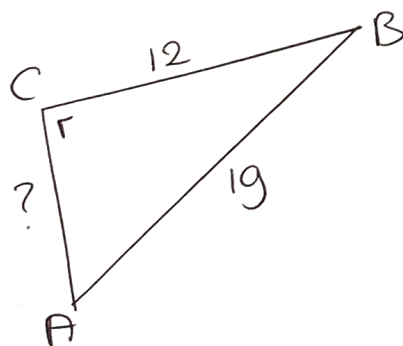
$$QR = ?$$



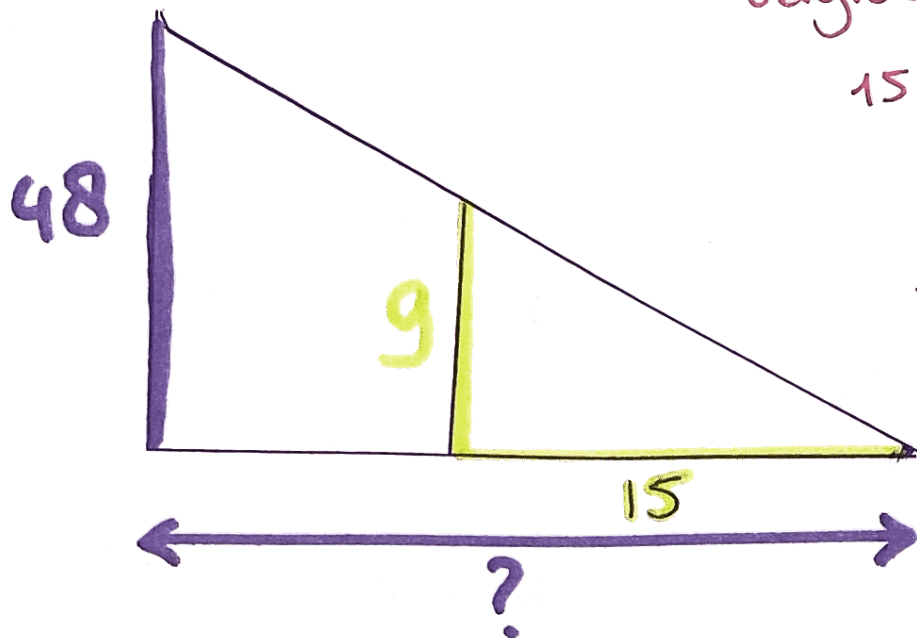
$$\angle Q = ?$$



$$\angle D = ?$$



$$AC = ?$$



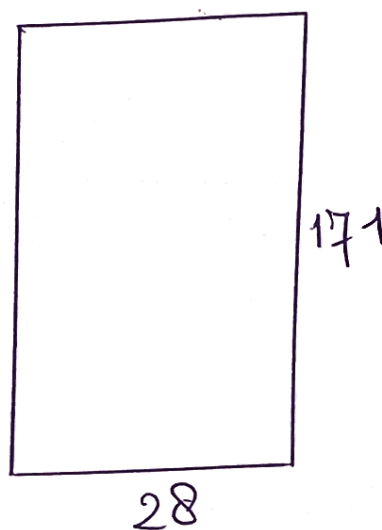
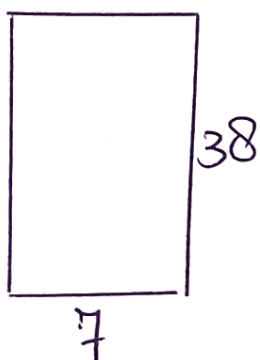
$$\text{vergrotingsfactor} = \frac{48}{9} = 5\frac{1}{3}$$

$$15 \times 5\frac{1}{3} = \underline{80 \text{ cm}}$$

of

b	15	?	80
h	9	1	48

: 9      × 48



$$171 : 38 = 4,5$$

$$28 : 7 = 4$$

nee

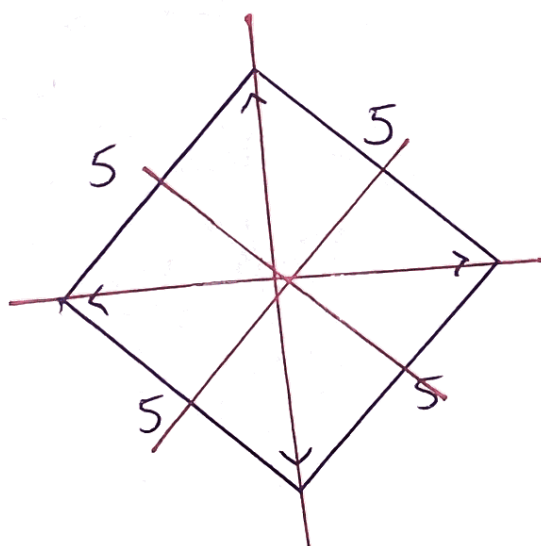
of

$$171 : 38 = 4,5$$

$$28 \times 4,5 = 126$$

nee

vergroting ?



