

$$20) \cos(-x) + \cos(\pi-x) = \cos(\pi+x) + \cos x$$

left-hand side :

$$\cos(-x) + \cos(\pi-x) = \cos x - \cos x = 0$$

right-hand side :

$$\cos(\pi+x) + \cos x = -\cos x + \cos x = 0$$

$$\therefore \parallel \cos(-x) + \cos(\pi-x) = \cos(\pi+x) + \cos x \parallel$$

$$21) \frac{\sin(\pi-x)}{\operatorname{tg}(\pi+x)} \cdot \frac{\operatorname{ctg}(\frac{\pi}{2}-x)}{\operatorname{tg}(\frac{\pi}{2}+x)} \cdot \frac{\cos(2\pi-x)}{\sin(-x)} = \sin x$$

$$\rightarrow \left\{ \begin{array}{l} \sin(\pi-x) = \sin x \\ \operatorname{ctg}(\frac{\pi}{2}-x) = \operatorname{tg} x \\ \cos(2\pi-x) = \cos x \\ \operatorname{tg}(\pi+x) = +\operatorname{tg} x \\ \operatorname{tg}(\frac{\pi}{2}+x) = -\operatorname{ctg} x \\ \sin(-x) = -\sin x \end{array} \right.$$

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