

1. Work out 54.6×4.3

	500	40	6
40	20000	1600	240
3	1500	120	18

$$\begin{array}{l}
 54.6 \longrightarrow 546 \\
 \quad \times 10 \\
 \hline
 4.3 \longrightarrow 43 \\
 \quad \times 10 \\
 \hline
 \left. \begin{array}{l} \\ \\ \end{array} \right\} \times 100
 \end{array}$$

$$20000 + 1600 + 240 + 1500 + 120 + 18 = 23,478$$

$$23478.$$

$$54.6 \times 4.3 = \underline{\underline{234.78}}$$

$$\underline{\underline{234.78.}}$$

(Total for Question is 3 marks)

$$125^{\frac{2}{3}} = (125^{\frac{1}{3}})^2$$

$$= (\sqrt[3]{125})^2 \checkmark$$

$$= (5)^2$$

$$= 25$$

$$5 \times 5 \times 5 = 125$$

$$25 \checkmark$$

2. 3 teas and 2 coffees have a total cost of £7.80
5 teas and 4 coffees have a total cost of £14.20

Work out the cost of one tea and the cost of one coffee.

let t be tea
let c be coffee

$$3t + 2c = 7.80$$

$$\textcircled{1} 5t + 4c = 14.20 \checkmark$$

$$3t + 2c = 7.80$$

$$(\times 2)$$

$$\textcircled{2} 6t + 4c = 15.60$$

$$\textcircled{2} - \textcircled{1}$$

$$6t + 4c = 15.60$$

$$5t + 4c = 14.20 -$$

$$t = 1.40 \checkmark$$

$$3(1.40) + 2c = 7.80$$

$$4.20 + 2c = 7.80$$

$$2c = 3.60$$

$$c = 1.80 \checkmark$$

tea £ 1.40

coffee £ 1.80 \checkmark

(Total for Question is 4 marks)

3. (a) Work out 3.67×4.2

$$367 \xrightarrow{\div 100} 3.67 \quad \Bigg| \quad 42 \xrightarrow{\div 10} 4.2$$

①

$$\therefore 3.67 \times 4.2 = (367 \times 42) \div 100 \div 10 = (367 \times 42) \div 1000$$

	3	6	7	
1	1	2	2	4
5	0	1	1	2
	4	1	4	

$$367 \times 42 = 15414$$

①

$$3.67 \times 4.2 = 15414 \div 1000$$

$$= \underline{\underline{15.414}}$$

①

15.414

(3)

(b) Work out $59.84 \div 1.6$ ↘ $1.6 = 16 \div 10$

$$16 \overline{) 59.84} = 3.74$$

①

$$59.84 \div 16 = 3.74$$

$$\frac{59.84}{16} = \frac{3.74}{1}$$

$$\frac{59.84}{16 \div 10} = \frac{3.74 \times 10}{1} = \underline{\underline{37.4}}$$

①

①

37.4

(3)

(Total for Question is 6 marks)