Simplifing starter - whiteboards

Objectives
- To understand rational numbers
- To convert recurring decimals to fractions
- To simplify surds

Adding and Subtracting Surds

$\sqrt{a}+\sqrt{b} \neq \sqrt{a+b}$ when a, b are different.

$\sqrt{c}-\sqrt{d} \neq \sqrt{c-d}$ " c, d are different

But.....

$\sqrt{3}+\sqrt{3} = 2\sqrt{3}$ (not $\sqrt{6}$!!!)

$2\sqrt{7}-\sqrt{7} = \sqrt{7}$

1) $6\sqrt{5}-\sqrt{5} = 5\sqrt{5}$

2) $3\sqrt{2}+\sqrt{2}+4\sqrt{2} = 8\sqrt{2}$

3) $6\sqrt{3}+4\sqrt{3}-3\sqrt{3} = 7\sqrt{3}$.

4) $5\sqrt{2}-\sqrt{8}$ ← This changes to $2\sqrt{2}$

$\sqrt{8} = \sqrt{4}\times\sqrt{2}$
$= 2\sqrt{2}$

$= 5\sqrt{2}-2\sqrt{2}$

$= \underline{3\sqrt{2}}$

5) $\sqrt{12}+\sqrt{27}$

$\sqrt{12} = 2\sqrt{3}$
$\sqrt{27} = 3\sqrt{3}$

$= 2\sqrt{3}+3\sqrt{3}$

$= \underline{5\sqrt{3}}$

p13 Q7 all parts

Then p22 Q6 – Q10

Treasure hunt - surds.