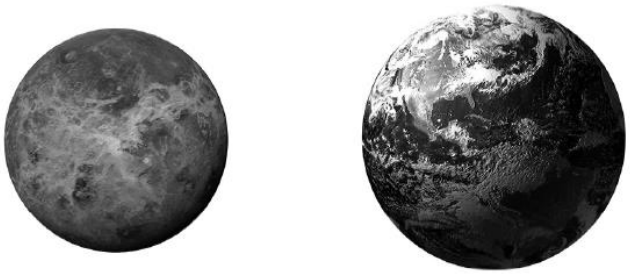
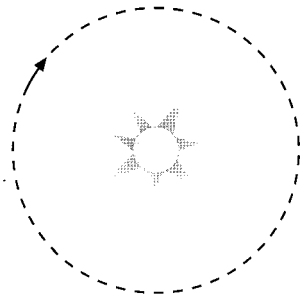
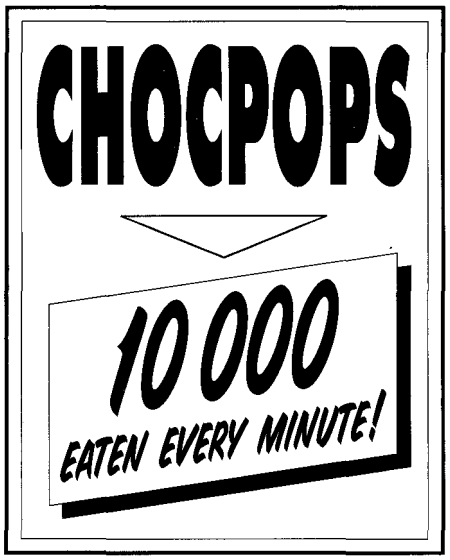
Nat 5/Credit/Int 2: Scientific Notation

Nat 5 2019 P2 Q4	**4.** A sesame seed weighs $3{\cdot}6\times10^{-6}$ kilograms. The weight of a poppy seed is 8% of the weight of a sesame seed. Calculate the weight of a poppy seed in kilograms. Give your answer in scientific notation. **2**	2
Ans	2.88×10^{-7} kg	
Nat 5 2018 P2 Q11	**11.** Venus and Earth are two planets within our solar system.  Venus Earth The volume of Venus is approximately $9{\cdot}3\times10^{11}$ cubic kilometres. This is 85% of the volume of Earth. Calculate the volume of Earth. **3**	3
Ans	$1{\cdot}094...\times10^{12}$ (km^3) or 1094117647000 (km^3)	
Nat 5 2016 P2 Q2	A pollen sample weighs 12 grams and contains $1{\cdot}5 \times 10^9$ pollen grains.  Calculate the weight of **one** pollen grain in grams. Give your answer in scientific notation.	2
Ans	8×10^{-9}	

Nat 5 2015 P2 Q6	(a) The Earth is approximately spherical with a radius of 6400 kilometres. Calculate the volume of the Earth giving your answer in scientific notation, correct to 2 significant figures.  (b) The approximate volume of the Moon is $2{\cdot}2 \times 10^{10}$ cubic kilometres. Calculate how many times the Earth's volume is greater than the Moon's.	
Ans	(a) $1{\cdot}1 \times 10^{12}$ (b) 50	
Nat 5 Specimen P2 Q2	There are 3×10^5 platelets per millilitre of blood. On average, a person has 5·5 litres of blood. On average, how many platelets does a person have in their blood? Give your answer in scientific notation.	2
Ans	$1{\cdot}65 \times 10^9$	

Credit 2006 P2 Q1	**1.** The orbit of a planet around a star is circular.  The radius of the orbit is $4{\cdot}96 \times 10^{\prime}$ kilometres. Calculate the circumference of the orbit. Give your answer **in scientific notation**.	3
Ans	$3.12\times10^{8}km$	
Credit 2005 P2 Q1	**1.** $E = mc^2$. Find the value of E when $m = 3{\cdot}6 \times 10^{-2}$ and $c = 3 \times 10^{8}$. Give your answer **in scientific notation**.	3
Ans	3.24×10^{15}	
Credit 2004 P2 Q1	**1.** Radio signals travel at a speed of 3×10^{8} metres per second. A radio signal from Earth to a space probe takes 8 hours. What is the distance from Earth to the probe? Give your answer **in scientific notation**.	4
Ans	$8{\cdot}64 \times 10^{12}$	
Credit 2002 P2 Q1	**1.** A spider weighs approximately $19{\cdot}06 \times 10^{-5}$ kilograms. A humming bird is 18 times heavier. Calculate the weight of the humming bird. Give your answer **in scientific notation**.	2
Ans	$3{\cdot}43 \times 10^{-3}$kg	

Credit 2001 P2 Q1	**1.**  How many chocpops will be eaten in the year 2001? Give your answer in **scientific notation**.	2
Ans	$5{\cdot}256 \times 10^{9}$	
Credit 2000 P2 Q2	**2.** The mass of water on the earth's surface is $1{\cdot}41 \times 10^{18}$ tonnes. The total mass of the earth is $5{\cdot}97 \times 10^{21}$ tonnes. Express the mass of water on the earth's surface as a percentage of the total mass of the earth. Give your answer in **scientific notation**.	3
Ans	$0{\cdot}0236 = 2{\cdot}36 \times 10^{-2}$	