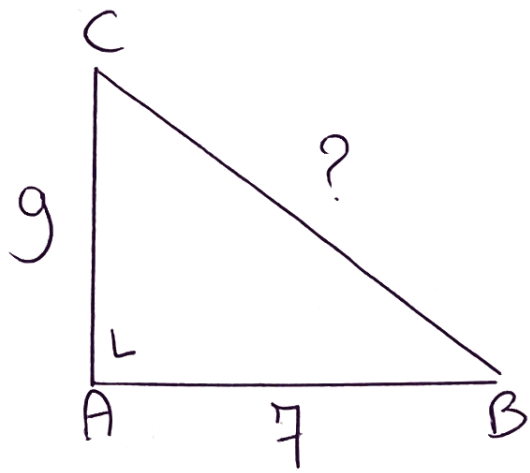
let op:  
teken netter dan ik nu

\* hoeveel symmetrie-assen? 4

\* teken de sym.-asser

\* draaihoek? 90°

$$(360^\circ : 4 = 90^\circ)$$

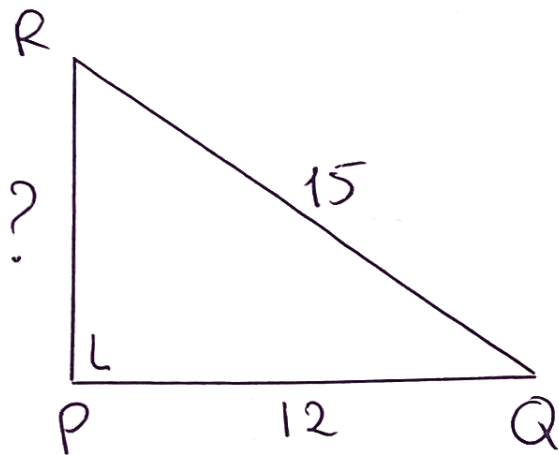


$BC = ?$  Pythagoras

$$BC = \sqrt{9^2 + 7^2}$$

$$= 11,40\dots$$

Dus  $BC = \underline{\underline{11,4 \text{ cm}}}$

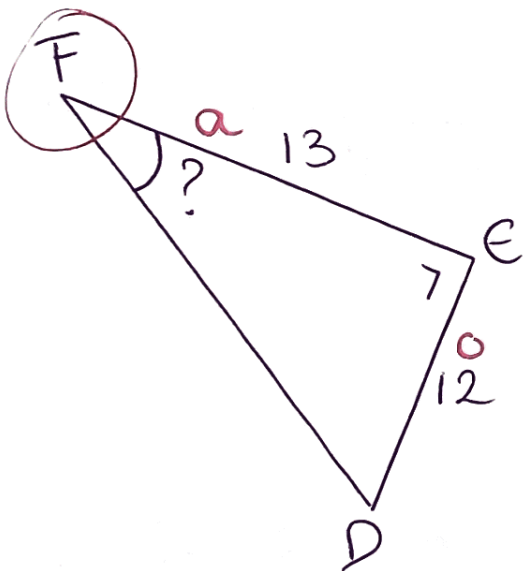


$PR = ?$  Pythagoras

$$PR = \sqrt{15^2 - 12^2}$$

$$= 9$$

Dus  $PR = \underline{\underline{9 \text{ cm}}}$



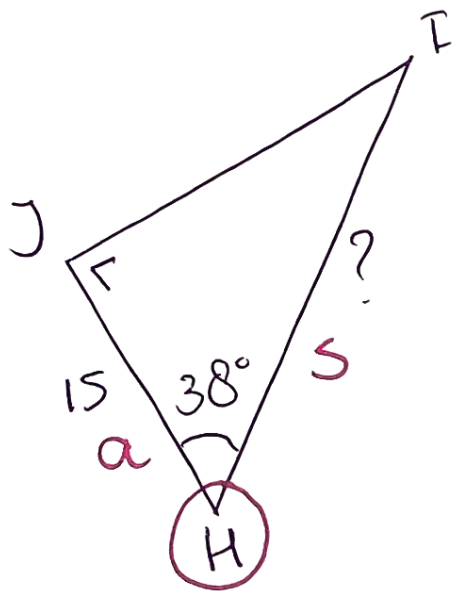
$\angle F = ?$  SOS CAS TOA

$$\tan \angle F = \frac{12}{13} = \frac{a}{13}$$

$$\angle F = \tan^{-1}\left(\frac{12}{13}\right) = 42,709\dots$$

Dus  $\underline{\underline{42,7^\circ}}$





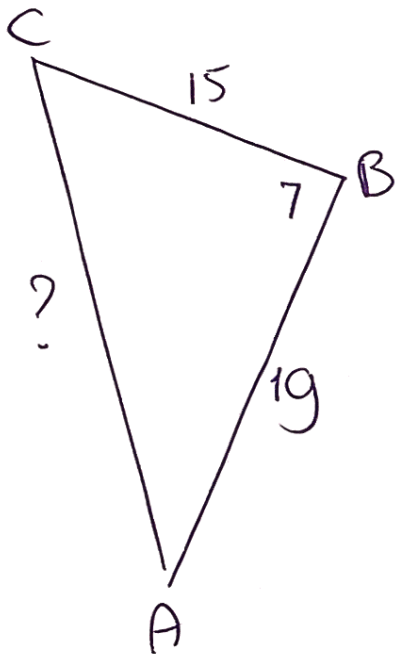
