

1. Cari Pythagoras dari titik tersebut:

$$\begin{aligned}(\sqrt{8})^2 + (\sqrt{8})^2 &= \sqrt{16} \\ &= 4\end{aligned}$$

Setelah itu cari tan dari derajat yang terbuat

$$\begin{aligned}\tan a &= \sqrt{8} / -\sqrt{8} = -1 \\ a &= 45^\circ\end{aligned}$$

karena berada di kuadran 4 maka:

$$\begin{aligned}360^\circ - 45^\circ &= 315^\circ \\ (4, 315^\circ)\end{aligned}$$

2. $6 \times \cos 330^\circ = 6 \times \cos 30^\circ$
 $= 3\sqrt{3}$

$$\begin{aligned}6 \times \sin 330^\circ &= 6 \times -\sin 30^\circ \\ &= -3\end{aligned}$$

Sehingga : B ($3\sqrt{3}$, -3)

3. $P(9,12) = P(r,a)$

$$r = \sqrt{9^2 + 12^2}$$

$$r = 15$$

4. $P(-5,10) = P(r,a)$ $\tan a = ?$

$$\tan a = 10 / -5$$

$$\tan a = -2$$

5. $A(a,b) = A(p,q) \rightarrow \text{cartesius}$

$$\text{Jadi } a = \sqrt{p^2 + q^2}$$

6. $4 \times \cos 30^\circ = 2\sqrt{3}$

$$4 \times \sin 30^\circ = 2$$

$$\text{Jadi : } (2\sqrt{3}, 2)$$

7. $2 \times \cos 120^\circ = 2 \times -\cos 60^\circ$
 $= -1$

$$\begin{aligned}2 \times \sin 120^\circ &= 2 \times \sin 60^\circ \\ &= \sqrt{3}\end{aligned}$$

$$\text{Jadi : } (-1, \sqrt{3})$$

8. Cari garis miringnya:

$$\sqrt{1^2 + (\sqrt{3})^2} = r$$

$$r = 2$$

$$\tan a = \sqrt{3} / 1$$

$$a = 60^\circ$$

$$\text{Jadi : } (2, 60^\circ)$$

9. $4 \times \cos 210^\circ = 4 \times -\cos 30^\circ$
 $= -2\sqrt{3}$

$$\begin{aligned}4 \times \sin 210^\circ &= 4 \times -\sin 30^\circ \\ &= -2\end{aligned}$$

$$\text{Sehingga : } (-2\sqrt{3}, -2)$$

10. $V(-1^2 + -1^2) = V2$
 $\tan a = -1/-1$
 $A = 45^\circ$
 Karena kuadran 3 $\rightarrow 180^\circ + 45^\circ = 225^\circ$
 Jadi: $(V2, 225^\circ)$
11. Karena dalam selang 180° dan 270° maka sudah pasti kuadran III
 Maka $\cos x = \text{minus}$
 $\tan x = 24/10$
 Pythagoras $= V(24^2 + 10^2)$
 $= 26$
 $\cos x = -10/26$
 $= -5/13$
12. $1 + \frac{1}{2} - 1 + 1 = 1 \frac{1}{2}$
 $= 1,5$
13. $\sec 330 = \sec 30 = 2/3 V3$
 $\tan 120 = -\tan 60 = -V3$
 $\sin 315 = -\sin 45 = -1/2 V2$
 $2/3 V3 \cdot -V3 \cdot -1/2 V2 = -V2$
14. $\sin x + \cos 60 / \sin 150 - \sin 270 = 0$
 $\sin x + \frac{1}{2} / \frac{1}{2} + 1 = 0$
 $\sin x + \frac{1}{2} / 1 \frac{1}{2} = 0$
 $\sin x + \frac{1}{2} = 0$
 $\sin x = -\frac{1}{2}$
 $x = 210^\circ$
15. $\tan x = a$
 Pythagoras $= V(a^2 + 1)$
 $\sin x = a / V(a^2 + 1)$
 $\cos x = 1 / V(a^2 + 1)$
 $(\sin x + \cos x)^2 = a^2 + 2a + 1 / a^2 + 1$
16. $\sin 135 + \sin 225 / \cos 225$
 $= \frac{1}{2} V2 - \frac{1}{2} V2 / \cos 225$
 $= 0 / \cos 225$
 $= 0$
17. $\sin 20 \cdot \sin 240 \tan 45 / \cos 70 \cos 120 \tan 120$
 $= \sin 20 \cdot -\frac{1}{2} V3 \cdot 1 / \sin 20 \cdot -\frac{1}{2} \cdot -V3$
 $= -1$
18. $\sin 45 \sin 135 \sin 120 \sin 330 / \cos 45 \cos 225 \cos 240 \cos 300$
 $= \frac{1}{2} V2 \cdot \frac{1}{2} V2 \cdot \frac{1}{2} V3 \cdot -\frac{1}{2} / \frac{1}{2} V2 \cdot -1/2 V2 \cdot -\frac{1}{2} \cdot \frac{1}{2}$
 $= -V3$
19. $\cos(90-(2x+10)) = \cos(3x-35)$
 $= 90 - 2x - 10 = 3x - 35$
 $x = -10$
20. $\cot(90-(45-x)) = \cot(25-x)$
 $= 90-45+x = 25-x$
 $x = 23$