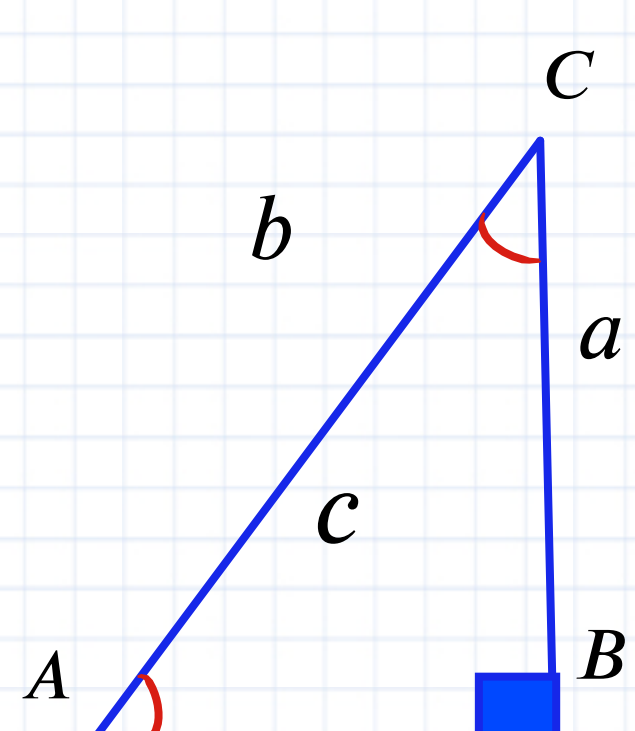


13

En un triángulo rectángulo ABC recto en B reducir :
 $= \text{Sen}A \cdot \text{Sec}C + \text{Cos}C \cdot \text{Csc}A$



$$E = \frac{\text{Sen}A \cdot \text{Sec}C}{a \cdot b} + \frac{\text{Cos}C \cdot \text{Csc}A}{a \cdot b}$$

$$E = \frac{b \cdot \left(\frac{a}{b}\right) + b \cdot \left(\frac{b}{a}\right)}{a \cdot b}$$

$$E = \frac{a + b^2/a}{a \cdot b}$$

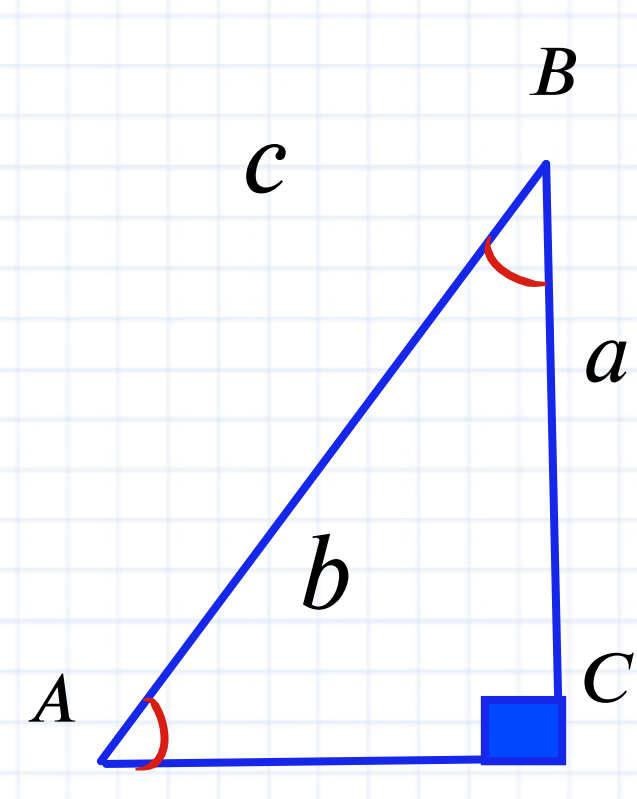
$$E = \frac{a^2 + b^2}{a^2 \cdot b}$$

$$E = \frac{c^2}{a^2 \cdot b}$$

$$E = 2$$

14

En un triángulo ABC recto en C simplificar :
 $= a \cdot \text{Ctg}A - c \cdot \text{Sen}B$



