

TRIGONOMETRI

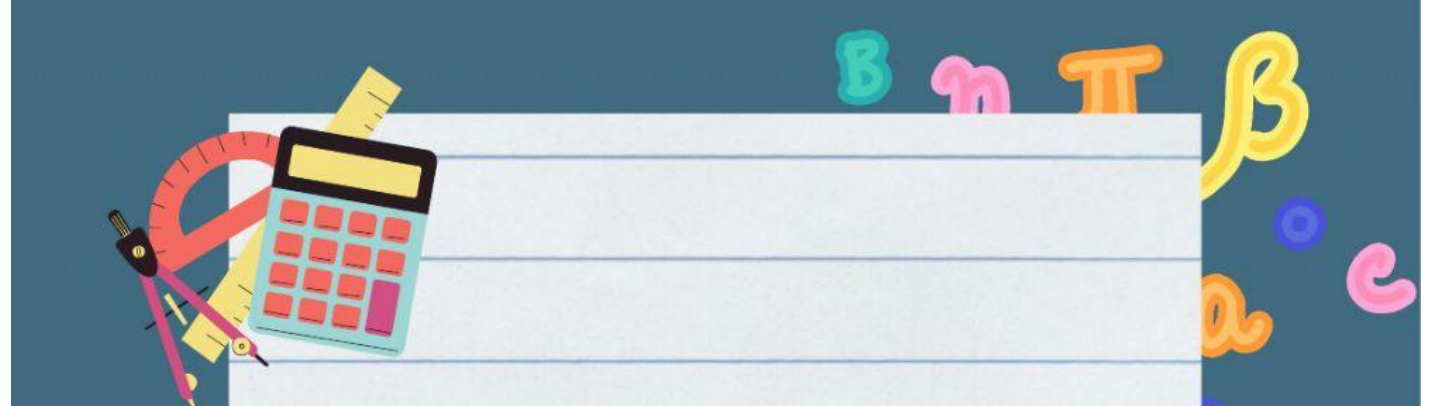
Nama Anggota Kelompok

1. Hitunglah nilai $\sin 105^\circ$ dan $\tan 75^\circ$.
2. Sederhanakan $\sin 70^\circ \cdot \cos 20^\circ + \cos 70^\circ \cdot \sin 20^\circ$
3. Sederhanakan $\frac{\tan 25^\circ + \tan 20^\circ}{1 - \tan 25^\circ \tan 20^\circ}$
4. Dengan menyatakan $3a = 2a + a$, buktikan bahwa

$$\sin 3a = 3 \sin a - 4 \sin^3 a$$

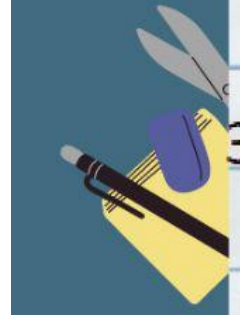
Penyelesaian:

$$\begin{aligned} 1. \quad \sin 105^\circ &= \sin(\quad^\circ + \quad^\circ) \\ &= \sin \quad^\circ \cos \quad^\circ + \cos \quad^\circ \sin \quad^\circ \\ &= \frac{\square}{\square} \sqrt{\square} \cdot \frac{\square}{\square} \sqrt{\square} + \frac{\square}{\square} \cdot \frac{\square}{\square} \sqrt{\square} \\ &= \frac{\square}{\square} \sqrt{\square} + \frac{\square}{\square} \sqrt{\square} \\ &= \frac{\square}{\square} (\sqrt{\square} + \sqrt{\square}) \end{aligned}$$



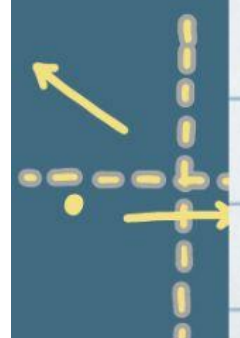
$$2. \sin 70^\circ \cdot \cos 20^\circ + \cos 70^\circ \cdot \sin 20^\circ$$

$$= \sin(\quad^\circ + \quad^\circ) = \sin \quad^\circ =$$



$$3. \frac{\tan 25^\circ + \tan 20^\circ}{1 - \tan 25^\circ \tan 20^\circ} = \tan(\quad^\circ + \quad^\circ)$$

$$= \tan \quad^\circ =$$



$$4. \sin 3a = \sin(2a + a)$$

$$= \square 2a \square a + \square 2a \square a$$

$$= (2\square a \square a) \square a + (1 - 2\square^2 a) \cdot \square a$$

$$= 2\square a \square^2 a + \square a - 2\square^3 a$$

$$= 2\square a (1 - \square^2 a) + \square a - 2\square^3 a$$

$$= 2\square a - 2\square^3 a + \square a - 2\square^3 a$$

$$= 3\square a - 4\square^3 a$$
