

# SMART EXAM RESOURCES

## TOPIC : NUMBERS

### STANDARD FORM

#### SET-2-QP-MS

**1** 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]

## MARK SCHEME:

(a)	$4.9 \times 10^{-5}$	2	<b>M1</b> for $0.000046 + 0.000003$ or $46 \times 10^{-6}$ or $0.3 \times 10^{-5}$
(b)	$1.38 \times 10^{-10}$	2	<b>B1</b> for $13.8 \times 10^{-11}$

**2**

**(a)** Write 0.0063 in standard form.

*Answer(a)* ..... [1]

**(b)**  $5.7 \times 10^9 + 2.4 \times 10^8 = k \times 10^9$

Find the value of  $k$ .

*Answer(b)*  $k =$  ..... [2]

## MARK SCHEME:

(a)	$6.3 \times 10^{-3}$	1	
(b)	5.94	2	<b>B1</b> for $0.24 \times 10^9$ or $57 \times 10^8$ or figures 594 seen

**3** Work out  $\frac{8 \times 10^7}{5 \times 10^{-12}}$ .

Give your answer in standard form.

..... [2]

## MARK SCHEME:

	$1.6 \times 10^{19}$	<b>2</b>	<b>B1</b> for $1.6 \times 10^n$ or $k \times 10^{19}$ or correct answer not in SF
--	----------------------	----------	--

**4** Work out, giving your answer in standard form.

**(a)**  $(7.5 \times 10^{-4}) + (4 \times 10^{-6})$

..... [2]

**(b)**  $(7.5 \times 10^{-4}) \times (4 \times 10^{-6})$

..... [2]

## MARK SCHEME:

(a)	$7.54 \times 10^{-4}$	2	<b>M1</b> for $0.00075 + 0.000004$ or $750 \times 10^{-6}$ or $0.04 \times 10^{-4}$ or figs 754
(b)	$3 \times 10^{-9}$	2	<b>B1</b> for $30 \times 10^{-10}$ or answer 0.000 000 003



**5** Work out  $\frac{4 \times 10^7}{8 \times 10^{22}}$ .

Give your answer in standard form.

..... [2]

## MARK SCHEME:

$5 \times 10^{-16}$	<b>2</b>	<b>B1</b> for correct value, not in standard form, seen
---------------------	----------	---