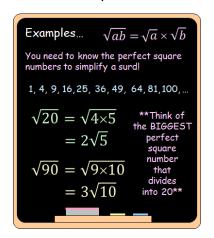
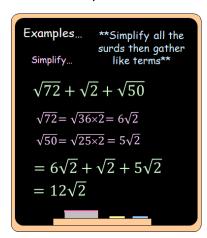
Outcome 1 - Simplify Surds

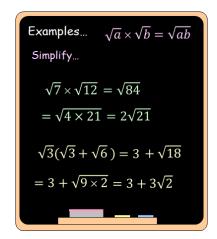
Bronze examples...



Silver example



Gold examples



Bronze Questions

Simplify the following surds...



$$\stackrel{2}{4}$$
 $\sqrt{40}$

$$\sqrt{50}$$

$$4\sqrt{28}$$

$$\sqrt{72}$$

$$\sqrt{48}$$

$$\sqrt{128}$$

10

$\sqrt{147}$

Silver Questions

Simplify the following expressions...

$$\frac{1}{48} + \sqrt{12} + \sqrt{3}$$

$$4 \sqrt{18} + \sqrt{2} + \sqrt{8}$$

$$\sqrt{125} - \sqrt{20} + \sqrt{5}$$

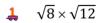
$$4 \sqrt{700} + \sqrt{28} - \sqrt{7}$$

$$\sqrt{162} - \sqrt{32} - \sqrt{2}$$

$$40 + \sqrt{490} - \sqrt{250}$$

Gold Questions

Simplify the following surds...



$$\stackrel{2}{\Rightarrow}$$
 $\sqrt{6} \times \sqrt{14}$

$$\sqrt{20} \times \sqrt{2}$$

$$4 \sqrt{5} \times \sqrt{15}$$

$$\sqrt{8} \times \sqrt{10}$$

$$\sqrt{24} \times \sqrt{3}$$

$$\sqrt{5}(\sqrt{5} + \sqrt{8})$$
 8 $\sqrt{8}(\sqrt{8} + \sqrt{3})$

$$\sqrt{8}(\sqrt{8} + \sqrt{3})$$

$$9 \sqrt{6}(\sqrt{12} + \sqrt{6})$$
 $9 \sqrt{7}(\sqrt{8} + \sqrt{7})$

$$\sqrt{7}(\sqrt{8} + \sqrt{7})$$

Bronze Answers

- 1. 3√2
- 5√2 3.
- 5. 6√2
- 7. 4√3
- 9. 8√2
- 2. 2√10
 - 4. 2√7
- 6. 4√5
- 8. 5√3
- 10. 7√3

Silver Answers

- 1. 7√3
- 2. 6√2
- 3. 4√5
- 4. 11√7
- 5. 4√2
- 6. 3√10

Gold Answers

- 1. 4√3
- 2. 2√21
- 3. 2√10
- 4. 5√3
- 5. 4√5
- 6. 6√2
- 7. 5 + 2√10
- 8. 8+2√6
- 9. $6\sqrt{2}+6$ 10. $2\sqrt{14}+7$