Topic test 1 (20 minutes)
(10 minutes calculator, 10 minutes non-calculator)
 Standard form - Foundation

You may use your calculator in this section.

1   Here are five numbers.

$47\ 000$ $\qquad$ 4.5×10^4 $\qquad$ 5×10^3 $\qquad$ 2.8×10^5 $\qquad$ $125\ 000$

Work out the difference between the largest and smallest numbers.

Give your answer in standard form.

[3 marks]

Answer _____

2   Work out $(5.9 \times 10^7) \div (2.3 \times 10^4)$

Give your answer in standard form to 2 significant figures.

[3 marks]

Answer _____

3 Solve $\dfrac{x}{0.02} = 3.1 \times 10^{-4}$

Give your answer in standard form.

[2 marks]

$x =$ _____

4 Here are the probabilities of two independent events.

Event A 2.7×10^{-2}
Event B 3.4×10^{-4}

How many times more likely is event A than event B?

[2 marks]

Answer _____

You **must not** use your calculator in this section.

5 Circle the number that is in standard form.

[1 mark]

6.4×5^{-7} $\qquad$ 0.9×10^{-7} $\qquad$ 1×10^{-7} $\qquad$ 10×10^{-7}

6 Write 32 million in standard form.

[1 mark]

Answer _____

7 Write 4.12×10^{-6} as an ordinary number.

[1 mark]

Answer _____

8 Work out $\qquad (5 \times 10^{-3})^2$
Give your answer in standard form.

[2 marks]

Answer _____

9 The table shows the surface area of six planets.

Planet	Surface area (km^2)
A	8.10×10^9
B	460 million
C	6.20×10^{10}
D	7.64×10^9
E	1.45×10^8
F	4.27×10^{10}

9 (a) Circle the planet with the smallest surface area.

[1 mark]

A   B   C   D   E   F

9 (b) Circle the planet with the largest surface area.

[1 mark]

A   B   C   D   E   F

10 The area of the Earth covered by water is 361 million km^2
The area of the Earth **not** covered by water is 149 million km^2

Work out the total area of the Earth.
Give your answer in standard form.

[3 marks]

Answer _____ km^2