



PUSAT KEGIATAN BELAJAR MASYARAKAT

PKBM ANGUDI MULYO

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Soal Matematika kls X Semester 2

1. Nyatakan perbandingan trigonometri $\tan 150^\circ$ dalam perbandingan trigonometri sudut pelurusnya!
 - a. $\tan 150^\circ = \tan (180^\circ - 30^\circ) = -\tan 30^\circ = -\frac{1}{3} \sqrt{3}$
 - b. $\tan 180^\circ = \tan (150^\circ - 30^\circ) = \tan 30^\circ = \frac{1}{3} \sqrt{3}$
 - c. $\tan 130^\circ = \tan (150^\circ - 80^\circ) = -\tan 30^\circ = -\frac{1}{3} \sqrt{3}$
 - d. $\tan 130^\circ = \tan (150^\circ - 30^\circ) = -\tan 80^\circ = -\frac{1}{3} \sqrt{3}$
2. Nyatakan perbandingan trigonometri $\sin 120^\circ$ dalam perbandingan trigonometri sudut pelurusnya!
 - a. $\sin 160^\circ = \sin (130^\circ - 60^\circ) = \sin 20^\circ = \frac{1}{2} \sqrt{3}$
 - b. $\sin 120^\circ = \sin (180^\circ - 60^\circ) = \sin 60^\circ = \frac{1}{2} \sqrt{3}$
 - c. $\sin 180^\circ = \sin (120^\circ - 60^\circ) = \sin 60^\circ = \frac{1}{2} \sqrt{3}$
 - d. $\sin 120^\circ = \sin (160^\circ - 60^\circ) = \sin 60^\circ = \frac{1}{2} \sqrt{3}$
3. Nyatakan perbandingan trigonometri $\cos 135^\circ$ dalam perbandingan trigonometri sudut pelurusnya!
 - a. $\cos 135^\circ = \cos (160^\circ - 45^\circ) = -\cos 45^\circ = -\frac{1}{2} \sqrt{2}$
 - b. $\cos 135^\circ = \cos (130^\circ - 45^\circ) = -\cos 45^\circ = -\frac{1}{2} \sqrt{2}$
 - c. $\cos 135^\circ = \cos (140^\circ - 45^\circ) = -\cos 45^\circ = -\frac{1}{2} \sqrt{2}$
 - d. $\cos 135^\circ = \cos (180^\circ - 45^\circ) = -\cos 45^\circ = -\frac{1}{2} \sqrt{2}$
4. Nyatakan perbandingan trigonometri cosec 150° dalam perbandingan trigonometri sudut pelurusnya!
 - a. $\operatorname{cosec} 150^\circ = \operatorname{cosec} (180^\circ - 30^\circ) = \operatorname{cosec} 30^\circ = 2$
 - b. $\operatorname{cosec} 150^\circ = \operatorname{cosec} (120^\circ - 30^\circ) = \operatorname{cosec} 30^\circ = 2$
 - c. $\operatorname{cosec} 150^\circ = \operatorname{cosec} (130^\circ - 30^\circ) = \operatorname{cosec} 30^\circ = 2$
 - d. $\operatorname{cosec} 150^\circ = \operatorname{cosec} (150^\circ - 30^\circ) = \operatorname{cosec} 30^\circ = 2$

5. Nyatakan perbandingan trigonometri $\sin 36^\circ$ dalam perbandingan sudut komplementernya..

a. $\sin 36^\circ = \sin (90^\circ - 54^\circ) = \cos 54^\circ$

Jadi, nilai $\sin 36^\circ = \cos 54^\circ$

b. $\sin 36^\circ = \sin (54^\circ - 54^\circ) = \cos 90^\circ$

Jadi, nilai $\sin 36^\circ = \cos 54^\circ$

c. $\sin 36^\circ = \sin (54^\circ - 54^\circ) = \cos 54^\circ$

Jadi, nilai $\sin 36^\circ = \cos 54^\circ$

d. $\sin 36^\circ = \sin (90^\circ - 54^\circ) = \cos 90^\circ$

Jadi, nilai $\sin 36^\circ = \cos 54^\circ$

6. Nyatakan perbandingan trigonometri $\tan 73^\circ$ dalam perbandingan sudut komplementernya..

a. $\tan 73^\circ = \tan (45^\circ - 17^\circ) = \cotan 17^\circ$

Jadi, nilai $\tan 73^\circ = \cotan 17^\circ$

b. $\tan 73^\circ = \tan (73^\circ - 17^\circ) = \cotan 17^\circ$

Jadi, nilai $\tan 73^\circ = \cotan 17^\circ$

c. $\tan 73^\circ = \tan (17^\circ - 17^\circ) = \cotan 17^\circ$

Jadi, nilai $\tan 73^\circ = \cotan 17^\circ$

d. $\tan 73^\circ = \tan (90^\circ - 17^\circ) = \cotan 17^\circ$

Jadi, nilai $\tan 73^\circ = \cotan 17^\circ$

7. Nyatakan perbandingan trigonometri $\cos 57^\circ$ dalam perbandingan sudut komplementernya..

a. $\cos 57^\circ = \cos (57^\circ - 33^\circ) = \sin 33^\circ$

Jadi, nilai $\cos 57^\circ = \sin 90^\circ$

b. $\cos 57^\circ = \cos (90^\circ - 33^\circ) = \sin 33^\circ$

Jadi, nilai $\cos 57^\circ = \sin 33^\circ$

c. $\cos 57^\circ = \cos (90^\circ - 57^\circ) = \sin 33^\circ$

Jadi, nilai $\cos 57^\circ = \sin 90^\circ$

d. $\cos 57^\circ = \cos (90^\circ - 33^\circ) = \sin 33^\circ$

Jadi, nilai $\cos 33^\circ = \sin 57^\circ$

8. Nyatakan perbandingan trigonometri $\sec 32^\circ$ dalam perbandingan sudut komplementernya..

- a. $\sec 32^\circ = \sec (95^\circ - 58^\circ) = \operatorname{cosec} 58^\circ$
Jadi, nilai $\sec 52^\circ = \operatorname{cosec} 58^\circ$
- b. $\sec 32^\circ = \sec (58^\circ - 90^\circ) = \operatorname{cosec} 58^\circ$
Jadi, nilai $\sec 58^\circ = \operatorname{cosec} 58^\circ$
- c. $\sec 32^\circ = \sec (90^\circ - 58^\circ) = \operatorname{cosec} 58^\circ$
Jadi, nilai $\sec 32^\circ = \operatorname{cosec} 58^\circ$
- d. $\sec 32^\circ = \sec (32^\circ - 58^\circ) = \operatorname{cosec} 90$
Jadi, nilai $\sec 32^\circ = \operatorname{cosec} 58^\circ$

9. Nyatakan sudut 270° dalam radian

- a. $270^\circ = (\pi/180^\circ) (270^\circ) = 2/3\pi$
- b. $270^\circ = (\pi/120^\circ) (270^\circ) = 2/3\pi$
- c. $270^\circ = (\pi/270^\circ) (270^\circ) = 2/3\pi$
- d. $270^\circ = (\pi/180^\circ) (80^\circ) = 2/3\pi$

10. Nyatakan sudut 360° dalam radian

- a. $360^\circ = (\pi/180^\circ) (320^\circ) = 1/2\pi$
- b. $360^\circ = (\pi/180^\circ) (310^\circ) = 1/2\pi$
- c. $360^\circ = (\pi/120^\circ) (360^\circ) = 1/2\pi$
- d. $360^\circ = (\pi/180^\circ) (360^\circ) = 1/2\pi$