$$E = a \cdot \text{Ctg}A - c \cdot \text{Sen}B$$

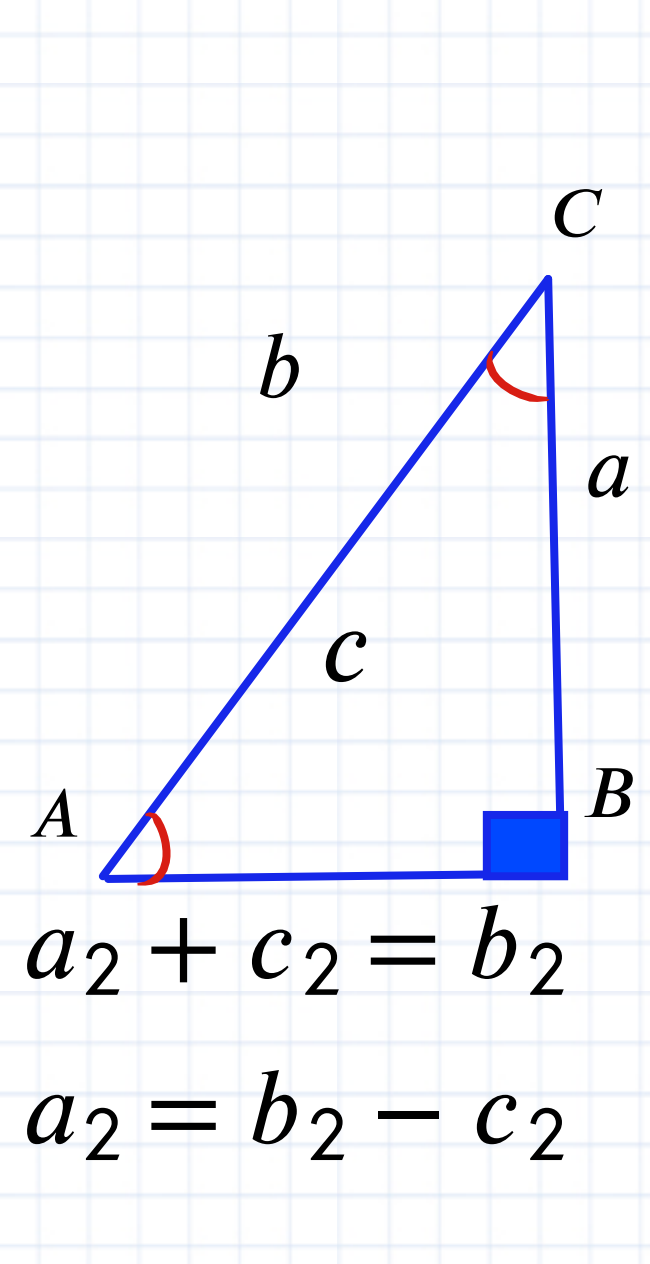
$$E = a \cdot \left(\frac{b}{a}\right) - c \cdot \left(\frac{b}{c}\right)$$

$$E = b - b$$

$$E = 0$$

15

En un triángulo rectángulo ABC recto en B reducir :
 $= \left(\frac{\text{Sec}A \cdot \text{Sen}C}{\text{Csc}A \cdot \text{Ctg}A} - \frac{\text{Csc}C}{\text{Ctg}A} \right) - \text{Cos}C$



