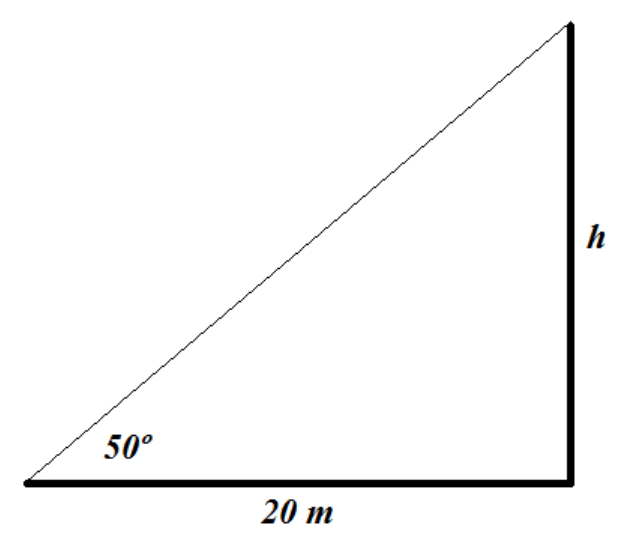


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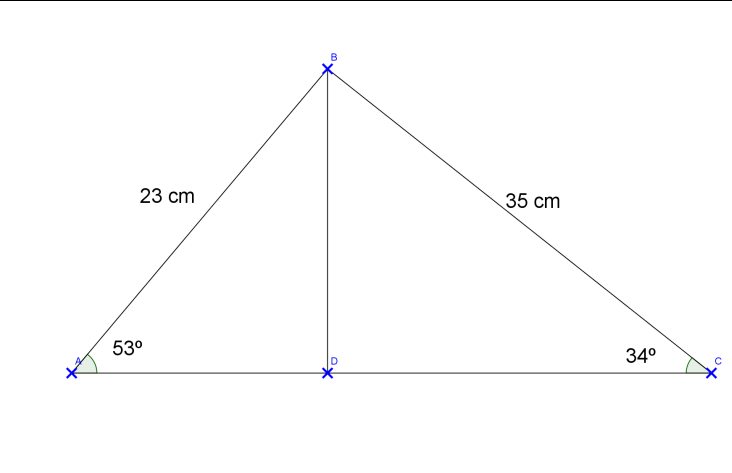


$tg 50^\circ = \frac{h}{20}$   
 $h = 20 \cdot tg 50^\circ = 23'8351m$   
 La altura del árbol es de 23'8351m.

20) Completa las razones trigonométricas de los ángulos indicados:

	Seno	Coseno	Tangente
128°	0'7880	-0'6157	-1'2799
198°	-0'3090		
87°			
98°			
285°			
305°	-0'8192	0'5736	-1'4281

23)



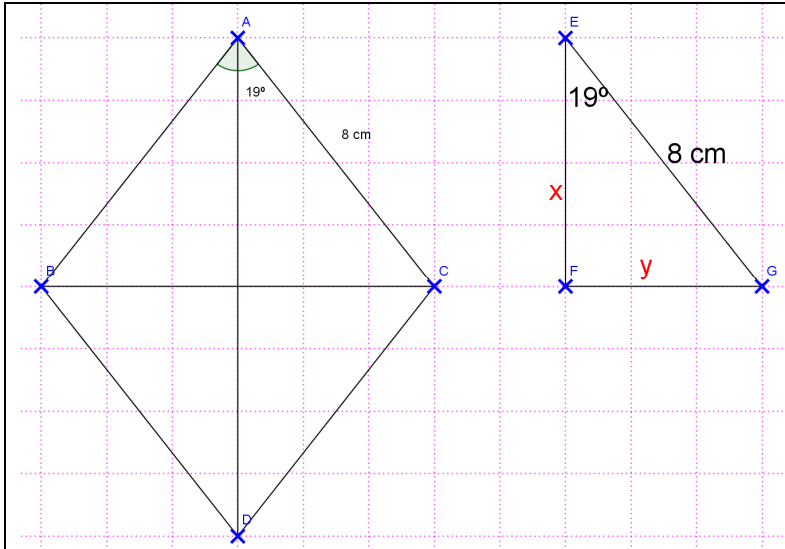
a)  $AC = AD + DC$   
 $\cos 53^\circ = \frac{AD}{23} \rightarrow 23 \cdot \cos 53^\circ = AD$   
 $AD = 13'8417cm$   
 $\cos 34^\circ = \frac{DC}{35} \rightarrow 35 \cdot \cos 34^\circ = DC$   
 $DC = 29'0163cm$   
 $AC = 13'8417 + 29'0163 = 42'858 cm$

b) Área del triángulo ABC,

$$A = \frac{\text{base} \cdot \text{altura}}{2} = \frac{AC \cdot BD}{2} = \frac{42'858 \cdot 18'3686}{2} = 393'6207cm^2$$

$$\text{sen } 53^\circ = \frac{BD}{23}; \quad 23 \cdot \text{sen } 53^\circ = BD; \quad BD = 18'3686$$

