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b)

$$\cos\alpha = \frac{8}{11'6} = 0'6897$$

$$T.P. \quad 11'6^2 = 8^2 + x^2; \quad x^2 = 11'6^2 - 8^2; \quad x = \sqrt{11'6^2 - 8^2} = 8'4$$

$$sen\,\alpha = \frac{8'4}{11'6} = 0'7241$$

$$tg\,\alpha = \frac{sen\,\alpha}{\cos\alpha} = \frac{0'7241}{0'6897} = 1'0499 \qquad o\ de\ otra\ forma \quad tg\,\alpha = \frac{8'4}{8} = 1'05$$

De otra forma:

$$\cos\alpha = \frac{8}{11'6} = 0'6897$$

Usando la calculadora: $\alpha = arc\cos\frac{8}{11'6} = 46'3971810....$

$$sen\,\alpha = 0'7241$$

$$tg\,\alpha = 1'05$$

c)

$$tg\,\alpha = \frac{32}{60} = 0'5333$$

$$T.P. \quad a^2 = 60^2 + 32^2; \quad a = \sqrt{60^2 + 32^2} = 68$$

$$sen\,\alpha = \frac{32}{68} = 0'4706$$

$$\cos\alpha = \frac{60}{68} = 0'8824$$

De otra forma:

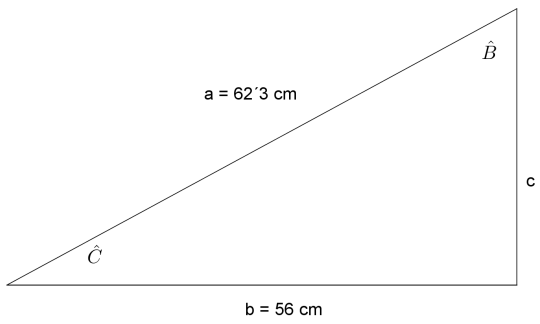
$$tg\,\alpha = \frac{32}{60} = 0'5333$$

Usando la calculadora: $\alpha = arc\,tg\frac{32}{60} = 28'0724869....$

$$sen\,\alpha = 0'4706$$

$$\cos\alpha = 0'8824$$

2 a



$\cos \hat{C} = \frac{56}{62´3} = 0´8989$

$\hat{C} = 25´9892335...$

$sen\ \hat{C} = 0´4382$

$tg\ \hat{C} = 0´4875$

$sen\ \hat{B} = \frac{56}{62´3} = 0´8989$

$\hat{B} = 64´0107664...$

$\cos \hat{B} = 0´4382$

$tg\ \hat{B} = 2´0513$

13)

Altura del árbol = x

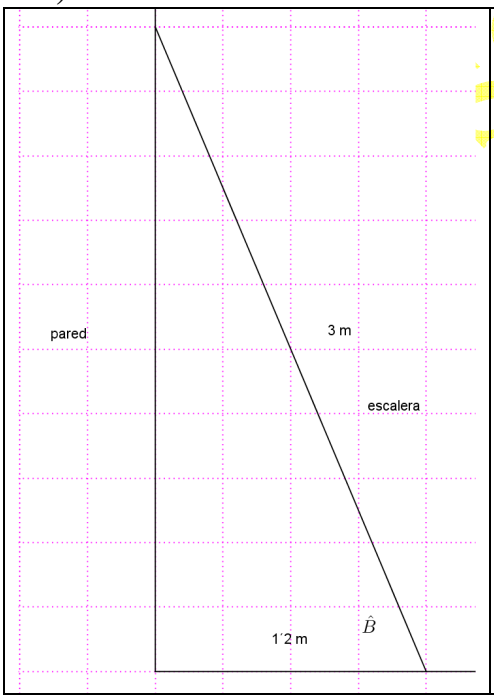
$tg\ 40º = \frac{x}{18}$

$18 \cdot tg\ 40º = x$

$x = 15´1038$

La altura del árbol es de 15´1038 m

14)



$\cos \hat{B} = \frac{1´2}{3}$

$\hat{B} = 66´4218º$

La escalera con el suelo forma un ángulo de 66´4218º.