

## Crack the Code

## Rationalising the Denominator

<b>A</b>	$\frac{\sqrt{2}}{\sqrt{5}} = \frac{\sqrt{10}}{\boxed{5}}$	<b>B</b>	$\frac{14\sqrt{3}}{\sqrt{2}} = \boxed{7}\sqrt{6}$
<b>C</b>	$\frac{\sqrt{3}}{2\sqrt{7}} = \frac{\sqrt{\boxed{21}}}{14}$	<b>D</b>	$\frac{4\sqrt{3}}{\sqrt{15}} = \frac{\boxed{4}\sqrt{\boxed{5}}}{5}$
<b>E</b>	$\frac{6\sqrt{10}}{\sqrt{3}} = 2\sqrt{\boxed{30}}$	<b>F</b>	$\frac{4 + \sqrt{3}}{\sqrt{5}} = \frac{4\sqrt{5} + \sqrt{\boxed{15}}}{\boxed{5}}$
<b>G</b>	$\frac{9 - \sqrt{2}}{\sqrt{2}} = \frac{-2 + \boxed{9}\sqrt{2}}{\boxed{2}}$	<b>H</b>	$\frac{\sqrt{3} + \sqrt{5}}{\sqrt{5}} = \frac{\boxed{5} + \sqrt{15}}{5}$
<b>I</b>	$\frac{2 + \sqrt{6}}{3\sqrt{3}} = \frac{2\sqrt{3} + \boxed{3}\sqrt{\boxed{2}}}{9}$	<b>J</b>	$\frac{9\sqrt{6} - 6}{3\sqrt{2}} = \boxed{3}\sqrt{3} - \sqrt{\boxed{2}}$
<b>K</b>	$\frac{\sqrt{3} + 4\sqrt{10}}{2\sqrt{3}} = \frac{3 + 4\sqrt{\boxed{30}}}{\boxed{6}}$	<b>L</b>	$\frac{2}{1 + \sqrt{2}} = \boxed{2}\sqrt{2} - \boxed{2}$
<b>M</b>	$\frac{\sqrt{6}}{2 - \sqrt{3}} = \boxed{3}\sqrt{2} + \boxed{2}\sqrt{6}$	<b>N</b>	$\frac{3\sqrt{2}}{4 + \sqrt{6}} = \frac{6\sqrt{\boxed{2}} - \boxed{3}\sqrt{3}}{5}$
<b>P</b>	$\frac{18\sqrt{5}}{\sqrt{5} - \sqrt{2}} = \boxed{30} + 6\sqrt{\boxed{10}}$	<b>Q</b>	$\frac{2\sqrt{3} - 4}{\sqrt{3} + 1} = \boxed{5} - \boxed{3}\sqrt{3}$
<b>R</b>	$\frac{\boxed{2} + \sqrt{8}}{4 - \sqrt{2}} = \frac{6 + \boxed{5}\sqrt{2}}{7}$	<b>S</b>	$\frac{3 + \sqrt{5}}{\sqrt{5} - 2} = \sqrt{\boxed{125}} + \sqrt{\boxed{121}}$
<b>T</b>	$\frac{\boxed{4} + \sqrt{a}}{5 - \sqrt{a}} = \frac{20 + 9\sqrt{a} + a}{\boxed{25} - a}$	<b>U</b>	$\frac{3\sqrt{c} - \sqrt{d}}{\sqrt{c} + 2\sqrt{d}} = \frac{3c + 2d - \boxed{7}\sqrt{cd}}{c - \boxed{4}d}$

Add together all the values in the boxes to give the three-digit code.

**509**