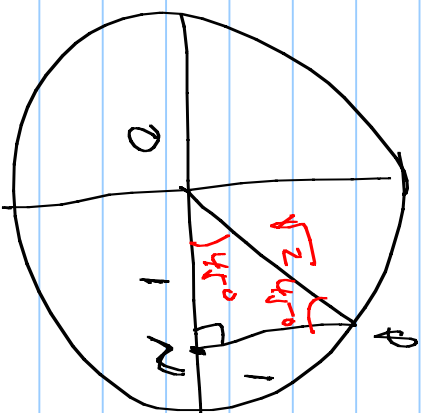


FUNCTION VALUES OF SPECIAL ANGLES

GIVEN THE FOLLOWING

FIND \overline{OP} AND THE ANGLES
(IN DEGREES).



$$\overline{OP}^2 = 1^2 + 1^2$$

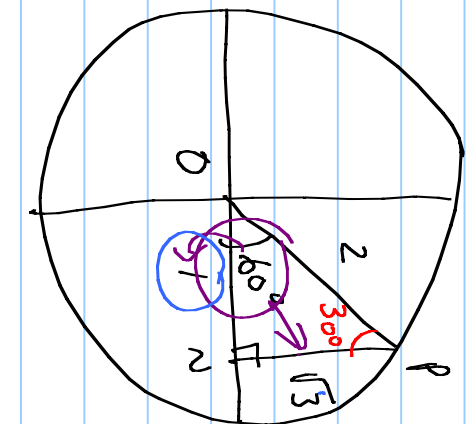
$$\angle N = 90^\circ$$

$$\overline{OP}^2 = 2$$

ISO TRIANGLE $\therefore \angle OPN = \angle PON = 45^\circ$

$$\overline{OP} = \sqrt{2}$$

$$\frac{\sqrt{3}}{2}$$



$$\angle N = 90^\circ$$

$$\angle PON = 30^\circ$$

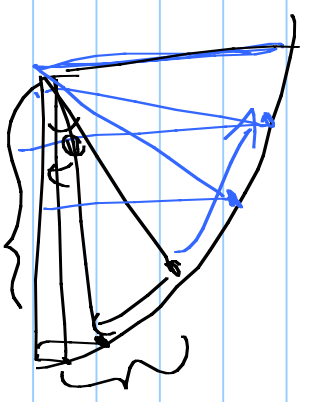
$$30-60-90 \triangle$$

$$\frac{\sqrt{3}}{1} = \sqrt{3} \quad \angle PON = 30^\circ$$

$$\frac{1}{2}$$

- LONGEST SIDE (HYPOTENUSE) IS TWICE THE SHORTEST
- THE MIDDLE SIDE IS $\sqrt{3}$ TIMES THE SHORTEST

| | $\sin \theta$ | $\cos \theta$ | $\tan \theta$ |
|----|--|----------------------|--|
| 0 | 0 | 1 | 0 |
| 30 | $\frac{1}{2}$ | $\frac{\sqrt{3}}{2}$ | $\frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$ |
| 45 | $\frac{1}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$ | $\frac{\sqrt{2}}{2}$ | 1 |
| 60 | $\frac{\sqrt{3}}{2}$ | $\frac{1}{2}$ | $\sqrt{3}$ |
| 90 | 1 | 0 | ∞ |



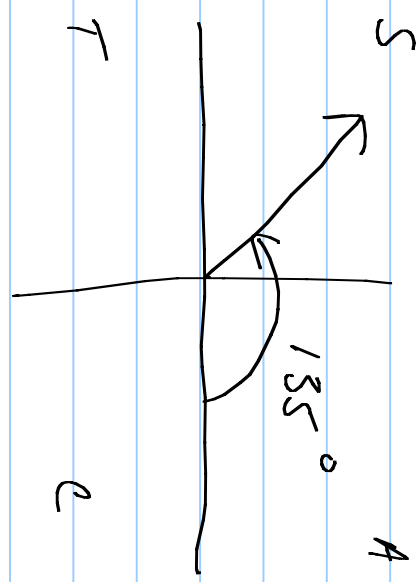
DE

FIND THE EXACT VALUE OF $\sin 135^\circ + \cos 135^\circ$



$$\text{REF } \angle = 185^\circ$$

$$\text{REF } \angle = 45^\circ$$



$$\sin 135^\circ = \sin 45^\circ = \frac{\sqrt{2}}{2}$$

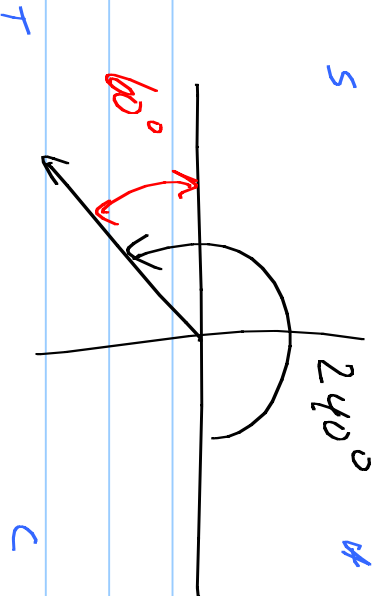
$$\cos 135^\circ = \cos 45^\circ = -\frac{\sqrt{2}}{2}$$

DE EXACT VALUE OF \sin , \cos , \tan 240°

Solve

S

A



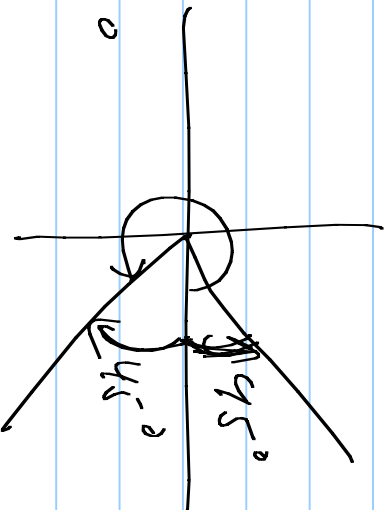
$$\sin 240^\circ = \sin 60^\circ = \frac{\sqrt{3}}{2}$$

$$\cos 240^\circ = \cos 60^\circ = -\frac{1}{2}$$

$$\tan 240^\circ = \tan 60^\circ = \sqrt{3}$$

Ans $\cos \theta = \frac{\sqrt{2}}{2}$ $0 \leq \theta \leq 360^\circ$

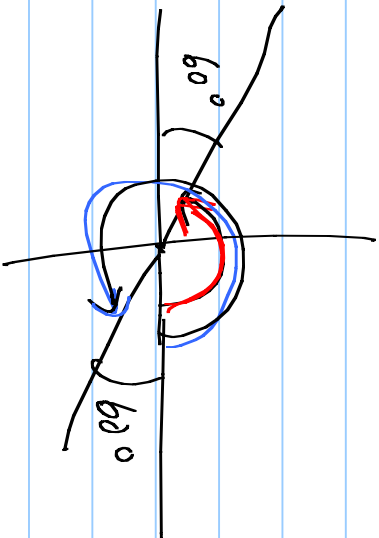
$$\theta_1 = 45^\circ$$



$$\theta_2 = 360 - 45 = 315^\circ$$

~~FE~~ $\tan \theta = -\sqrt{3}$ $0 \leq \theta \leq 360^\circ$

Solve



$$\theta_1 = 180 - 60 = 120^\circ$$

$$\theta_2 = 360 - 60 = 300^\circ$$

H/w Pg 174 # 1-3, 7-9