SURDS : 1

1) If $\sqrt{12}$ is the same as $2\sqrt{3}$ what about

a) $\sqrt{18}$ b) $\sqrt{300}$ c) $\sqrt{288}$ d) $\sqrt{75}$

2) Rationalise (simplify)

a) $\frac{1}{\sqrt{2}}$ b) $\frac{3}{\sqrt{7}}$ c) $\frac{2}{5\sqrt{2}}$ d) $\frac{6}{5\sqrt{3}}$

3) Expand and simplify

a) $(\sqrt{2}+1)(\sqrt{2}-1)$ b) $(5-2\sqrt{3})(5+2\sqrt{3})$

4) Simplify

a) $\sqrt{3}+2\sqrt{3}-7\sqrt{3}$ b) $\sqrt{12}+\sqrt{3}$ c) $\sqrt{8}-\sqrt{2}$

d) $\sqrt{18}-\sqrt{8}$ e) $\frac{6}{\sqrt{2}}-\frac{16}{\sqrt{8}}$ f) $\frac{5}{2\sqrt{3}}+\sqrt{12}$

g) $3\sqrt{x}-5\sqrt{x}$

5) Rationalise (simplify)

a) $\frac{1}{1+\sqrt{3}}$ b) $\frac{2}{\sqrt{2}-1}$

c) $\frac{-3}{2\sqrt{3}+5}$ d) $\frac{4}{5-3\sqrt{2}}$

e) $\frac{2}{\sqrt{2}+\sqrt{3}}$ f) $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{3}}$