

N5 - Expressions
& Formulae

Worksheet 3

Gold Level



Outcome 1 - Simplifying Surds

Simplify the following surds...

$$\text{1} \quad \sqrt{11} \times \sqrt{11} \quad \text{2} \quad \sqrt{7} \times \sqrt{7}$$

$$\text{3} \quad \sqrt{10} \times \sqrt{8} \quad \text{4} \quad \sqrt{2} \times \sqrt{12}$$

$$\text{5} \quad \sqrt{10} \times \sqrt{5} \quad \text{6} \quad \sqrt{70} \times \sqrt{2}$$

$$\text{7} \quad \sqrt{2}(\sqrt{2} + \sqrt{10}) \quad \text{8} \quad \sqrt{3}(\sqrt{3} + \sqrt{18})$$

$$\text{9} \quad \sqrt{5}(\sqrt{5} + \sqrt{8}) \quad \text{10} \quad \sqrt{6}(\sqrt{8} + \sqrt{6})$$

Outcome 2 - Rationalising the Denominator

Express each of the following
with rational denominators...

$$\text{1} \quad \frac{3}{7 + \sqrt{2}} \quad \text{2} \quad \frac{28}{5 + \sqrt{2}}$$

$$\text{3} \quad \frac{7}{4 + \sqrt{6}} \quad \text{4} \quad \frac{15}{8 - \sqrt{2}}$$

$$\text{5} \quad \frac{11}{6 - \sqrt{13}} \quad \text{6} \quad \frac{17}{4 + \sqrt{6}}$$

$$\text{7} \quad \frac{20}{3 - \sqrt{3}} \quad \text{8} \quad \frac{12}{6 + \sqrt{2}}$$