

1. Write the following in normalized scientific notation, include appropriate significant figures (3 marks).

(a) 40,168,000,000

(b) 0.000 006 088

(c) 345.624

2. Calculate the following without the use of a calculator; significant figures are NOT required. (6 marks)

(a)  $65,000,000 \times 2,000,000$

(b)  $140,000,000 \times 0.00005$

(c)  $0.000004 \times 0.000011$

3. State the number of significant figures in the following: (3 marks)

(a) 4,009.05

(b) 0.0010003

(c) 4.0050

4. Evaluate the following and maintain the appropriate number of significant figures (4 marks)

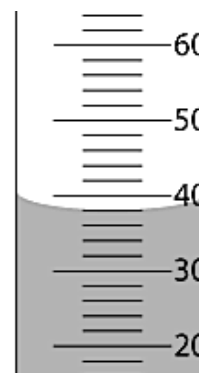
(a)  $8.45 + 1.6 - 3.25 + 2$

(b)  $4.888 \times 0.1$

5. Using a ruler, measure the length of the nail AND state the absolute error with your measurement Justify/explain your error decision. (3 marks).



6. State the volume (mL) of water in the picture of the graduated cylinder, include the absolute error with your measurement. Justify/explain your error decision (3 marks)



7. A student records a measurement of a frog's horizontal jump distance as  $25\text{cm} \pm 2\text{cm}$ . (2 marks)

(a) What is the absolute error of the measurement?

(b) What is the percentage error of the measurement?