Rationaliser le dénominateur

exples : a) $\dfrac{2}{\sqrt{7}} = \dfrac{2}{\sqrt{7}} \cdot \underbrace{\dfrac{\sqrt{7}}{\sqrt{7}}}_{=1} = \dfrac{2\sqrt{7}}{7}$

b) $\sqrt{\dfrac{5}{3}} = \dfrac{\sqrt{5}}{\sqrt{3}} \cdot \dfrac{\sqrt{3}}{\sqrt{3}} = \dfrac{\sqrt{15}}{3}$

c) $\dfrac{1}{\sqrt{5}-\sqrt{3}} = \left(\dfrac{1}{\sqrt{5}-\sqrt{3}} \cdot \dfrac{\sqrt{5}-\sqrt{3}}{\sqrt{5}-\sqrt{3}} = \dfrac{\sqrt{5}-\sqrt{3}}{(\sqrt{5}-\sqrt{3})^2} \right.$

$(\sqrt{5}-\sqrt{3})^2 = 5 - 2\sqrt{15} + 3$ ↯

$\left. \right)$ ↯

$\dfrac{1}{\sqrt{5}-\sqrt{3}} \cdot \dfrac{\sqrt{5}+\sqrt{3}}{\sqrt{5}+\sqrt{3}} = \dfrac{\sqrt{5}+\sqrt{3}}{5-3} = \dfrac{\sqrt{5}+\sqrt{3}}{2}$

$\sqrt{5}+\sqrt{3}$ est le conjugué de $\sqrt{5}-\sqrt{3}$

on utilise le produit rem. $(a+b)(a-b) = a^2 - b^2$

d) $\dfrac{\sqrt{3}}{\sqrt{6}+\sqrt{3}} = \dfrac{\sqrt{3}}{\sqrt{6}+\sqrt{3}} \cdot \dfrac{\sqrt{6}-\sqrt{3}}{\sqrt{6}-\sqrt{3}} = \dfrac{\sqrt{18}-3}{6-3} = \dfrac{3\sqrt{2}-3}{3}$

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