

Scientific notation, rounding off & working with a calculator

ROUNDING

Remember that when you round off you look at the number AFTER the one you wish to end at. If this next number is 5 or more, you round the last number UP. If the number is 0 – 4, you leave the number as it is.

e.g. Rounding to TWO decimal places:

5.75**6**3 becomes 5.76

5.75**4**3 becomes 5.75

Question 1

Round the following values off to 2 decimal places:

(Make sure to use , not . for the decimal!)

1.1) 2,94879

1.2) 10,9769

1.3) 0,5479

1.4) 0,0555

1.5) 0,0278

1.6) 9,9999

1.7) 0,2228

1.8) 5,3429

1.9) 4,5890

1.10) 8,7556

1.11) 9,556

1.12) 100,568

1.13) 10,995

SCIENTIFIC NOTATION

Scientific notation is used to make very small or very large numbers easier to express.

In scientific notation, you move the decimal place until you have only one digit to the left of the decimal. You then times the number by a power of 10 to express how many places you moved the decimal.

eg. 2 890 000 000 becomes $2,89 \times 10^9$

0,000346 becomes $3,46 \times 10^{-4}$

Question 2

Write the following in scientific notation.:

(Type the answer in the format $2,89 \times 10^9$ or $3,46 \times 10^{-4}$)

2.1) 100

2.2) 9549

2.3) 7000

2.4) 80053

2.5) 309423

2.6) 78309

2.7) 0,00003434

2.8) 5000

2.9) 0,0045

2.10) 100005

Question 3

Write the following in decimal notation (in other words NOT scientific notation):

3.1) 3×10^3

3.2) $5,389 \times 10^5$

3.3) $6,54 \times 10^2$

3.4) $3,74 \times 10^{-2}$

3.5) 5×10^{-3}

3.6) $7,83 \times 10^{-4}$

3.7) $5,09 \times 10^{-1}$

3.8) $8,568 \times 10^{-3}$

3.9) $4,837 \times 10^3$

3.10) $2,568 \times 10^{-2}$

Question 4

Calculate the following using your scientific calculator:

(Your calculator may have a **10^x** or **Exp** button to help with entering scientific notation. When dividing with scientific notation, put the scientific notation number in brackets to avoid errors. e.g. for 4.4 below enter onto your calculator as $(5,389 \times 10^5) \div (4,837 \times 10^3)$).

4.1) $5,389 \times 10^5 \times 6,54 \times 10^2$

4.2) $7,83 \times 10^{-4} \times 3 \times 10^3$

4.3) $4,837 \times 10^3$

4.4)
$$\frac{5,389 \times 10^5}{4,837 \times 10^3}$$

4.5)
$$\frac{4,202 \times 10^5}{5,29 \times 10^2}$$

4.6)
$$\frac{8,568 \times 10^{-2}}{5,09 \times 10^{-1}}$$