STANDARD FORM-SET-1

1

The distance from the Earth to the Moon is 3.8×10^5 km.
A spacecraft travels this distance four times.
Calculate the total distance travelled.
Give your answer in standard form.

Answer ..... km [2]

MS-1

(a)	$4 \times 3.8 \times 10^5$ $1.52(0\ldots) \times 10^6$	**M1** **A1**	If zero scored **SC1** for 1.5×10^6 ww. www 2 **[2]**

2

Write 36 000 in standard form.

Answer ..... [1]

MS-2

	$3.6(0) \times 10^4$	B1	[1]

3

(a) Find the value of ax^3 when $a = 1200$ and $x = 5$.
Give your answer in standard form.

Answer(a) ..... [2]

MS-3

(a)	1.5×10^5	**2**	**B1** for 150 000

4	Work out $(1.6 \times 10^3) \div (4 \times 10^5)$. Give your answer in standard form. *Answer* ..... [2]

MS-4

	4×10^{-3}	**2**	**B1** 0.4×10^{-2} o.e.

5	Work out the following, giving your answers in standard form. **(a)** $(4.6 \times 10^{-5}) + (3 \times 10^{-6})$ *Answer(a)* ..... [2] **(b)** $(4.6 \times 10^{-5}) \times (3 \times 10^{-6})$ *Answer(b)* ..... [2]

MS-5

(a)	4.9×10^{-5}	**2**	**M1** for 0.000046 + 0.000003 or 46×10^{-6} or 0.3×10^{-5}
(b)	1.38×10^{-10}	**2**	**B1** for 13.8×10^{-11}

6	**(a)** Write 0.0063 in standard form. *Answer(a)* ..... [1]

MS-6

(a)	6.3×10^{-3}	**1**	
(b)	5.94	**2**	**B1** for 0.24×10^{9} or 57×10^{8} or figures 594 seen

7

Work out $\dfrac{8\times10^{7}}{5\times10^{-12}}$.

Give your answer in standard form.

..... [2]

MS-7

	1.6×10^{19}	**2**	**B1** for 1.6×10^{n} or $k \times 10^{19}$ or correct answer not in SF

8

Work out, giving your answer in standard form.

(a) $(7.5\times10^{-4})+(4\times10^{-6})$

..... [2]

(b) $(7.5\times10^{-4})\times(4\times10^{-6})$

..... [2]

MS-8

(a)	7.54×10^{-4}	**2**	**M1** for $0.000\,75 + 0.000\,004$ or 750×10^{-6} or 0.04×10^{-4} or figs 754
(b)	3×10^{-9}	**2**	**B1** for 30×10^{-10} or answer $0.000\,000\,003$

9

Work out $\dfrac{4\times10^{7}}{8\times10^{22}}$.

Give your answer in standard form.

..... [2]

MS-9

	5×10^{-16}	**2**	**B1** for correct value, not in standard form, seen

10

Work out $(5.6 \times 10^{-7}) - (7.8 \times 10^{-8})$.
Give your answer in standard form.

..... [2]

MS-10

	4.82×10^{-7}	**2**	**B1** for figs 482 or 56.7×10^{-8} or 0.78×10^{-7}

11

Work out $1.1 \times 10^{30} + 1.1 \times 10^{29}$, giving your answer in standard form.

..... [2]

MS-11	1.21×10^{30}	**2**	**B1** for figs 121 seen or for 0.11×10^{30} seen, or for 11×10^{29} seen
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