

$$\frac{(x-1)(4x-3)}{(x-1)(2x-3)} = \frac{4x-3}{2x-3} \xrightarrow{x \rightarrow 1} = \frac{1}{2} \checkmark$$

(۲)

$$x \rightarrow 0^+ \vee 0^- \rightarrow \frac{1-3x-3x-1}{x} = \frac{-6x}{x} = -6 \checkmark$$

(۲)

$$\frac{(\sqrt{x}-2)(\sqrt{x}+2)}{\sqrt{x}-2} = \sqrt{x}+2 = 4 \checkmark$$

(۲)

$$\frac{\sqrt{x}(\sqrt{x}-\sqrt{2})}{(x-2)(2x+3)} = \frac{\sqrt{x}(\sqrt{x}-\sqrt{2})}{(\sqrt{x}-\sqrt{2})(\sqrt{x}+\sqrt{2})(2x+3)} = \frac{\sqrt{x}}{(\sqrt{x}+\sqrt{2})(2x+3)} = \frac{\sqrt{2}}{14\sqrt{2}} = \frac{1}{14} \checkmark$$

(۲)

$$\frac{1-\sqrt{x}}{2-\sqrt{2-x}} \times \frac{2}{2} \times \frac{22}{22} = \frac{1-x}{2-\sqrt{2-x}} \times \frac{2}{2} = \frac{1-x}{x-1} \times 2 = -2 \checkmark$$

(۲)

$$\frac{\sqrt{px+q} - r}{\sqrt{ax+V} - p} \times \frac{\sqrt{p}}{\sqrt{p}} \times \frac{r\sqrt{q}}{r\sqrt{q}} = \frac{px+q-r^2}{ax+V-p^2} \times \frac{r\sqrt{q}}{r\sqrt{q}} = \frac{px-r^2}{ax-p^2} \times \frac{r\sqrt{q}}{r\sqrt{q}}$$

$$\frac{p(x-r^2)}{a(x-p^2)} \times \frac{r\sqrt{q}}{r\sqrt{q}} = \frac{pr}{ar}$$

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$$\frac{\sqrt{px+\sqrt{q}} - r}{\sqrt{ax-1}} \times \frac{\sqrt{p}}{\sqrt{p}} \times \frac{r\sqrt{q}}{r\sqrt{q}} = \frac{px+\sqrt{q}-r^2}{ax-1} \times \frac{r\sqrt{q}}{r\sqrt{q}}$$

V

$$\frac{(p\sqrt{q}+r)(\sqrt{q}-1)}{(\sqrt{q}-1)(\sqrt{q}+1)} = \frac{p\sqrt{q}+r}{\sqrt{q}+1} \times \frac{r\sqrt{q}}{r\sqrt{q}} = \frac{pr}{r}$$

$$\frac{1+\cos^p x}{1-\cos^p x} = \frac{(1+\cos x)(1+\cos^p x - \cos x)}{(1+\cos x)(1-\cos x)} = \frac{p}{r}$$

A

$$\frac{1 - \frac{\sin x}{\cos x}}{\sin x - \cos x} = \frac{\cos x - \sin x}{\cos x} \times \frac{1}{\sin x - \cos x} = \frac{-1}{\cos x} = \frac{-1}{\frac{r}{\sqrt{r}}} = \frac{-r}{r} = -\sqrt{r}$$

$$\frac{\sin^p x - \cos^p x}{\cos^p x} \times \frac{1}{\cos^p x - \sin^p x} = \frac{-1}{\cos^p x} = \frac{-1}{\frac{1}{r}} = -r$$

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