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

分母に $\square^2 - \square^2$ をつくる

$$= \frac{\sqrt{3}-\sqrt{2}}{(\sqrt{3})^2-(\sqrt{2})^2} = \frac{\sqrt{3}-\sqrt{2}}{3-2} = \sqrt{3}-\sqrt{2}$$

Point 分母に $\square^2 - \square^2$ の形をつくろう！

2乗 − 2乗

問題 次の式の分母を有理化せよ.

(1) $\dfrac{1}{\sqrt{3}+\sqrt{2}} = \dfrac{1(\sqrt{3}-\sqrt{2})}{(\sqrt{3}+\sqrt{2})(\sqrt{3}-\sqrt{2})}$

$$= \frac{\sqrt{3}-\sqrt{2}}{(\sqrt{3})^2-(\sqrt{2})^2}$$

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

(2) $\dfrac{\sqrt{2}}{\sqrt{5}-\sqrt{3}} = \dfrac{\sqrt{2}(\sqrt{5}+\sqrt{3})}{(\sqrt{5}-\sqrt{3})(\sqrt{5}+\sqrt{3})}$

$$= \frac{\sqrt{2}(\sqrt{5}+\sqrt{3})}{(\sqrt{5})^2-(\sqrt{3})^2}$$

$$= \frac{\sqrt{10}+\sqrt{6}}{5-3}$$

$$= \frac{\sqrt{10}+\sqrt{6}}{2}$$