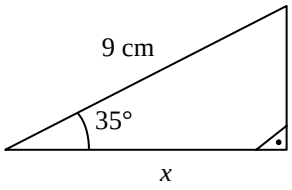
Exercices de math ECG J.P. – 2ème A

SERIE 15
Trigonométrie du triangle rectangle

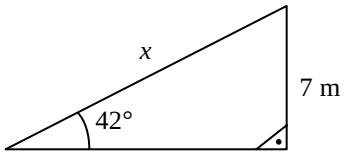
Calculatrice autorisée

Exemples :

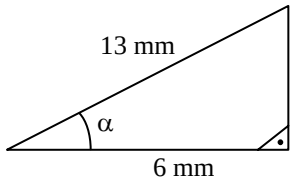
a)



b)



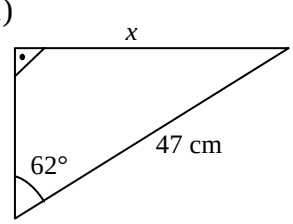
c)



Exercice 1 :

Déterminer l'inconnue *x* dans les triangles suivants :

1)



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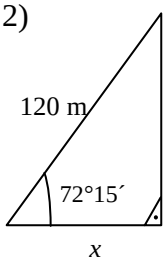

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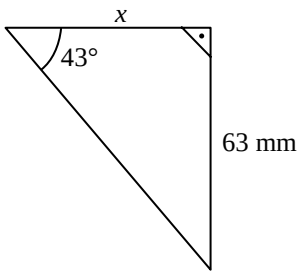

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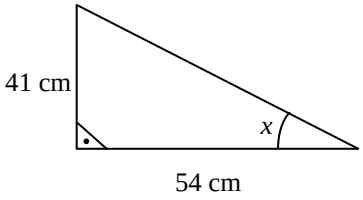

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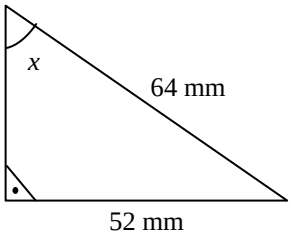
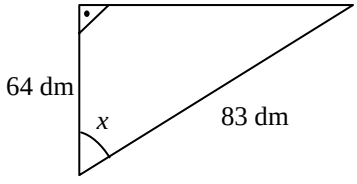
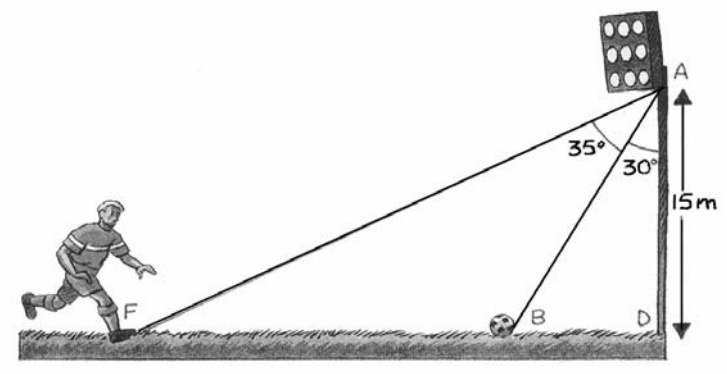


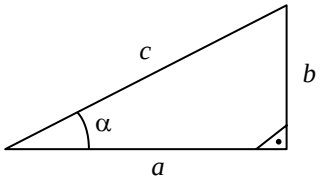
6)



Exercice 2 :
Calculer la distance entre le footballeur et le ballon sur le dessin ci-dessous.



Exercice 3 :
En se basant sur le dessin ci-dessous on demande de démontrer les trois propriétés suivantes :



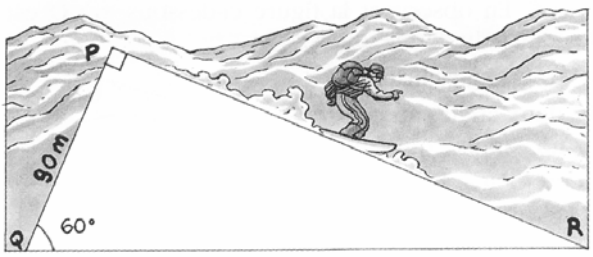
$$\sin(\alpha)^2 + \cos(\alpha)^2 = 1$$

$$\frac{\sin(\alpha)}{\cos(\alpha)} = \tan(\alpha)$$

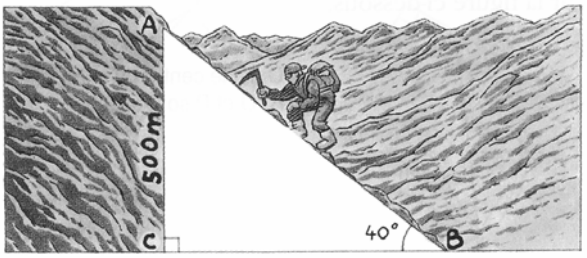
$$\sin(\alpha) = \cos(90° - \alpha)$$

Exercice 4 :
Déterminer dans chacun des cas suivants la mesure demandée.

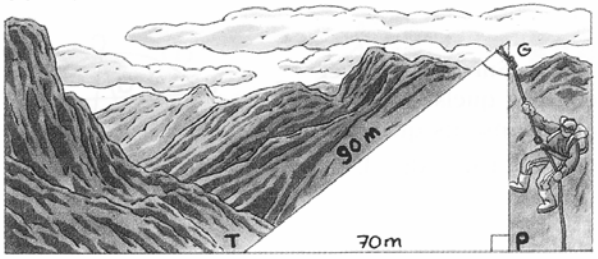
(1) PR ;



(3) BA.



(2) $\widehat{G}$;



Réponses :
Ex 1 : 1) x=41,50 cm ; 2) x=36,58 m ; 3) x=67,56 mm ; 4) x=37,2° ; 5) x=54,3° ; 6) x=39,5°
Ex 2 : 23,51 m
Ex 3 : Indication : utiliser les définitions de sin, cos et tan.
Ex 4 : 1) 155.88 m ; 2) 51,06° ; 3)777,86 m