

PENILAIAN HARIAN KD 3.8

Nama :

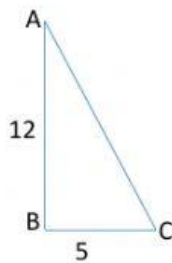
Kelas :

No Absen :

Jawablah pertanyaan berikut dengan mengisi bagian/kotak yang kosong.

1. Diketahui segitiga ABC siku-siku di B. Panjang AB = 12 cm dan BC = 5. Tentukan
 - a. Sin A
 - b. Cos A
 - c. Tan A

Penyelesaian :



$$AC = \sqrt{AB^2 + BC^2}$$

$$AC = \sqrt{12^2 + 5^2}$$

$$AC = \sqrt{144 + 25} = \sqrt{169}$$

$$AC = 13$$

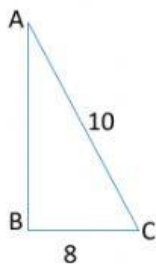
$$\sin A = \frac{de}{mi} = \frac{5}{13}$$

$$\cos A = \frac{sa}{mi} = \frac{12}{13}$$

$$\tan A = \frac{de}{sa} = \frac{5}{12}$$

2. Diketahui segitiga ABC siku-siku di B. Panjang AC = 10 cm dan BC = 8. Tentukan
 - a. Sin C
 - b. Cos C
 - c. Tan C

Penyelesaian :



$$AB = \sqrt{AC^2 - BC^2}$$

$$AB = \sqrt{10^2 - 8^2}$$

$$AB = \sqrt{100 - 64} = \sqrt{36}$$

$$AB = 6$$

$$\sin C = \frac{de}{mi} = \frac{6}{10} = \frac{3}{5}$$

$$\cos C = \frac{sa}{mi} = \frac{8}{10} = \frac{4}{5}$$

$$\tan C = \frac{de}{sa} = \frac{6}{8} = \frac{3}{4}$$

3. Diketahui segitiga siku-siku sebagai berikut. Tentukan :

a. $\sin 45^\circ$

b. $\cos 45^\circ$

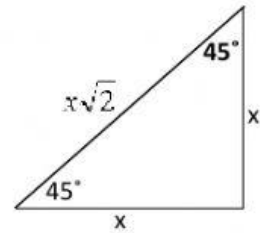
c. $\tan 45^\circ$

Penyelesaian :

$$\sin 45^\circ = \frac{de}{mi} = \frac{x}{x\sqrt{2}} = \frac{x}{x\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$\cos 45^\circ = \frac{sa}{mi} = \frac{x}{x\sqrt{2}} = \frac{x}{x\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$\tan 45^\circ = \frac{de}{sa} = \frac{x}{x} = 1$$



4. Pada suatu segitiga siku-siku, diketahui $\tan \alpha = \frac{3}{4}$. Tentukan :

a. $\sin \alpha$

b. $\cos \alpha$

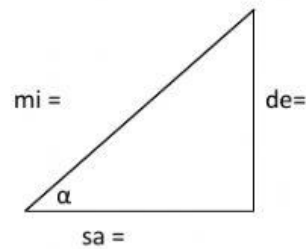
c. $\csc \alpha$

d. $\sec \alpha$

e. $\cot \alpha$

Penyelesaian

$\tan \alpha = \frac{3}{4} = \frac{de}{sa}$, jika digambar menjadi



Dari gambar di atas, diperoleh

$$\sin \alpha = \frac{de}{mi} = \frac{3}{5}$$

$$\cos \alpha = \frac{sa}{mi} = \frac{4}{5}$$

$$\csc \alpha = \frac{mi}{de} = \frac{5}{3}$$

$$\sec \alpha = \frac{mi}{sa} = \frac{5}{4}$$

$$\cot \alpha = \frac{sa}{de} = \frac{4}{3}$$