

National 5 Mathematics

Surds - Solutions - 2014-2017

Marks are indicated in brackets after each question number

2014 Paper 1 Question 8, (3)

$$\begin{aligned}\sqrt{40} + 4\sqrt{10} + \sqrt{90} &= \sqrt{4 \times 10} + 4\sqrt{10} + \sqrt{9 \times 10} \\ &= 2\sqrt{10} + 4\sqrt{10} + 3\sqrt{10} \\ &= 9\sqrt{10}\end{aligned}$$

2015 Paper 1 Question 13, (3)

$$\begin{aligned}\frac{4}{\sqrt{8}} &= \frac{4}{\sqrt{8}} \times \frac{\sqrt{8}}{\sqrt{8}} \\ &= \frac{4\sqrt{8}}{8} \\ &= \frac{\sqrt{8}}{2} \\ &= \frac{2\sqrt{2}}{2} \\ &= \sqrt{2}\end{aligned}$$