**Calculating in Standard Form**

Without using a calculator, work out the following, giving your answer in standard form.

(a) $\left(2×10^{5}\right)+\left(3×10^{4}\right)$

(b) $\left(6.2×10^{7}\right)-\left(5×10^{6}\right)$

(c) $\left(3×10^{-2}\right)+\left(7×10^{-1}\right)$

(d) $\left(1.5×10^{-4}\right)-\left(9×10^{-5}\right)$

(e) $\left(2×10^{5}\right)×\left(3×10^{4}\right)$

(f) $\left(6×10^{8}\right)÷\left(2×10^{4}\right)$

(g) $\left(1.5×10^{-4}\right)×\left(3×10^{8}\right)$

(h) $\left(4.4×10^{7}\right)÷\left(1.1×10^{-3}\right)$

Using a calculator, work out the following, giving your answer in standard form.

(a) $\left(1.25×10^{5}\right)+\left(3.4×10^{5}\right)$

(b) $\left(2.7×10^{-4}\right)-\left(1.28×10^{-5}\right)$

(c) $\left(3.87×10^{-2}\right)×\left(5.3×10^{4}\right)$

(d) $\frac{4.1×10^{6}}{1.73×10^{-2}}$

(e) $\left(7.3×10^{-2}\right)^{2}$

(f) $\sqrt{\left(3.6×10^{11}\right)}$

(a) Given that $F=ma$, find $F$ when $m=1.2×10^{-12 }g$ and $a=4.5×10^{9}m/s^{2}$.

(b) Denmark has a population of $5.36×10^{6}$ and Jamaica has a population of $2.56×10^{6}$. How many more people live in Denmark than in Jamaica?

(a) The mass of Saturn is $5.686×10^{26} $tonnes and the mass of the Earth is $6.04×10^{21}$ tonnes. How many times heavier is Saturn than Earth?

(b) In 2009 the world population was $6.77×10^{9}$. In 2019 it was $7.73×10^{9}. $Calculate the percentage increase in population between 2009 and 2019.

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