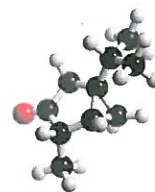


# SIGNIFICANT FIGURES & STANDARD FORM



Name ..... Form .....

## Significant Figures

You need to be able to quote answers to the correct number of significant figures.

1) Write the following numbers to the quoted number of significant figures.

- |            |            |               |             |            |                |
|------------|------------|---------------|-------------|------------|----------------|
| a) 345789  | 4 sig figs | <u>345800</u> | d) 6        | 3 sig figs | <u>6.00</u>    |
| b) 297300  | 3 sig figs | <u>297000</u> | e) 0.001563 | 3 sig figs | <u>0.00156</u> |
| c) 0.07896 | 3 sig figs | <u>0.0790</u> | f) 0.01     | 4 sig figs | <u>0.01000</u> |

2) Complete the following sums and give the answers to 3 significant figures.

- |                        |                |                          |                 |
|------------------------|----------------|--------------------------|-----------------|
| a) $6125 \times 384$   | <u>2350000</u> | d) $750 \div 25$         | <u>30.0</u>     |
| b) $25.00 \times 0.01$ | <u>0.250</u>   | e) $0.000152 \times 13$  | <u>0.00198</u>  |
| c) $13.5 + 0.18$       | <u>13.67</u>   | f) $0.0125 \times 0.025$ | <u>0.000312</u> |

## Standard Form

You need to be able to work with numbers in standard form.

3) Write the following numbers in non standard form.

- |                           |                |                          |                |
|---------------------------|----------------|--------------------------|----------------|
| a) $1.5 \times 10^{-3}$   | <u>0.0015</u>  | d) $0.0534 \times 10^4$  | <u>534</u>     |
| b) $0.046 \times 10^{-2}$ | <u>0.00046</u> | e) $10.3 \times 10^5$    | <u>1030000</u> |
| c) $3.575 \times 10^5$    | <u>357500</u>  | f) $8.35 \times 10^{-3}$ | <u>0.00835</u> |

4) Write the following numbers in standard form.

- |                |   |             |  |
|----------------|---|-------------|--|
| a) 0.000167    | <u><math>1.67 \times 10^{-4}</math></u> | d) 34500    | <u><math>3.45 \times 10^4</math></u>   |
| b) 0.0524      | <u><math>5.24 \times 10^{-2}</math></u> | e) 0.62     | <u><math>6.2 \times 10^{-1}</math></u> |
| c) 0.000000015 | <u><math>1.5 \times 10^{-8}</math></u>  | f) 87000000 | <u><math>8.7 \times 10^7</math></u>    |

5) Complete the following calculations and give the answers to 3 significant figures.

- |  |   |                    |
|--|---|--------------------|
| a) $6.125 \times 10^{-3} \times 3.5$                 | <u><math>2.14 \times 10^{-2}</math></u> | <u>0.0214</u>      |
| b) $4.3 \times 10^{-4} \div 7.0$                     | <u><math>6.14 \times 10^{-5}</math></u> | <u>0.0000614</u>   |
| c) $4.0 \times 10^8 + 35000$                         | <u><math>4 \times 10^8</math></u>       | <u>400000000</u>   |
| d) $0.00156 + 2.4 \times 10^3$                       | <u><math>2.4 \times 10^3</math></u>     | <u>2400</u>        |
| e) $6.10 \times 10^{-2} - 3.4 \times 10^{-5}$        | <u><math>6.10 \times 10^{-2}</math></u> | <u>0.0610</u>      |
| f) $8.00 \times 10^{-3} \times 0.100 \times 10^{-3}$ | <u><math>8.0 \times 10^{-7}</math></u>  | <u>0.000000800</u> |

