Standard Form

GCSE Mathematics Answers

1) Write $3.81 \times 10^{-5} = 0.0000381$

2) $(2.22 \times 10^7) \div (6 \times 10^{-4}) = \frac{2.22}{6} \times 10^{7--4} = \frac{1.11}{3} \times 10^{11} = 0.37 \times 10^{11} = 3.7 \times 10^{10}$

3) $(6.4 \times 10^{4n+1})^{\frac{1}{2}} = (64 \times 10^{4n})^{\frac{1}{2}} = 8 \times 10^{2n}$

4) $(3.2 \times 10^{50})^2 = 10.24 \times 10^{100} = 1.024 \times 10^{101}$

5) $3.1 \times 10^a + 4.2 \times 10^{a+1} = 0.31 \times 10^{a+1} + 4.2 \times 10^{a+1} = 4.51 \times 10^{a+1}$

6) $\frac{2.2 \times 10^a}{b \times 10^3} = 4.4 \times 10^4 \Rightarrow 2.2 \times 10^a = 4.4b \times 10^7 \Rightarrow 10^{a-7} = 2b \Rightarrow b = 5$ and $a = 8$

More worked examples