24)



$$\cos 19^\circ = \frac{x}{8} \rightarrow x = 8 \cdot \cos 19^\circ$$

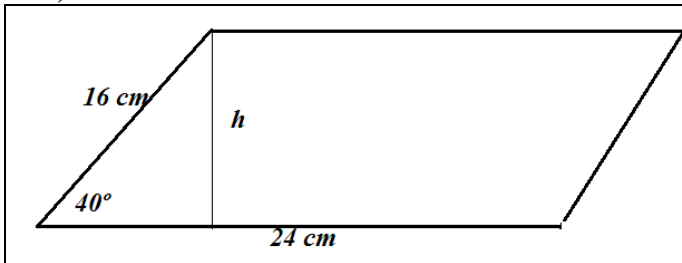
$$\sin 19^\circ = \frac{y}{8} \rightarrow y = 8 \cdot \sin 19^\circ$$

$$\text{Diagonal mayor} = 2x = 2 \cdot 8 \cdot \cos 19^\circ = 15'1283 \text{ cm}$$

$$\text{Diagonal menor} = 2y = 2 \cdot 8 \cdot \sin 19^\circ = 5'2091 \text{ cm}$$

$$A = \frac{D \cdot d}{2} = 39'4024 \text{ cm}^2$$

25)



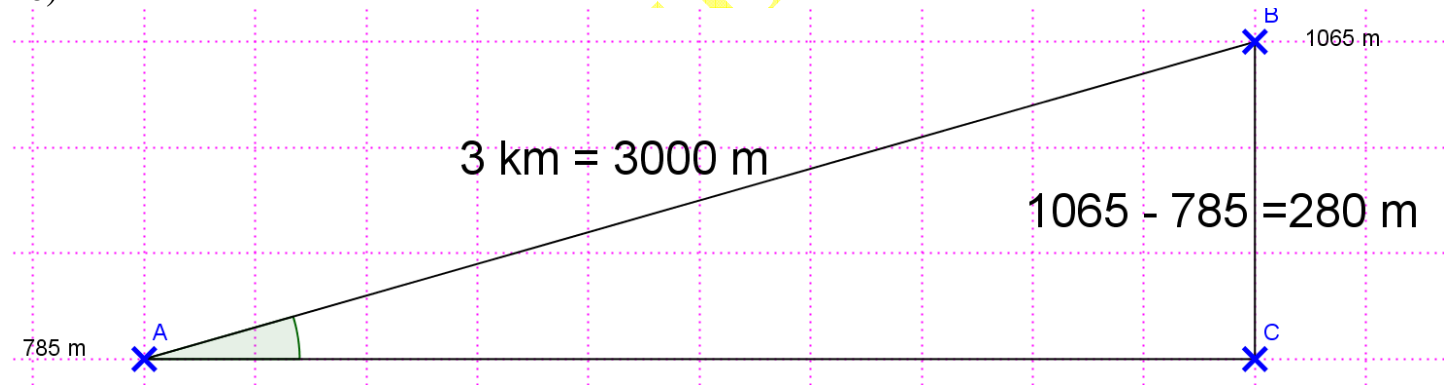
$$\sin 40^\circ = \frac{h}{16}$$

$$h = 16 \sin 40^\circ = 10'2846 \text{ cm}$$

$$A = 24 \cdot 10'2846 = 246'8304 \text{ cm}^2$$

El área del paralelogramo es de 246'8304 cm<sup>2</sup>

26)



$$\text{Pendiente media de la carretera} = \frac{BC}{AC} = \frac{280}{2986'9048} = 0'0937 = 9'37\%$$

$$\sin \hat{A} = \frac{280}{300} = \frac{7}{75} \rightarrow \hat{A} = \arcsen \frac{7}{75} = 5'3554^\circ$$

$$\cos \hat{A} = \frac{AC}{3000} \rightarrow AC = 3000 \cdot \cos 5'3554^\circ = 2986'9048 \text{ m}$$

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