Key
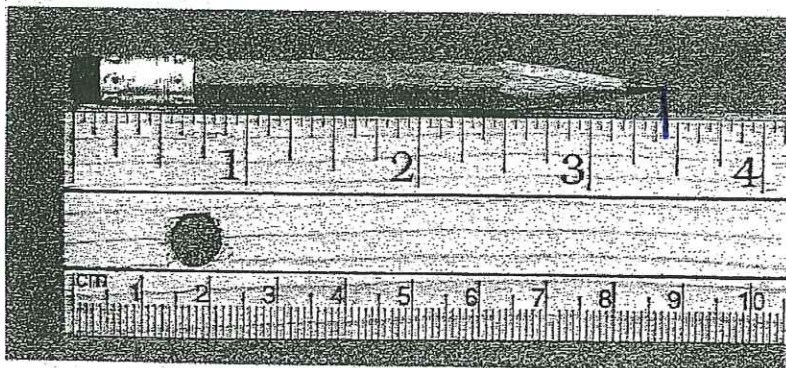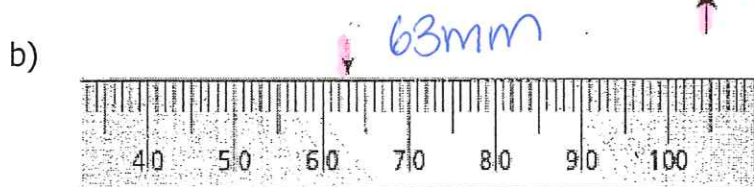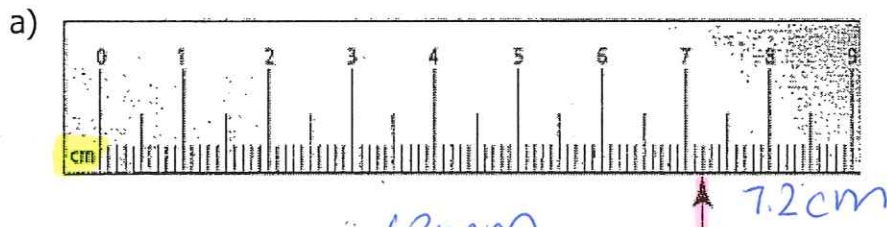
1.2 Reading SI and Imperial Rulers

Many rulers marked with imperial units show one inch divided into eighths, tenths, or sixteenths. To measure the length of an object, you must first determine the smallest indicated unit by counting the number of divisions between two adjacent inch marks. For example, the ruler below has 16 divisions between 2 adjacent inch marks, so the smallest indicated unit is $\frac{1}{16}$ of an inch, which is written as $\frac{1}{16}$ in.

Ex.) What is length of the pencil? $3\frac{7}{16}$ in.

A fraction of an imperial measure of length is usually written in fraction form not decimal form. An imperial ruler or measuring tape can measure distances to the nearest $\frac{1}{16}$ in

Ex.) What reading(s) is/are shown on each ruler below?

a)

7.2 cm

b)

63 mm

(SI ruler) ← mm

c)

C $1\frac{7}{16}$ in

D $2\frac{8}{16}=2\frac{1}{2}$ in

E $3\frac{4}{16}=3\frac{1}{4}$ in

F $4\frac{12}{16}=4\frac{3}{4}$ in

G $5\frac{2}{16}=5\frac{1}{8}$ in

A 2.2 cm

B 11.7 cm