$$HI = ?$$

SOS cos toa  
 $\frac{a}{s}$

$$\cos 38^\circ = \frac{15}{?}$$

$$? = \frac{15}{\cos 38^\circ} = 19,03 \dots$$

$$\text{Dus } HI = 19 \text{ cm}$$

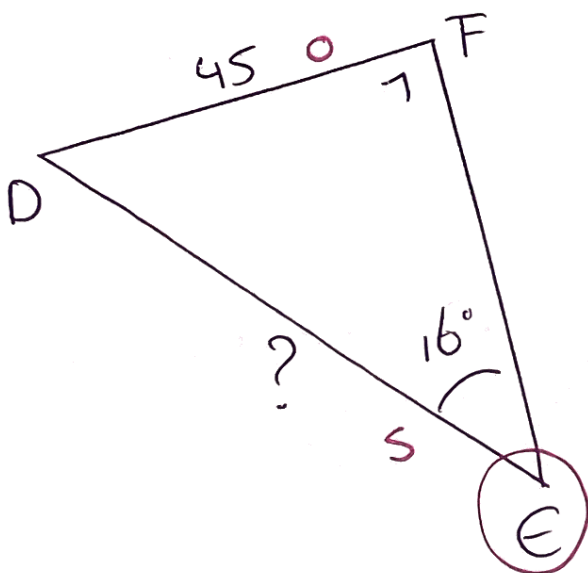


$$BC = ? \quad \text{Pythagoras}$$

$$AC = \sqrt{15^2 + 19^2}$$

$$= 24,207 \dots$$

$$\text{Dus } AC = 24,2 \text{ cm}$$



$$ED = ?$$

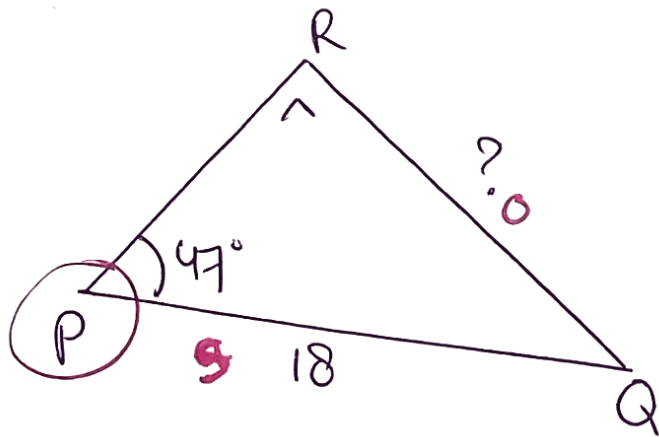
SOS CASTOA  
 $\frac{o}{s}$

$$\sin 16^\circ = \frac{45}{?}$$

$$? = \frac{45}{\sin 16^\circ} = 163,25 \dots$$

$$\text{Dus } ED = \underline{\underline{163,3 \text{ cm}}}$$



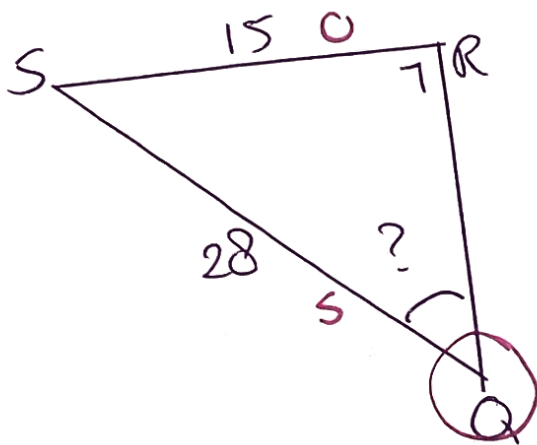


$$QR = ? \quad \frac{\sin 47^\circ}{\sin 90^\circ} = \frac{QR}{18}$$

$$\sin 47^\circ = \frac{QR}{18}$$

$$QR = \sin 47^\circ \times 18 = 13,16$$

