

2003 Sample paper

Question 2

Q2. (b) (i) By rounding to the nearest whole number, estimate the value of

$$(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$$

Then, evaluate $(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$, correct to two decimal places.

(ii) Simplify $\frac{5^2 \times 25^{\frac{1}{2}}}{125^{\frac{2}{3}} \times 5^3}$

Give your answer in the form 5^n , where $n \in \mathbb{Q}$

Solution

Q2. (b) (i) By rounding to the nearest whole number, estimate the value of

$$(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$$

Then, evaluate $(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$, correct to two decimal places.

$$(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$$

$$4^2 + \frac{1}{2} \times \sqrt{49}$$

$$16 + \frac{1}{2} \times 7$$

$$19.5$$

$$(4.37)^2 + \frac{1}{2.05} \times \sqrt{50.9}$$

$$19.0969 + 0.4878 \times 7.1344$$

$$22.577$$

$$22.58$$

(ii) Simplify $\frac{5^2 \times 25^{\frac{1}{2}}}{125^{\frac{2}{3}} \times 5^3}$

Give your answer in the form 5^n , where $n \in \mathbb{Q}$.

$$\frac{5^2 \times 25^{\frac{1}{2}}}{125^{\frac{2}{3}} \times 5^3}$$

$$\frac{5^2 \times 5}{25 \times 5^3}$$

$$\frac{5^3}{5^5} = 5^{-2}$$