FORM 3
CHAPTER 2

Summative Practice

Section A

1 $\underline{68\,4}91 = 68\,500$
Answer: **D**

2 $0.\underbrace{0\,0\,0\,0\,2}\,0\,8$
$= 2.08 \times 10^{-5}$
Answer: **B**

3 $0.00038 - 8 \times 10^{-6}$
$= 3.8 \times 10^{-4} - 8 \times 10^{-6}$
$= 3.8 \times 10^{-4} - 0.08 \times 10^{-4}$
$= (3.8 - 0.08) \times 10^{-4}$
$= 3.72 \times 10^{-4}$
Answer: **C**

4 $0.\underline{79}64 = 0.80$
Answer: **C**

5 $4.6 \times 10^{14} + 8.3 \times 10^{15}$
$= 0.46 \times 10^{15} + 8.3 \times 10^{15}$
$= (0.46 + 8.3) \times 10^{15}$
$= 8.76 \times 10^{15}$
Answer: **C**

6 Volume of water $= 65\% \times$ volume of tank
$= \frac{65}{100} \times 500 \times 500 \times 400$
$= 65\,000\,000$
$= 6.5 \times 10^{7}$
Answer: **D**

7 $0\,\underbrace{0\,0\,0\,6}.189$
$= 0.0006189$
Answer: **B**

8 $\frac{\text{Area of floor}}{\text{Area of a tile}} = \frac{2\,000 \times 2\,000\ \text{cm}^2}{25 \times 25\ \text{cm}^2}$
$= 6\,400$
$= 6.4 \times 10^{3}$
Answer: **D**

Section B

1 (a)

	Number	Number of significant figures
(i)	60 801	5
(ii)	0.05900	4

(b) (i) $294\,503 = 295$ False

(ii) $0.0061994 = 0.00620$ True

2

Number	2 significant figures	3 significant figures
8 945	(a) 8 900	(b) 8 950
0.007451	(c) 0.0075	(d) 0.00745

3 (a) $0.0000598 = 5.98 \times 10^{-4}$ False

(b) $89\,904\,000 = 8.9904 \times 10^{7}$ True

(c) $1.36 \times 10^{-2} = 0.0136$ True

(d) $7.1682 \times 10^{3} = 71\,682$ False

Section C

1 (a) $\text{Length} = \frac{\text{Area}}{\text{Width}}$
$= \frac{5.134 \times 10^{6}}{1.7 \times 10^{2}}$
$= 3.02 \times 10^{6-2}$
$= 3.0 \times 10^{4}\ \text{cm}$

(b) Distance travelled
$=$ speed $\times$ time
$= 3 \times 10^{8}\ \text{m s}^{-1} \times 30 \times 60\ \text{s}$
$= 5\,400 \times 10^{8}\ \text{m}$
$= 5.4 \times 10^{3} \times 10^{8}\ \text{m}$
$= 5.4 \times 10^{3+8}\ \text{m}$
$= 5.4 \times 10^{11}\ \text{m}$
$= 5.4 \times 10^{11} \times 10^{-3}\ \text{km}$
$= 5.4 \times 10^{8}\ \text{km}$

(c) Total surface area $= 6 \times (6 \times 10^{-3})^2$
$= 6 \times 6^2 \times (10^{-3})^2$
$= 6 \times 36 \times 10^{-6}$
$= 216 \times 10^{-6}$
$= 2.16 \times 10^{2} \times 10^{-6}$
$= 2.16 \times 10^{-4}\ \text{m}^2$