**Number Revision**

|  |  |  |  |
| --- | --- | --- | --- |
| Number | 1 sf | 2 sf | 3 sf |
| 21.42 | 20 |  |  |
| 3.145 |  | 3.1 |  |
| 340.567 |  | 340 |  |
| 0.8155 | 0.8 |  |  |
| 0.0002031 | 0.0002 |  |  |
| 0.030987 |  | 0.031 |  |

1. Significant figures (sf)

In any number the first non-zero digit is called the first significant figure (sf).

eg: 21.429 3.145 340.567 0.8155 0.0002031

Round the numbers to the required significant figures

2. Decimal place (dp)

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 dp | 2 dp | 3 dp |
| 21.4292 | 20.4 |  |  |
| 3.1454 |  |  | 3.145 |
| 340.567 |  | 340.57 |  |
| 0.8155 | 0.8 |  |  |
| 0.0002031 |  |  | 0.000 |
| 0.030987 | 0.0 |  |  |

The first decimal place is the first digit after the decimal point.

eg: 21.4292 3.1454 340.567 0.8155 0.0002031 0.030987

Round these numbers to the required decimal places (dp).

3. Standard form (Scientific notation) and ordinary form

A number is written in the standard form if it is expressed as

(A number between 1 and 10 (exclusive))x(power of 10)

eg: The speed of light in vacuum is 3.0x108 ms-1, the mass of an atom of hydrogen is 1.67x10-27kg

2130=213x10=21.3x10x10=2.13x10x10x10 =2.13x103

0.00213 =0.0213÷10=0.213÷10÷10=2.13÷10÷10÷10=2.13/(10x10x10)=2.13/103=2. 13x10-3

123400000 = 1.234x108, 0.00001234 = 1.234x10-5

|  |  |  |
| --- | --- | --- |
|  | Standard Form | Standard Form (2 sf) |
| 21.4292 |  |  |
| 3.1454 |  |  |
| 340.567 |  |  |
| 0.8155 |  |  |
| 0.0002031 |  |  |
| 0.030987 |  |  |

Ex: Round these numbers to 1sf, 2 sf, 3 sf, 1 dp, 2 dp, 3 dp, and standard form:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1sf | 2sf | 3sf | 1dp | 2dp | 3dp | Standard form | Standard form (3sf) |
| 23.4725 |  |  |  |  |  |  |  |  |
| 0.0203445 |  |  |  |  |  |  |  |  |
| 90.9021 |  |  |  |  |  |  |  |  |
| 12.9835 |  |  |  |  |  |  |  |  |
| 0.099125 |  |  |  |  |  |  |  |  |
| 103523.5 |  |  |  |  | ------ | -------- |  |  |
| 2.36512 |  |  |  |  |  |  |  |  |

**Number Revision**

|  |  |  |  |
| --- | --- | --- | --- |
| Number | 1 sf | 2 sf | 3 sf |
| 21.42 | 20 |  |  |
| 3.145 |  | 3.1 |  |
| 340.567 |  | 340 |  |
| 0.8155 | 0.8 |  |  |
| 0.0002031 | 0.0002 |  |  |
| 0.030987 |  | 0.031 |  |

1. Significant figures (sf)

In any number the first non-zero digit is called the first significant figure (sf).

eg: 21.429 3.145 340.567 0.8155 0.0002031

Round the numbers to the required significant figures

2. Decimal place (dp)

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 dp | 2 dp | 3 dp |
| 21.4292 | 20.4 |  |  |
| 3.1454 |  |  | 3.145 |
| 340.567 |  | 340.57 |  |
| 0.8155 | 0.8 |  |  |
| 0.0002031 |  |  | 0.000 |
| 0.030987 | 0.0 |  |  |

The first decimal place is the first digit after the decimal point.

eg: 21.4292 3.1454 340.567 0.8155 0.0002031 0.030987

Round these numbers to the required decimal places.

3. Standard form (Scientific notation) and ordinary form

A number is written in the standard form if it is expressed as

(A number between 1 and 10 (exclusive))x(power of 10)

eg: The speed of light in vacuum is 3.0x108 ms-1, the mass of an atom of hydrogen is 1.67x10-27kg

2130=213x10=21.3x10x10=2.13x10x10x10 =2.13x103

0.00213 =0.0213÷10=0.213÷10÷10=2.13÷10÷10÷10=2.13/(10x10x10)=2.13/103=2. 13x10-3

123400000 = 1.234x108, 0.00001234 = 1.234x10-5

|  |  |  |
| --- | --- | --- |
|  | Standard Form | Standard Form (2 sf) |
| 21.4292 |  |  |
| 3.1454 |  |  |
| 340.567 |  |  |
| 0.8155 |  |  |
| 0.0002031 |  |  |
| 0.030987 |  |  |

Ex: Round these numbers to 1sf, 2 sf, 3 sf, 1 dp, 2 dp, 3 dp, and standard form:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1sf | 2sf | 3sf | 1dp | 2dp | 3dp | Standard form | Standard form (3sf) |
| 23.4725 |  |  |  |  |  |  |  |  |
| 0.0203445 |  |  |  |  |  |  |  |  |
| 90.9021 |  |  |  |  |  |  |  |  |
| 12.9835 |  |  |  |  |  |  |  |  |
| 0.099125 |  |  |  |  |  |  |  |  |
| 103523.5 |  |  |  |  | ------ | -------- |  |  |
| 2.36512 |  |  |  |  |  |  |  |  |