$$E = \frac{b}{c} - \frac{c}{b} \cdot \frac{a}{b}$$

$$E = \frac{b^2 - c^2}{b^2} - \frac{ac}{b^2}$$

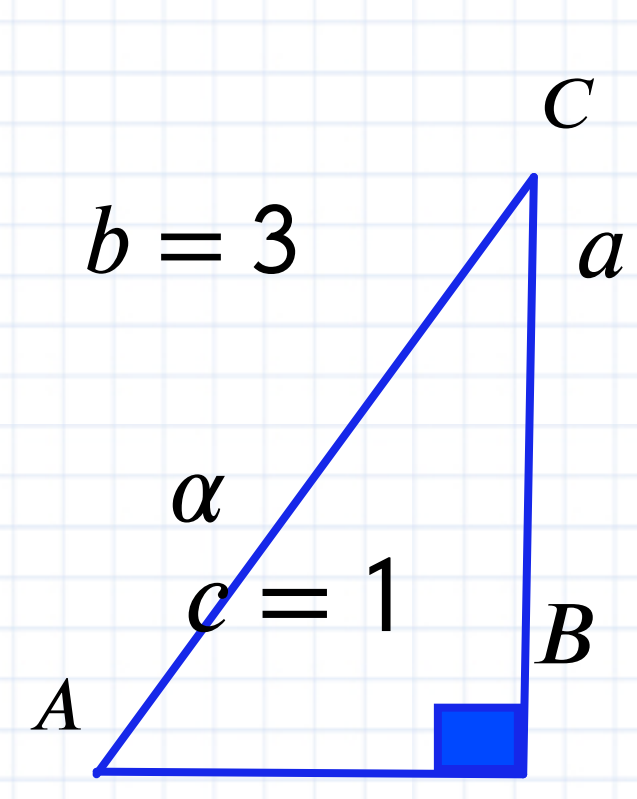
$$E = \frac{a^2 - c^2}{b^2} - \frac{ac}{b^2}$$

$$E = \frac{a^2 - c^2 - ac}{b^2}$$

$$E = 0$$

16

Si α es un ángulo agudo tal que $\text{Cos}\alpha = \frac{1}{3}$, calcular $\text{Tg}\alpha$



