

Worksheet Grade 7

1. 10^3 represents which prefix.
A. centi B. deci C. kilo D. milli
2. A physical quantity is represented by a and a
A. Magnitude and unit
B. Magnitude and power
C. Unit and power
D. Magnitude and decimal
3. Length is defined as the Between two points.
A. Matter B. distance C. space D. surface
4. is the amount of space occupied by an object.
A. Volume B. mass C. length D. area
5. Area is the amount of occupied by an object.
A. Matter B. distance C. surface D. space
6. Mass is the amount of contained in an object.
A. Distance B. surface C. space D. matter
7. The volume of regular shaped object can be calculated using
A. Formulae
B. Instruments
C. Ruler
D. Beam balance
8. The volume of a liquid can be measured using a
A. Stopwatch
B. Measuring cylinder
C. Top-pan balance
D. Thermometer

9. The mass of an object can be measured using a

- A. Beaker
- B. Watch
- C. Thermometer
- D. Electronic balance

10. Which of the following instruments is suitable to measure long distance?

- A. Ruler
- B. Half-metre rule
- C. Metre rule
- D. Measuring tape

11. Complete the table below.

Physical Quantity	SI Unit	Symbol for SI unit
	metre	
Area		
		kg
	Kelvin	
	metre-cubed	
time		

12. Complete the table below

Fundamental Quantities	Fundamental Units	Symbol for Fundamental Units
		cd
Electric current		
	mole	
	Second	
Temperature		
		m
mass		

13. Underline the physical quantities, magnitudes and units in the following sentences

- (a) The length of a room is 3.5 m.
- (b) 80 kg is the average mass of a person.
- (c) The temperature of a classroom is about 23 °C.
- (d) 225 cm² is the area of a tile.
- (e) The time taken by a sports car to travel the distance during a race was 3600 s.
- (f) The volume of the cube as calculated was 84 m³.

14. Match the following physical quantities with their correct units

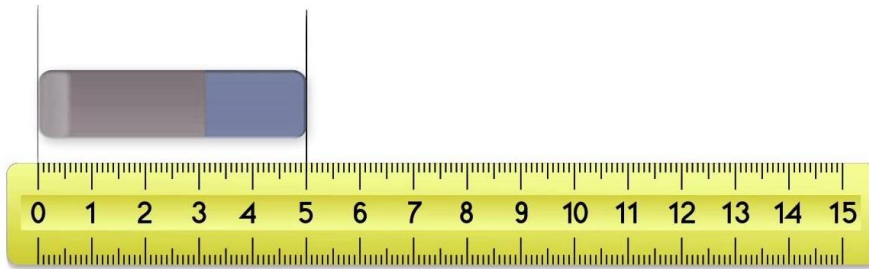
- | | |
|-------------------------|---------------|
| (a) Luminous intensity | Kelvin |
| (b) Area | kilogram |
| (c) Temperature | metre-squared |
| (d) Volume | candela |
| (e) Mass | Ampere |
| (f) Amount of substance | second |
| (g) Time | metre-cubed |
| (h) Length | mole |
| (i) Electric current | metre |

15. The following sentences were wrongly written by a grade 7 student. The mistakes are in bold, correct them.

- (a) During an experiment, Carlson measured the length of an eraser as 3.5 **kg**.
- (b) The **mass** of water in a beaker was recorded as 34 °C.
- (c) The shopkeeper measured the mass of the potatoes as 4 **s**.
- (d) 4 m² is the surface **temperature** of the table.
- (e) The **time** of 20 iron nails was measured as 20 cm³.
- (f) The **area** of 20 car measured by Paula is 100 m.

