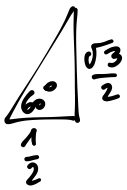
27/4/2018

53 $4\cos 0 - 2\sec\frac{\pi}{3} + 2\operatorname{cosec}\frac{\pi}{4} - 4\operatorname{sen}\frac{\pi}{4} + \operatorname{cotg}\frac{\pi}{2} =$

$$= 4\cdot 1 - 2\cdot\frac{1}{\cos\frac{\pi}{3}} + 2\cdot\frac{1}{\operatorname{sen}\frac{\pi}{4}} - 4\cdot\frac{\sqrt{2}}{2} + \frac{\cos\frac{\pi}{2}}{\operatorname{sen}\frac{\pi}{2}} =$$

$$= 4 - 2\cdot\frac{1}{\frac{1}{2}} + 2\cdot\frac{1}{\frac{\sqrt{2}}{2}} - 2\sqrt{2} + \frac{0}{1} =$$



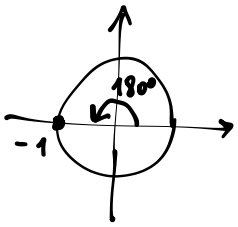
$$= 4 - 2\cdot 2 + 2\cdot\frac{2}{\sqrt{2}} - 2\sqrt{2} =$$

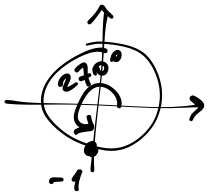
$$= \frac{4}{\sqrt{2}} - 2\sqrt{2} = \frac{4 - 2\sqrt{2}\cdot\sqrt{2}}{\sqrt{2}} = \frac{4-4}{\sqrt{2}} = 0$$

55 $\cos 0° + \operatorname{sen} 90° - 3\cos 180° + 5\operatorname{sen}^2 270° - \operatorname{sen} 180° + 7\cos 270° =$

($\operatorname{sen}^2 270° = (\operatorname{sen} 270°)^2$; $\operatorname{sen} 180° = 0$)

$$= 1 + 1 - 3\cdot(-1) + 5\cdot(-1)^2 - 0 + 7\cdot 0 =$$

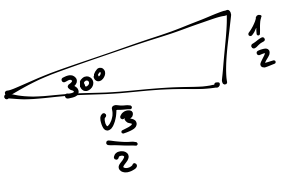




$$= 1 + 1 + 3 + 5 = 10$$

56 $\sqrt{3}\cos 30° - \sqrt{3}\sec 60° - \operatorname{sen} 45° + \cos 60°\operatorname{cosec} 45° - 8\operatorname{sen}^2 30° =$

$$= \sqrt{3}\cdot\frac{\sqrt{3}}{2} - \sqrt{3}\cdot\frac{1}{\cos 60°} - \frac{\sqrt{2}}{2} + \frac{1}{2}\cdot\frac{1}{\operatorname{sen} 45°} - 8\cdot\left(\frac{1}{2}\right)^2 =$$



$$= \frac{3}{2} - \sqrt{3}\cdot\frac{1}{\frac{1}{2}} - \frac{\sqrt{2}}{2} + \frac{1}{2}\cdot\frac{1}{\frac{\sqrt{2}}{2}} - 2\cdot\frac{1}{4} =$$

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