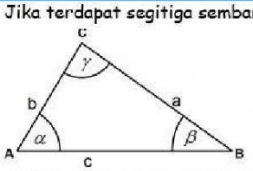
ATURANCOSINUS



RumusAturancosinus

Jika terdapat segitiga sembarang seperti berikut:



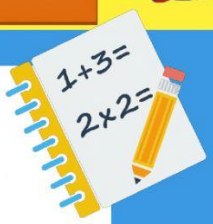
Maka Rumus aturan cos nya yaitu:

$a^2 = b^2 + c^2 - 2 \cdot b \cdot c \cdot \cos A$

$b^2 = a^2 + c^2 - 2 \cdot a \cdot c \cdot \cos B$

$c^2 = a^2 + b^2 - 2 \cdot a \cdot b \cdot \cos C$

**tips: gunakan rumusnya 1 saja sesuai konteks soalnya*

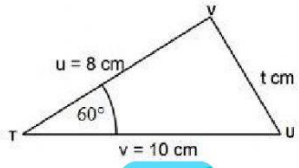




LATIHAN SOAL

a. **Diketahui suatu segitiga TUV dengan panjang sisi TU = 10 cm, panjang sisi TV = 8 cm, dan besar sudut T = 60°. Hitunglah panjang sisi UV!**

Sketsa Gambar:



$t^2 = u^2 + v^2 - 2 \cdot u \cdot v \cdot \cos T$

$t^2 = 8^2 + 10^2 - 2 \cdot 8 \cdot 10 \cdot \cos 60°$

$t^2 = \square + \square - 160 \cdot \frac{\square}{\square}$

$t^2 = \square + \square - \square$

$t^2 = \square$

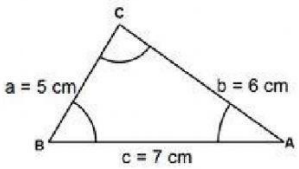
$t = \sqrt{84}$

$t = \sqrt{4 \cdot \square} = \square\sqrt{21}$



b. **Diketahui suatu segitiga ABC dengan panjang sisi a = 5 cm, panjang sisi b = 6 cm, dan panjang sisi c = 7 cm. Hitunglah besar sudut A!**

Sketsa gambar:



$a^2 = b^2 + c^2 - 2 \cdot b \cdot c \cdot \cos A$

$5^2 = 6^2 + 7^2 - 2 \cdot 6 \cdot 7 \cdot \cos A$

$25 = \square + \square - {}^{84}\cos A$

${}^{84}\cos A = \square + \square - 25$

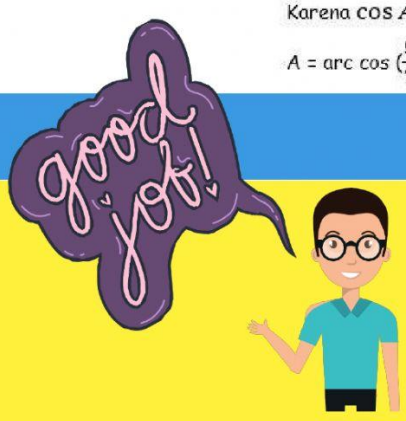
${}^{84}\cos A = \square$

$\cos A = \frac{\square}{84}$

$\cos A = \frac{5}{\square}$

Karena $\cos A = \frac{5}{7}$ bukan sudut istimewa maka

$A = \text{arc}\cos\left(\frac{5}{7}\right)$



LIVEWORKSHEETS