16. Identify which physical quantity is being measured in the following diagrams.

(a)



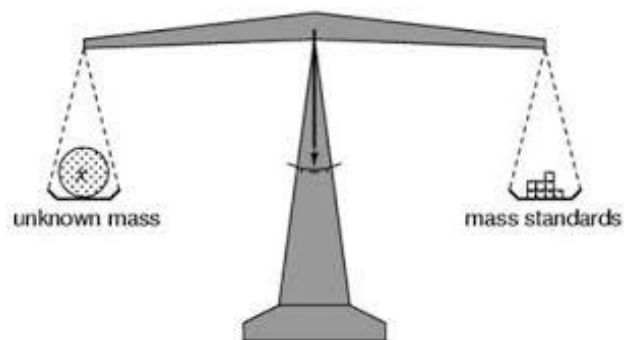
(b)



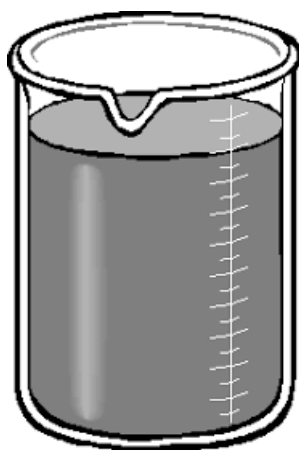
(c)



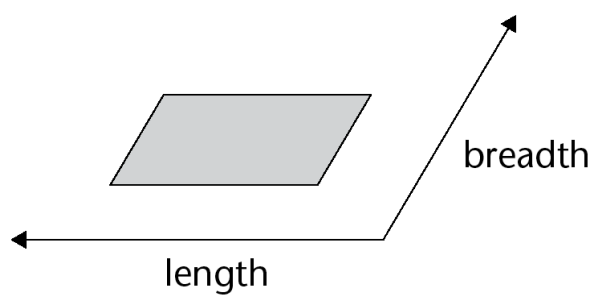
(d)



(e)



(f)



17. Write the following values using suitable prefixes.

(a) 6320 g =

(b) 46000 g =

(c) 0.8 m =

(d) 0.05 m =

(e) 0.02 s =

(f) 0.01 g =

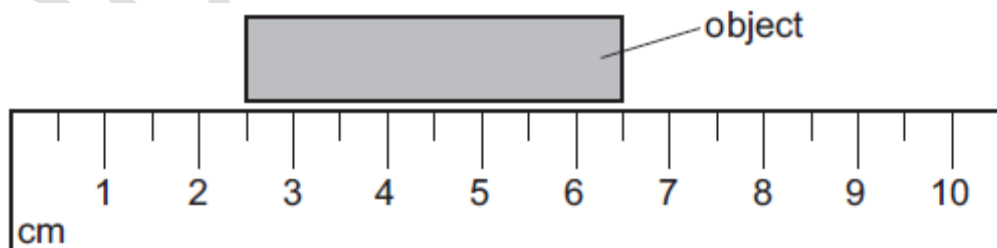
(g) 0.007 s =

(h) 0.005 g =

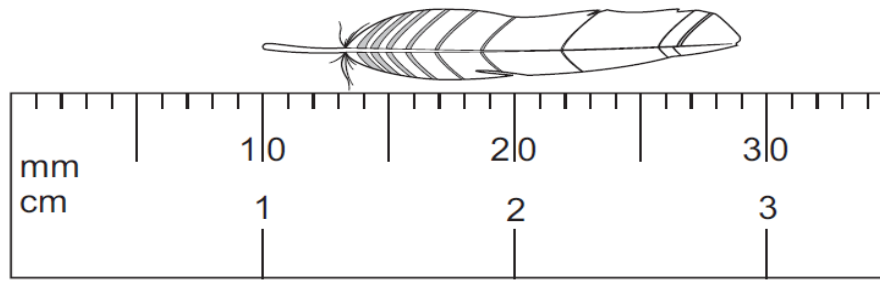
(i) 0.004 m =

Measurement of length

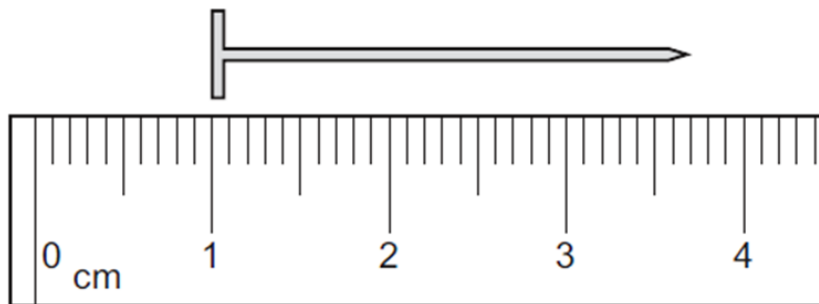
1. Define the term length.
2. State the SI unit of length.
3. List the different instruments used to measure length.
4. State the range of the following instruments:
 - (i) A ruler
 - (ii) A half metre rule
 - (iii) A metre rule
 - (iv) A measuring tape
5. Name an instrument to measure the following length.
 - (a) Width of a book
 - (b) Distance between the modern college and market
 - (c) Length of a table
 - (d) The height of a bus
6. A ruler is used to measure the length of an object. What is the length of the object?



