

FULL PREPARACAO TRIGONOMETRIA

1) $0^\circ = 0 \text{ rad}; 45^\circ = \frac{\pi}{4} \text{ rad}; 90^\circ = \frac{\pi}{2} \text{ rad}.$
 $120^\circ = \frac{120^\circ \cdot \pi \text{ rad}}{180^\circ} = \frac{2\pi}{3} \text{ rad}.$
 $210^\circ = \frac{210^\circ \cdot \pi \text{ rad}}{180^\circ} = \frac{7\pi}{6} \text{ rad}$
 $225^\circ = \frac{225^\circ \cdot \pi \text{ rad}}{180^\circ} = \frac{5\pi}{4} \text{ rad} = \frac{5\pi}{4}$
 $300^\circ = \frac{300^\circ \cdot \pi \text{ rad}}{180^\circ} = \frac{5\pi}{3} \text{ rad}$
 $330^\circ = \frac{330^\circ \cdot \pi \text{ rad}}{180^\circ} = \frac{11\pi}{6} \text{ rad}.$

2) $\frac{3\pi}{4} \text{ rad} = \frac{3\pi \text{ rad} \cdot 180^\circ}{4\pi \text{ rad}} = 135^\circ$
 $\frac{5\pi}{3} \text{ rad} = \frac{5\pi \text{ rad} \cdot 180^\circ}{3\pi \text{ rad}} = 300^\circ$
 $\frac{2\pi}{3} \text{ rad} = \frac{2\pi \text{ rad} \cdot 180^\circ}{3\pi \text{ rad}} = 120^\circ$
 $\pi \text{ rad} = 180^\circ; 2\pi \text{ rad} = 360^\circ$
 $\frac{3\pi}{2} \text{ rad} = \frac{3\pi \text{ rad} \cdot 180^\circ}{2\pi \text{ rad}} = 270^\circ$

1) $\frac{9\pi}{10} \text{ rad} = \frac{9\pi \text{ rad} \cdot 180^\circ}{10\pi \text{ rad}} = 162^\circ$
 $\frac{4\pi}{3} \text{ rad} = \frac{4\pi \text{ rad} \cdot 180^\circ}{3\pi \text{ rad}} = 240^\circ$

3) $\alpha = 17 \text{ rad}$
 $\beta = 90^\circ = \frac{\pi}{2} \text{ rad} \approx 1.57 \text{ rad}$
 $\Rightarrow \alpha > \beta$
 \uparrow
 $17 > 1.57$

Per tant si un angle fa 17 rad és més gran que un angle recte.

4) a) Fals. $-1 \leq \cos \alpha \leq 1 \quad \forall \alpha \in \mathbb{R}.$
 "per qualsevol valor de α real"

b) Fals. Pot ser 1, per exemple $\sin 90^\circ = 1$

c) Cert, per exemple $\cos 0 = 1$

d) Fals, pot ser més petit o igual que 0. $-1 \leq \sin \alpha \leq 1$
 Per exemple $\sin(210^\circ) = -\frac{1}{2}$