

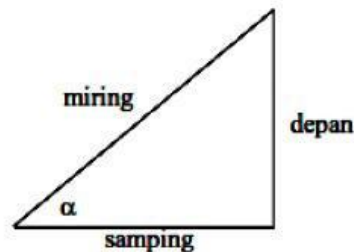
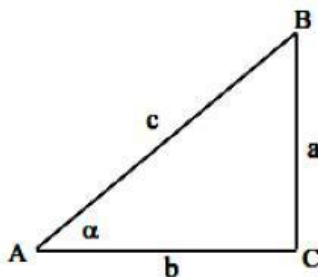
Perbandingan Trigonometri

Lembar Kerja Peserta Didik (LKPD)

Nama:

Kelas:

Perhatikan segitiga siku-siku ABC disamping. Dengan titik sudut siku-siku di C.
Panjang sisi dihadapan sudut A (sisi depan) dinamakan a atau
Panjang sisi dihadapan sudut B (sisi samping) dinamakan b atau
Panjang sisi dihadapan sudut C (sisi miring) dinamakan c atau



Yang dimaksud nilai perbandingan dalam trigonometri adalah enam nilai perbandingan sisi sisi segitiga siku-siku, yaitu :

$$\sin \alpha = \frac{a}{c} = \frac{\text{sisi depan}}{\text{sisi miring}}$$

$$\operatorname{cosec} \alpha = \frac{c}{a} = \frac{\text{sisi miring}}{\text{sisi depan}}$$

$$\cos \alpha = \frac{b}{c} = \frac{\text{sisi samping}}{\text{sisi miring}}$$

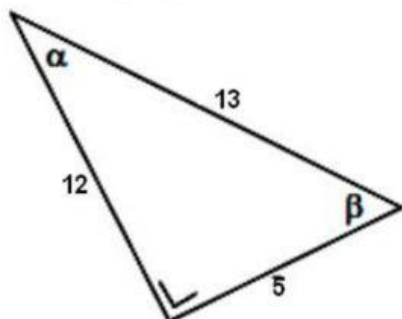
$$\sec \alpha = \frac{c}{b} = \frac{\text{sisi miring}}{\text{sisi samping}}$$

$$\tan \alpha = \frac{a}{b} = \frac{\text{sisi depan}}{\text{sisi samping}}$$

$$\cotan \alpha = \frac{b}{a} = \frac{\text{sisi samping}}{\text{sisi depan}}$$

Find the Solution

01. Dari segitiga siku-siku disamping tentukanlah nilai dari :



(a) $\sin \alpha$

(c) $\tan \alpha$

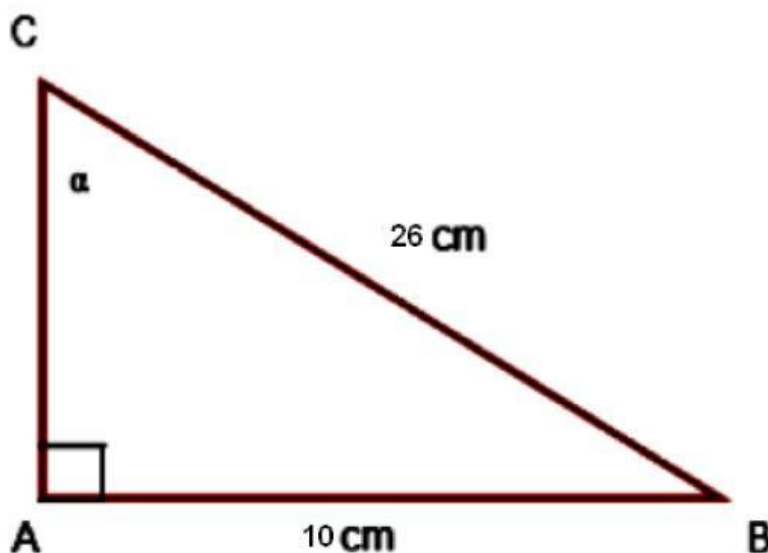
(e) $\cos \beta$

(b) $\cos \alpha$

(d) $\sin \beta$

(f) $\tan \beta$

02. Perhatikan segitiga siku-siku ABC di bawah.



Tentukan:

a. Panjang AC

b. $\sin \alpha$, $\cos \alpha$, $\tan \alpha$

c. $\sec \alpha$, $\operatorname{cosec} \alpha$, dan $\cotan \alpha$

3. Diberikan $\sin A = \frac{3}{5}$. Tentukan lima perbandingan trigonometri yang lain.

Solution:

1. Dilihat dari sudut α , maka sisi depan = ; sisi samping =; sisi miring = Sehingga:

Jodohkanlah. Tariklah garisnya		
a.	$\sin \alpha = \frac{\text{depan}}{\text{miring}} = \dots\dots\dots$	$\frac{12}{13}$
b.	$\cos \alpha = \frac{\text{samping}}{\text{miring}} = \dots\dots\dots$	$\frac{5}{12}$
c.	$\tan \alpha = \frac{\text{depan}}{\text{samping}} = \dots\dots\dots$	$\frac{5}{13}$

- Dilihat dari sudut β , maka sisi depan = ; sisi samping =; sisi miring = Sehingga:

Jodohkanlah. Tariklah garisnya		
a.	$\sin \beta = \frac{\text{depan}}{\text{miring}} = \dots\dots\dots$	$\frac{12}{5}$
b.	$\cos \beta = \frac{\text{samping}}{\text{miring}} = \dots\dots\dots$	$\frac{5}{13}$
c.	$\tan \beta = \frac{\text{depan}}{\text{samping}} = \dots\dots\dots$	$\frac{12}{13}$

2. $AC = \sqrt{BC^2 - AB^2} = \sqrt{\dots\dots\dots^2 - \dots\dots\dots^2} = \sqrt{\dots\dots\dots - \dots\dots\dots}$
 $= \sqrt{\dots\dots\dots} = \dots\dots\dots \text{ cm.}$

- Dari sudut α , maka sisi depan = AB = ; sisi samping = AC =; sisi miring = BC = Sehingga:

a. $\sin \alpha = \frac{AB}{BC} = \dots$

e. $\operatorname{cosec} \alpha = \frac{BC}{AB} = \dots$

b. $\cos \alpha = \frac{AC}{BC} = \dots$

f. $\sec \alpha = \frac{BC}{AC} = \dots$

c. $\tan \alpha = \frac{AB}{AC} = \dots$

g. $\cot \alpha = \frac{AC}{AB} = \dots$

Pilihan Jawaban

a	b	c	d	e	f
$\frac{12}{5}$	$\frac{5}{13}$	$\frac{13}{5}$	$\frac{5}{12}$	$\frac{12}{13}$	$\frac{13}{12}$

3. Diketahui: $\sin A = \frac{3}{5}$, maka

sisi depan =

sisi miring =

sisi samping = $\sqrt{\text{miring}^2 - \text{depan}^2} = \sqrt{\dots\dots\dots} = \dots\dots\dots$

Jodohkanlah

$\cos A = \frac{\text{samping}}{\text{miring}} = \dots$	$\frac{5}{3}$
$\tan A = \frac{\text{depan}}{\text{samping}} = \dots$	$\frac{4}{3}$
$\operatorname{cosec} A = \frac{\text{miring}}{\text{depan}} = \dots$	$\frac{4}{5}$
$\sec A = \frac{\text{miring}}{\text{samping}} = \dots$	$\frac{3}{4}$
$\cot A = \frac{\text{samping}}{\text{depan}} = \dots$	$\frac{5}{4}$