7. The diagram shows an enlarged drawing of the end of a metre rule. It is being used to measure the length of a small feather. What is the length of the feather?



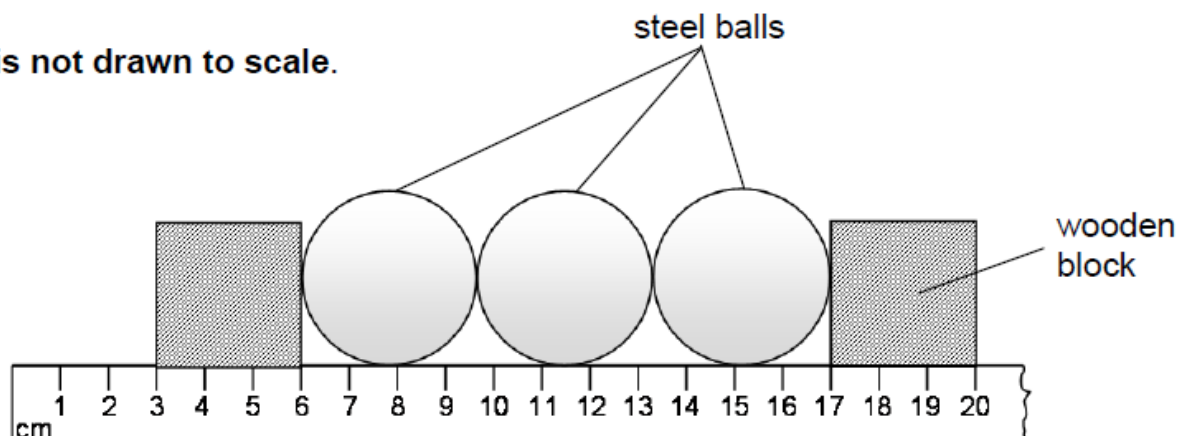
8. The diagram shows part of a ruler. The ruler is used to find the length of a nail.



What is the length of the nail?

9. To find the diameter of a steel ball, Neel arranges three identical steel balls along a graduated ruler as shown in the diagram below.

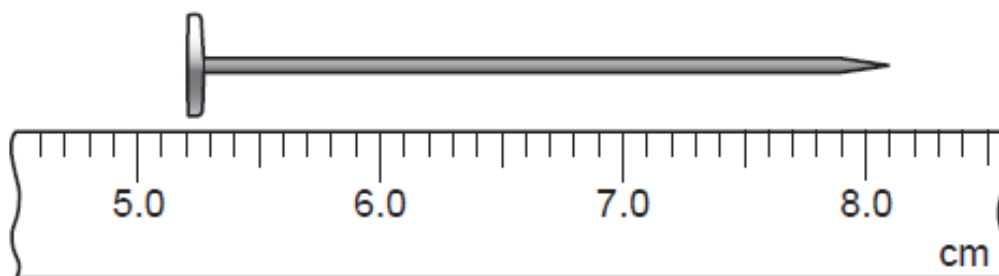
Diagram is not drawn to scale.



