Fill In The Blanks...

Rationalising the Denominator

Question	Working		Answer
$\frac{5}{\sqrt{3}}$	$\times\frac{\sqrt{3}}{\sqrt{3}}$	$=\frac{5\sqrt{3}}{\sqrt{9}}$	$=\frac{5\sqrt{3}}{3}$
$\frac{\sqrt{3}}{\sqrt{7}}$	$\times\frac{\sqrt{7}}{\sqrt{7}}$	$=\frac{\sqrt{21}}{\sqrt{49}}$	$=\frac{\sqrt{21}}{7}$
$\frac{5\sqrt{5}}{\sqrt{6}}$	$\times\frac{\sqrt{6}}{\sqrt{6}}$	$=\frac{5\sqrt{30}}{\sqrt{36}}$	$=\frac{5\sqrt{30}}{6}$
$\frac{2+\sqrt{3}}{\sqrt{5}}$	$\times\frac{\sqrt{5}}{\sqrt{5}}$	$=\frac{\sqrt{5}(2+\sqrt{3})}{\sqrt{25}}$	$=\frac{2\sqrt{5}+\sqrt{15}}{5}$
$\frac{3-\sqrt{5}}{\sqrt{2}}$	$\times\frac{\sqrt{2}}{\sqrt{2}}$	$=\frac{\sqrt{2}(3-\sqrt{5})}{\sqrt{4}}$	$=\frac{3\sqrt{2}-\sqrt{10}}{2}$
$\frac{1+\sqrt{2}}{2\sqrt{3}}$	$\times\frac{\sqrt{3}}{\sqrt{3}}$	$=\frac{\sqrt{3}(1+\sqrt{2})}{2\sqrt{9}}$	$=\frac{\sqrt{3}+\sqrt{6}}{6}$
$\frac{\sqrt{2}-3\sqrt{5}}{5\sqrt{2}}$	$\times\frac{\sqrt{2}}{\sqrt{2}}$	$=\frac{\sqrt{2}(\sqrt{2}-3\sqrt{5})}{5\sqrt{4}}$	$=\frac{2-3\sqrt{10}}{10}$

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