Estimation

1 Rounding

1.1 Rounding Up

Rounding up is the process of estimating a number to its nearstest higher value.

1.1.1 Example

Round up each of the following to the required accuracy.

21.16 (1 dp) 7894 (tens digit) 7894 (hundreds digit)

1.2 Rounding Down

Rounding down is the process of estimating a number to its nearstest lower value.

1.2.1 Example

Round down each of the following to the required accuracy.

21.16 (1 dp) 7894 (tens digit) 7894 (hundreds digit)

1.3 Rounding Off

Rounding off is the process of estimating a number to its nearstest greater value. Use the rule of round down below 5 and round up above or equal 5.

1.3.1 Example

Round off each of the following to the required accuracy.

21.16 (1 dp) 7894 (tens digit) 7894 (hundreds digit)

2 Significant Figures

Significant figures show the precision of measurements. The higher the number of significant figures a measurement has, the more precise the measurement is.

2.1 Rules

- 1.23 has 3 significant figures (All the digits give us information on how accurate the measurement is)
- 0.123 has 3 significant figures (The first zero only tell us the size, and not the accuracy of the measurement)
- 0.1230 has 4 significant figures (The last zero tells us that this number has been rounded off, so it is significant)
- 0.10023 has 5 significant figures (All the zeros between the significant figures are significant)
- 10.0 has 3 significant figures (The zero between the significant figures is significant too)
- 10 has either 2 significant figures or 1 significant figure (Depending on the question)

2.2 Example

Round off each of the following to the required accuracy.

21.16 (1 sf) 7894 (2 sf) 7894 (3 sf)