339 $\sin(-30°)$; $\cos(-60°)$;

340 $\cos\left(-\frac{\pi}{6}\right)$; $\sec\left(-\frac{\pi}{4}\right)$;

341 $\sin\left(2\pi-\frac{\pi}{3}\right)$; $\tan\left(-\frac{\pi}{4}\right)$;

$$\sin(-30°) = -\sin 30° = -\frac{1}{2} \qquad \cos(-60°) = \cos 60° = \frac{1}{2}$$

$$\cos\left(-\frac{\pi}{6}\right) = \cos\frac{\pi}{6} = \frac{\sqrt{3}}{2} \qquad \sec\left(-\frac{\pi}{4}\right) = \frac{1}{\cos\left(-\frac{\pi}{4}\right)} = \frac{1}{\cos\frac{\pi}{4}} = \frac{1}{\frac{\sqrt{2}}{2}} = \sqrt{2}$$

$$\sin\left(2\pi-\frac{\pi}{3}\right) = \sin\left(-\frac{\pi}{3}\right) = -\sin\frac{\pi}{3} = -\frac{\sqrt{3}}{2}$$

$$\tan\left(-\frac{\pi}{4}\right) = -\tan\frac{\pi}{4} = -1$$

403 $\tan(-\alpha)\cos(\pi+\alpha) - \cos\left(\frac{3}{2}\pi+\alpha\right) - \cot\left(\frac{\pi}{2}+\alpha\right) =$

$$= -\tan\alpha \cdot (-\cos\alpha) - \cos\left(\pi+\frac{\pi}{2}+\alpha\right) - (-\tan\alpha) =$$

$$= \frac{\sin\alpha}{\cos\alpha} \cdot \cos\alpha - \left(-\cos\left(\frac{\pi}{2}+\alpha\right)\right) + \tan\alpha =$$

$$= \sin\alpha + (-\sin\alpha) + \tan\alpha = \boxed{\tan\alpha}$$

407

$$\dfrac{\sin\left(\dfrac{\pi}{2}-\alpha\right)+\cos(-\alpha)+\sin(2\pi-\alpha)+\cos\left(\dfrac{\pi}{2}-\alpha\right)}{\cos\left(\dfrac{\pi}{2}+\alpha\right)+\sin(-\alpha)}=$$

$$=\dfrac{\cos\alpha+\cos\alpha-\cancel{\sin\alpha}+\cancel{\sin\alpha}}{-\sin\alpha-\sin\alpha}=$$

$$=\dfrac{\cancel{2}\cos\alpha}{-\cancel{2}\sin\alpha}=\boxed{-\cot\alpha}$$

416

$$\underbrace{\sin(720°+\alpha)}_{4\cdot 180°}\cos(180°+\alpha)-\underbrace{\cos(450°+\alpha)}_{360°+90°}\sin(-270°-\alpha)=$$

$$=\sin\alpha\,(-\cos\alpha)-(-\sin\alpha)\,(-\sin(270°+\alpha))=$$

$$=-\sin\alpha\cos\alpha-\sin\alpha\,\sin(180°+90°+\alpha)=$$

$$=-\sin\alpha\cos\alpha-\sin\alpha\,(-\sin(90°+\alpha))=$$

$$=-\sin\alpha\cos\alpha-\sin\alpha\,(-\cos\alpha)=0$$