$$\text{Dus } QR = \underline{\underline{13,2 \text{ cm}}}$$

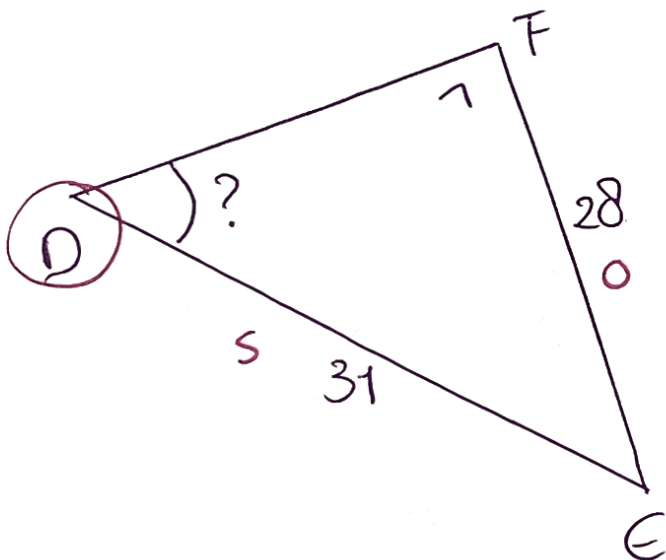


$$\angle Q = ? \quad \frac{\sin \angle Q}{\sin 90^\circ} = \frac{SR}{SQ}$$

$$\sin \angle Q = \frac{15}{28}$$

$$\angle Q = \sin^{-1}\left(\frac{15}{28}\right) = 32,39^\circ$$

$$\text{Dus } \angle Q = \underline{\underline{32,4^\circ}}$$

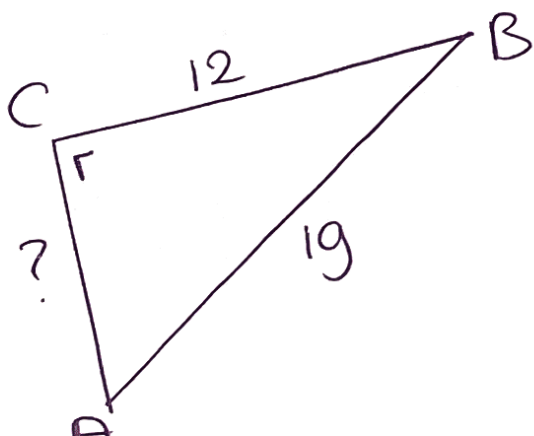


$$\angle D = ? \quad \frac{\sin \angle D}{\sin 90^\circ} = \frac{DF}{DE}$$

$$\sin \angle D = \frac{28}{31}$$

$$\angle D = \sin^{-1}\left(\frac{28}{31}\right) = 64,58^\circ$$

$$\text{Dus } \angle D = \underline{\underline{64,6^\circ}}$$



$$AC = ? \quad \text{Pythagoras}$$

$$AC = \sqrt{19^2 - 12^2}$$

$$= 14,73 \dots$$

$$\text{Dus } AC = \underline{\underline{14,7 \text{ cm}}}$$