Fill in the Blanks — Rationalising the Denominator

Question	Working		Answer	Question	Working		Answer
$\dfrac{5}{\sqrt{3}}$	$\times \dfrac{\sqrt{3}}{\sqrt{3}}$	$= \dfrac{5\sqrt{3}}{\sqrt{9}}$	$= \dfrac{5\sqrt{3}}{3}$	$\dfrac{3}{2+\sqrt{2}}$	$\times \dfrac{2-\sqrt{2}}{2-\sqrt{2}}$	$= \dfrac{3(2-\sqrt{2})}{4-\sqrt{4}}$	$= \dfrac{6-3\sqrt{2}}{2}$
$\dfrac{\sqrt{3}}{\sqrt{7}}$	$\times \dfrac{\sqrt{7}}{\sqrt{7}}$	$= \dfrac{\sqrt{21}}{\sqrt{49}}$	$= \dfrac{\sqrt{21}}{7}$	$\dfrac{8}{4-\sqrt{3}}$	$\times \dfrac{4+\sqrt{3}}{4+\sqrt{3}}$	$= \dfrac{8(4+\sqrt{3})}{16-\sqrt{9}}$	$= \dfrac{32+8\sqrt{3}}{13}$
$\dfrac{5\sqrt{5}}{\sqrt{6}}$	$\times \dfrac{\sqrt{6}}{\sqrt{6}}$	$= \dfrac{5\sqrt{30}}{\sqrt{36}}$	$= \dfrac{5\sqrt{30}}{6}$	$\dfrac{\sqrt{5}}{6+\sqrt{5}}$	$\times \dfrac{6-\sqrt{5}}{6-\sqrt{5}}$	$= \dfrac{\sqrt{5}(6-\sqrt{5})}{36-\sqrt{25}}$	$= \dfrac{6\sqrt{5}-5}{31}$
$\dfrac{2+\sqrt{3}}{\sqrt{5}}$	$\times \dfrac{\sqrt{5}}{\sqrt{5}}$	$= \dfrac{\sqrt{5}(2+\sqrt{3})}{\sqrt{25}}$	$= \dfrac{2\sqrt{5}+\sqrt{15}}{5}$	$\dfrac{3\sqrt{5}}{3-\sqrt{7}}$	$\times \dfrac{3+\sqrt{7}}{3+\sqrt{7}}$	$= \dfrac{3\sqrt{5}(3+\sqrt{7})}{9-\sqrt{49}}$	$= \dfrac{9\sqrt{5}+3\sqrt{35}}{2}$
$\dfrac{3-\sqrt{5}}{\sqrt{2}}$	$\times \dfrac{\sqrt{2}}{\sqrt{2}}$	$= \dfrac{\sqrt{2}(3-\sqrt{5})}{\sqrt{4}}$	$= \dfrac{3\sqrt{2}-\sqrt{10}}{2}$	$\dfrac{7+\sqrt{2}}{3-\sqrt{2}}$	$\times \dfrac{3+\sqrt{2}}{3+\sqrt{2}}$	$= \dfrac{(7+\sqrt{2})(3+\sqrt{2})}{9-\sqrt{4}}$	$= \dfrac{23+10\sqrt{2}}{7}$
$\dfrac{1+\sqrt{2}}{2\sqrt{3}}$	$\times \dfrac{\sqrt{3}}{\sqrt{3}}$	$= \dfrac{\sqrt{3}(1+\sqrt{2})}{2\sqrt{9}}$	$= \dfrac{\sqrt{3}+\sqrt{6}}{6}$	$\dfrac{1-\sqrt{8}}{5+\sqrt{2}}$	$\times \dfrac{5-\sqrt{2}}{5-\sqrt{2}}$	$= \dfrac{(1-\sqrt{8})(5-\sqrt{2})}{25-\sqrt{4}}$	$= \dfrac{9-11\sqrt{2}}{23}$
$\dfrac{\sqrt{2}-3\sqrt{5}}{5\sqrt{2}}$	$\times \dfrac{\sqrt{2}}{\sqrt{2}}$	$= \dfrac{\sqrt{2}(\sqrt{2}-3\sqrt{5})}{5\sqrt{4}}$	$= \dfrac{2-3\sqrt{10}}{10}$	$\dfrac{a+\sqrt{b}}{a\sqrt{b}}$	$\times \dfrac{\sqrt{b}}{\sqrt{b}}$	$= \dfrac{\sqrt{b}(a+\sqrt{b})}{a\sqrt{b^2}}$	$= \dfrac{a\sqrt{b}+b}{ab}$