

Standard Form Answers

1. Write the following in standard form:

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|----------------|--|
| a. 70 000 | 7×10^4 |
| b. 100 000 | 1×10^5 |
| c. 99 000 000 | 9.9×10^7 |
| d. 458 000 | 4.58×10^5 |
| e. 372 000 000 | 3.72×10^8 |
| f. 21 300 | 2.13×10^4 |
| g. 23.72 | 2.372×10^1 |
| h. 0.0005 | 5×10^{-4} |
| i. 0.034 | 3.4×10^{-2} |
| j. 0.0079 | 7.9×10^{-3} |

3. Write the following, correctly, in standard form:

- | | |
|---------------------------|--|
| a. 90×10^5 | 9×10^6 |
| b. 88×10^6 | 8.8×10^7 |
| c. 790×10^{-3} | 7.9×10^{-1} |
| d. 21.2×10^3 | 2.12×10^4 |
| e. 101.1×10^2 | 1.011×10^4 |
| f. 0.1×10^2 | 1×10^1 |
| g. 0.54×10^4 | 5.4×10^3 |
| h. 34×10^{-3} | 3.4×10^{-2} |
| i. 0.26×10^{-2} | 2.6×10^{-3} |
| j. 0.006×10^{-5} | 6×10^{-8} |

2. Write the following as ordinary numbers:

- | | |
|--------------------------|--------------------|
| a. 5×10^3 | 5000 |
| b. 6.2×10^4 | 62 000 |
| c. 2.55×10^2 | 255 |
| d. 9.99×10^5 | 999 000 |
| e. 1.01×10^8 | 101 000 000 |
| f. 7.13×10^1 | 71.3 |
| g. 4×10^{-2} | 0.04 |
| h. 3.2×10^{-4} | 0.00032 |
| i. 9.75×10^{-3} | 0.00975 |
| j. 8.1×10^{-5} | 0.000081 |

4. Calculate the following, leaving your answers in standard form:

- | | |
|---|--|
| a. $3 \times 10^3 \times 2 \times 10^2$ | 6×10^5 |
| b. $5 \times 10^4 \times 3 \times 10^1$ | 1.5×10^6 |
| c. $6 \times 10^4 \times 7 \times 10^3$ | 4.2×10^8 |
| d. $2.1 \times 10^2 \times 3 \times 10^2$ | 6.3×10^4 |
| e. $5.5 \times 10^3 \times 2 \times 10^{-1}$ | 1.1×10^3 |
| f. $4 \times 10^{-2} \times 6 \times 10^{-4}$ | 2.4×10^{-5} |
| g. $3.1 \times 10^{-5} \times 3 \times 10^{-2}$ | 9.3×10^{-7} |
| h. $5.5 \times 10^3 \div (2 \times 10^{-1})$ | 2.75×10^4 |
| i. $\frac{4 \times 10^5}{2 \times 10^3}$ | 2×10^2 |
| j. $\frac{12 \times 10^6}{36 \times 10^2}$ Give answer to 2s.f. | 3.3×10^3 |

Extension

Charlotte inherits $\text{£}4.2 \times 10^6$ from her great aunt Flo's estate.

a. How much money is this?

£4 200 000

b. She spends 45% on a house and car. How much money does she have left? Write your answer in standard form.

$0.55 \times 4\,200\,000 = 2\,310\,000$

2.31×10^6