Splitting the steps: Surds

Simplify each fraction by rationalising the denominator using **(a + b)(a - b) = $a^2 - b^2$**

	$\frac{\mathbf{2}}{(\mathbf{5}-\sqrt{\mathbf{3}})} \times \frac{(5+\sqrt{3})}{(5+\sqrt{3})}$ ① $= \frac{2(5+\sqrt{3})}{(5-\sqrt{3})(5+\sqrt{3})}$ ② $= \frac{2(5+\sqrt{3})}{25-3}$ ③ $= \frac{2(5+\sqrt{3})}{22}$ ④ $= \frac{(5+\sqrt{3})}{11}$	①/② Multiply by the 'pair' to the denominator: $\frac{(5+\sqrt{3})}{(5+\sqrt{3})}$ ③ Expand: $5^2 - (\sqrt{3})^2$ ④ Simplify: common factor of 2 
2.	$\frac{\mathbf{6}}{(\mathbf{2}+\sqrt{\mathbf{7}})} \times \frac{(2-\sqrt{7})}{(2-\sqrt{7})}$ ① $= \frac{6(2-\sqrt{7})}{(2+\sqrt{7})(2-\sqrt{7})}$ ② $= \frac{6(2-\sqrt{7})}{4-7}$ ③ $=$ _____ ④ = _____	①/② Multiply by the 'pair' to the denominator: $\frac{(2-\sqrt{7})}{(2-\sqrt{7})}$ ③ Expand: $2^2 - (\sqrt{7})^2$ ④ Simplify: Common factor of 3
3.	$\frac{\mathbf{8}}{(\sqrt{\mathbf{15}}+\mathbf{3})} \times \frac{(\sqrt{15}-3)}{(\sqrt{15}-3)}$ ① $= \frac{8(\sqrt{15}-3)}{(\sqrt{15}+3)(\sqrt{15}-3)}$ ② $= \frac{8(\sqrt{15}-3)}{}$ ③ $=$ _____ ④ = _____	①/② Multiply by the 'pair' to the denominator: $\frac{(\sqrt{15}-3)}{(\sqrt{15}-3)}$ ③ Expand: _____ ④ Simplify: _____

4.	$\frac{\mathbf{10}}{(\sqrt{\mathbf{21}}-\mathbf{7})} \times \frac{(\sqrt{\quad}+\quad)}{(\sqrt{\quad}+\quad)}$ ① $= \frac{10(\sqrt{\quad}+\quad)}{(\sqrt{21}-7)(\sqrt{\quad}+\quad)}$ ② $= \frac{10(\sqrt{\quad}+\quad)}{\quad}$ ③ $= \_\_\_\_\_$ ④ $=$	①/② Multiply by the 'pair' to the denominator: $\frac{(\sqrt{\quad}+\quad)}{(\sqrt{\quad}+\quad)}$ ③ Expand: _____ ④ Simplify: _____
5.	$\frac{\mathbf{12}}{(\mathbf{4}+\sqrt{\mathbf{2}})} \times \_\_\_\_\_$ ① $= \frac{12(\quad)}{(4+\sqrt{2})(\quad)}$ ② $= \_\_\_\_\_$ ③ $=$ ④ $=$	①/② Multiply by the 'pair' to the denominator: $\frac{(\quad)}{(\quad)}$ ③ Expand: _____ ④ Simplify: _____
6.	$\frac{\mathbf{20}}{(\mathbf{5}-\sqrt{\mathbf{15}})} \times$ ① $=$ ② $=$ ③ $=$ ④ $=$	①/② Multiply by the 'pair' to the denominator: $\frac{(\quad)}{(\quad)}$ ③ Expand: _____ ④ Simplify: _____
7.	$\frac{-\mathbf{16}}{(\mathbf{6}-\sqrt{\mathbf{20}})} \times$	