



Air maths tuition

Interact, engage and perform

Surds - Rationalising

$\begin{aligned}\sqrt{\frac{16}{5}} &= \frac{\sqrt{16}}{\sqrt{5}} \\ &= \frac{4}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} \\ &= \frac{4\sqrt{5}}{5}\end{aligned}$	$\begin{aligned}\frac{3}{\sqrt{7}} &= \frac{3}{\sqrt{7}} \times \frac{\sqrt{7}}{\sqrt{7}} \\ &= \frac{3\sqrt{7}}{7}\end{aligned}$	$\begin{aligned}\frac{2}{5\sqrt{3}} &= \frac{2}{5\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} \quad \text{good} \\ &= \frac{2\sqrt{3}}{15}\end{aligned}$ <hr/> $\begin{aligned}\frac{2}{5\sqrt{3}} &= \frac{2}{5\sqrt{3}} \times \frac{5\sqrt{3}}{5\sqrt{3}} \quad \text{poor} \\ &= \frac{2 \cdot 10\sqrt{3}}{75 \cdot 15}\end{aligned}$
$\begin{aligned}\frac{5}{3-\sqrt{2}} &= \frac{5}{3-\sqrt{2}} \times \frac{3+\sqrt{2}}{3+\sqrt{2}} \\ &= \frac{5(3+\sqrt{2})}{9+3\sqrt{2}-3\sqrt{2}-2} \\ &= \frac{5(3+\sqrt{2})}{7}\end{aligned}$	$\begin{aligned}\frac{3}{5\sqrt{3}+2\sqrt{2}} &= \frac{3}{5\sqrt{3}+2\sqrt{2}} \times \frac{5\sqrt{3}-2\sqrt{2}}{5\sqrt{3}-2\sqrt{2}} \\ &= \frac{3(5\sqrt{3}-2\sqrt{2})}{75-10\sqrt{6}+10\sqrt{6}-8} \\ &= \frac{3(5\sqrt{3}-2\sqrt{2})}{67}\end{aligned}$	

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maths made easy