$$\text{Cos}\alpha = \frac{c}{b}$$

$$a_2 + c_2 = b_2$$

$$a_2 + 1 = 9$$

$$a_2 = 9 - 1$$

$$a_2 = 8$$

$$a = \sqrt{8} = 2\sqrt{2}$$

$$\text{Tg}\alpha = \frac{a}{c} = \frac{2\sqrt{2}}{1} = 2\sqrt{2}$$

Si : $\text{Tg}3x \cdot \text{Ctg}(x+40^\circ) = 1$. Calcular : $\text{Cos}3x$

17

$$\text{Sen}\theta \cdot \text{Csc}\theta = 1$$

$$\text{Tg}\theta \cdot \text{Ctg}\theta = 1$$

$$\text{Cos}\theta \cdot \text{Sec}\theta = 1$$

$$\text{Tg}3x \cdot \text{Ctg}3x = 1$$

$$\text{Tg}3x = \frac{1}{\text{Ctg}3x}$$

$$\frac{1}{\text{Ctg}3x} (\text{Ctg}(x+40)) = 1$$

$$\text{Ctg}(x+40) = \text{Ctg}3x$$

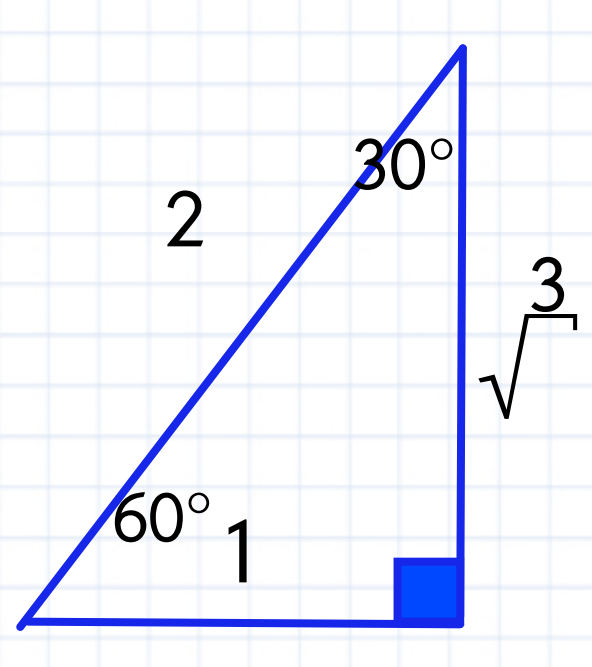
$$x+40 = 3x$$

$$40 = 3x - x$$

$$40 = 2x$$

$$20 = x$$

$$\text{Cos}3x = \text{Cos}3(20) = \text{Cos}60^\circ = \frac{1}{2}$$



18

Hallar "x" Si : $\text{Cos}(2x - 10^\circ) \cdot \text{Sec}(x + 30^\circ) = 1$

$$\text{Sen}\theta \cdot \text{Csc}\theta = 1$$

$$\text{Tg}\theta \cdot \text{Ctg}\theta = 1$$

$$\text{Cos}\theta \cdot \text{Sec}\theta = 1$$

$$\text{Cos}(2x - 10^\circ) \cdot \text{Sec}(2x - 10) = 1$$

$$\text{Cos}(2x - 10^\circ) = \frac{1}{\text{Sec}(2x - 10)}$$

$$\frac{1}{\text{Sec}(2x - 10)} \cdot \text{Sec}(x + 30) = 1$$

$$\text{Sec}(x + 30) = \text{Sec}(2x - 10)$$

$$x + 30 = 2x - 10$$

$$30 + 10 = 2x - x$$

$$40 = x$$

19

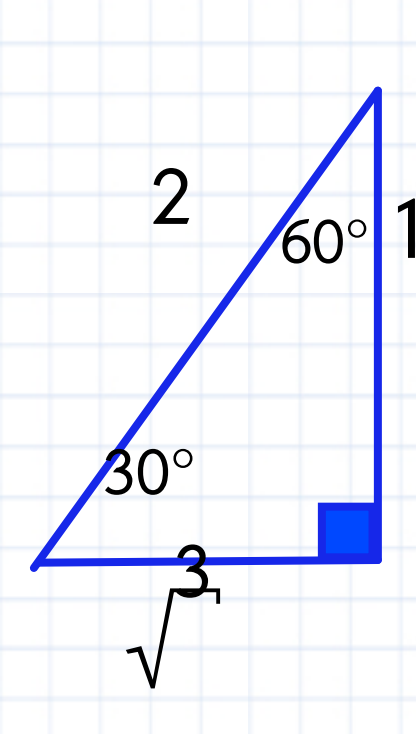
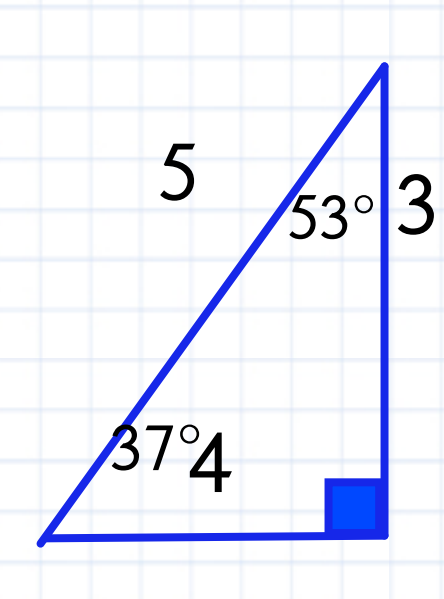
Calcular : $E = \text{sen}230^\circ + \text{tg}37^\circ$

$$E = \text{sen}230^\circ + \text{tg}37^\circ$$

$$E = \frac{1}{2} + \frac{3}{4}$$

$$E = \frac{2}{4} + \frac{3}{4} = \frac{5}{4}$$

$$E = 1.25$$



20

Evaluar : $E = \frac{(\text{Sen}45^\circ)^2 + \text{Cos}60^\circ}{\text{Csc}30^\circ}$

$$E = \frac{\left(\frac{1}{\sqrt{2}}\right)^2 + \frac{1}{2}}{\frac{1}{\text{Sen}30^\circ}} = \frac{\frac{1}{2} + \frac{1}{2}}{\frac{1}{\frac{1}{2}}} = \frac{1}{2}$$

