

1. Based on the following measurements, determine the smallest unit of measurement given by the tool.

a) 3.254 m \_\_\_\_\_

b) 1.34 cm \_\_\_\_\_

c)  $20\tilde{0}N$  \_\_\_\_\_

d)  $45\tilde{0}0N$  \_\_\_\_\_

e)  $1.25 \times 10^3 m^3$  \_\_\_\_\_

2. If the smallest scale on measuring device is in 0.01mm, which of the following measurements would be most accurate? Explain why

a) 5.32mm

b) 5.3255 mm

c) 5.326 mm

3. Using the rules for addition, subtraction, multiplication and division of measured quantities, determine the answer to the correct number of decimal places.

a) The perimeter of a quadrilateral that is 1.02m by 52.4cm by 39.85cm by 99cm

b) The volume of box that is 2.3m by 1.22m by 45cm

c) The surface area of a cylinder whose height is 1.25cm and radius is 2.5cm

4. A class of grade 12 physics students did an experiment to determine the acceleration due to gravity. Using the below results, determine:
- the mean result for acceleration for this class.
  - the Standard Deviation (S.D.) for the data.
  - the number of results that fell within 1 S.D. of the mean.
- the **ratio** of the number of **results that fell within 1 S.D.** to the **total number** of results. Was the result close to 2/3?

9.7945  
9.7977  
9.7806  
9.7897  
9.8131  
9.8321  
9.7858  
9.8182  
9.7931  
9.8228  
9.7783  
9.8193  
9.7744  
9.7726  
9.7588  
9.8001  
9.7595  
9.8170  
9.7717  
9.7761  
9.7969  
9.7935  
9.7592  
9.8051  
9.8434