Sig figs / Sci not^n (Credit Past Paper quest 2003 – 2007)

(A)

1. Bacteria in a test-tube increase at the rate of 0·6% per hour.

(P2) At 12 noon, there are 5000 bacteria.

At 3pm, how many bacteria will be present?

Give your answer **to 3 significant figures**.

KU	RE
4	

(B)

1. Radio signals travel at a speed of 3×10^8 metres per second.

(P2) A radio signal from Earth to a space probe takes 8 hours.

What is the distance from Earth to the probe?

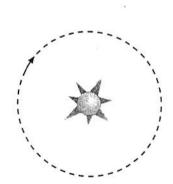Give your answer **in scientific notation**.

KU	RE
4	

(C)

$$E = mc^2.$$

1. Find the value of E when $m = 3 \cdot 6 \times 10^{-2}$ and $c = 3 \times 10^8$.

(P2) Give your answer **in scientific notation**.

KU	RE
3	

(D)

1. The orbit of a planet around a star is circular.

(P2)

The radius of the orbit is $4 \cdot 96 \times 10^7$ kilometres.

Calculate the circumference of the orbit.

Give your answer **in scientific notation**.

KU	RE
3	