

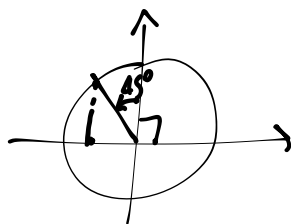
26/3/2018

485

$$\begin{aligned}
 & \frac{2 \cos 240^\circ + 2 \tan 225^\circ - \sqrt{2} \cos 315^\circ}{4 \cos 150^\circ + 2 \cot 225^\circ} = \\
 & \frac{2 [-\cos 60^\circ] + 2 \tan 45^\circ - \sqrt{2} \cos (-45^\circ)}{4 [-\cos 30^\circ] + 2 \cot 45^\circ} = \\
 & = \frac{-2 \cdot \frac{1}{2} + 2 \cdot 1 - \sqrt{2} \cdot \frac{\sqrt{2}}{2}}{-4 \cdot \frac{\sqrt{3}}{2} + 2 \cdot 1} = \frac{-1 + 2 - 1}{-2\sqrt{3} + 2} = 0
 \end{aligned}$$

496

$$\begin{aligned}
 & 4(\sin 150^\circ \cos 135^\circ + \cos 240^\circ \sin 135^\circ) \sin 45^\circ = \\
 & = 4 \left(\sin 30^\circ \cdot (-\sin 45^\circ) - \cos 60^\circ \cdot \cos 45^\circ \right) \cdot \frac{\sqrt{2}}{2} =
 \end{aligned}$$



$$= 4 \left(\frac{1}{2} \left(-\frac{\sqrt{2}}{2} \right) - \frac{1}{2} \cdot \frac{\sqrt{2}}{2} \right) \frac{\sqrt{2}}{2} = 2 \left(-\frac{\sqrt{2}}{2} \right) \cdot \frac{\sqrt{2}}{2} = -2$$

501

$$\sqrt{3} \sin 240^\circ + 3 \tan 150^\circ - 2 \sec 120^\circ + 5 \cos 120^\circ + 2 \tan 600^\circ =$$

$\begin{matrix} 180^\circ+60^\circ & 180^\circ-30^\circ & 90^\circ+30^\circ \end{matrix}$

$$= \sqrt{3} (-\sin 60^\circ) + 3 \tan (-30^\circ) - \frac{2}{\cos (90^\circ+30^\circ)} + 5 (-\sin 30^\circ) +$$

$$+ 2 \tan (360^\circ + 180^\circ + 60^\circ) =$$

$$= -\sqrt{3} \cdot \frac{\sqrt{3}}{2} - 3 \frac{\sqrt{3}}{3} - \frac{2}{-\frac{1}{2}} - \frac{5}{2} + 2 \overset{\tan 60^\circ}{\sqrt{3}} =$$

$$= -\frac{3}{2} - \sqrt{3} + 4 - \frac{5}{2} + 2\sqrt{3} = \sqrt{3}$$

511

$$\cos \frac{21}{4} \pi + \sin \frac{15}{6} \pi + \tan \frac{23}{3} \pi + \sin \frac{31}{4} \pi + \cot \frac{43}{6} \pi =$$

$$= \cos \left(5\pi + \frac{1}{4}\pi \right) + \sin \left(2\pi + \frac{\pi}{2} \right) + \tan \left(7\pi + \frac{2}{3}\pi \right) +$$

$$+ \sin \left(7\pi + \frac{3}{4}\pi \right) + \cot \left(7\pi + \frac{\pi}{6} \right) =$$

$$= -\cos \frac{\pi}{4} + \sin \frac{\pi}{2} + \tan \frac{\pi - \frac{\pi}{3}}{3} - \sin \frac{3}{4}\pi + \cot \frac{\pi}{6} =$$

$$= -\frac{\sqrt{2}}{2} + 1 - \sqrt{3} - \frac{\sqrt{2}}{2} + \sqrt{3} = 1 - \sqrt{2}$$