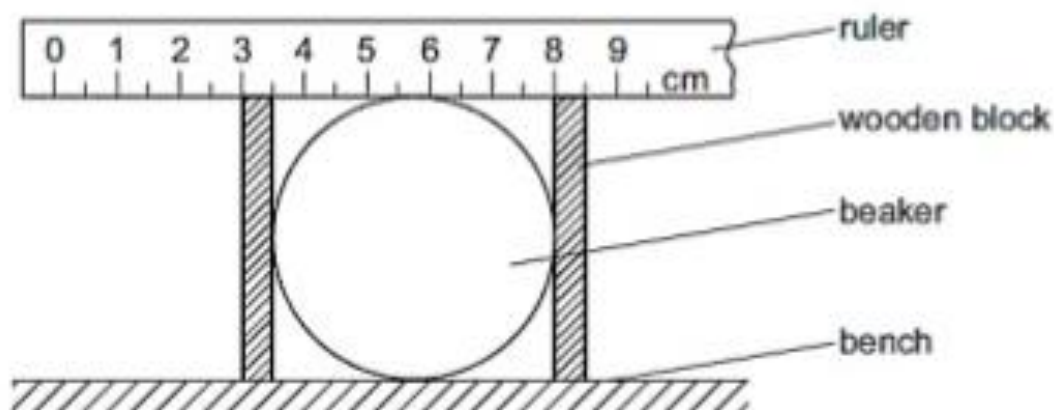
- a. Use **the diagram** to calculate the diameter of **one** steel ball. Show all your workings.

b. Explain the purpose of the wooden block.

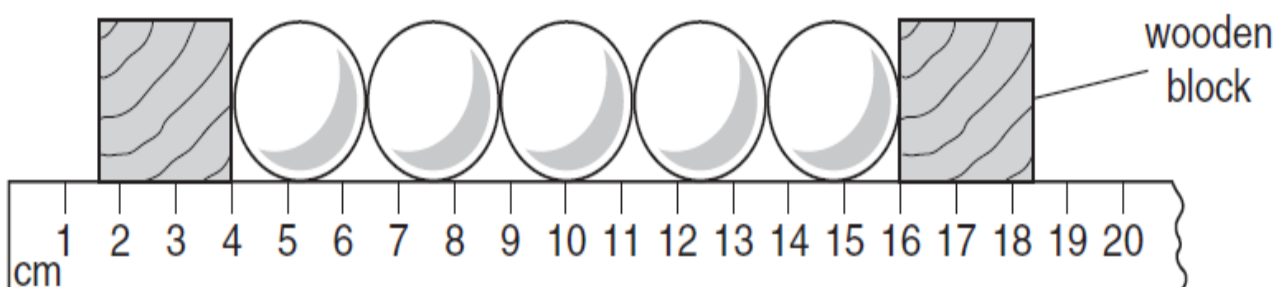
10. A ruler is used to measure the length of a nail. What is the length of the nail?



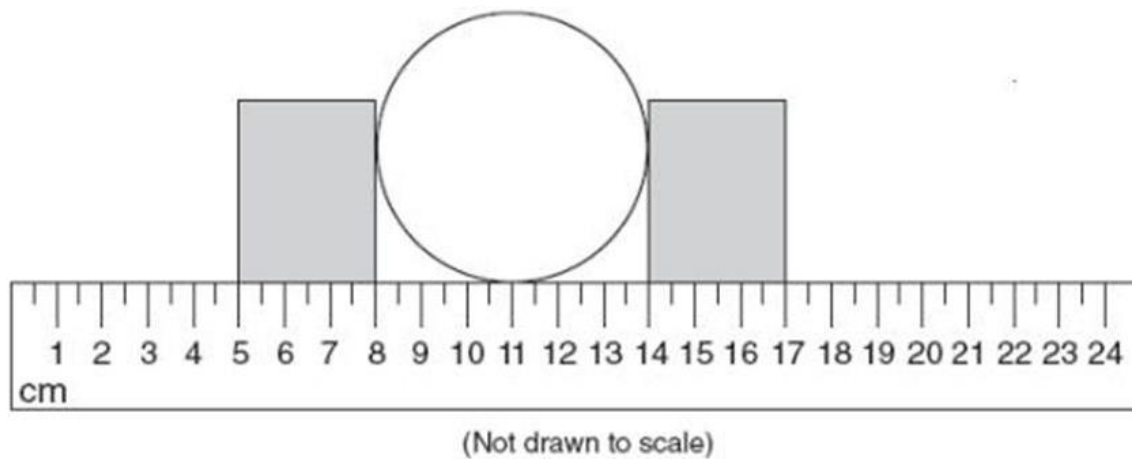
11. The diagram shows one method of measuring the diameter of a beaker. What is the diameter of the beaker?



12. The diagram shows a method to measure diameter of a ball bearing. Take measurement from the diagram and determine the diameter of a ball bearing.

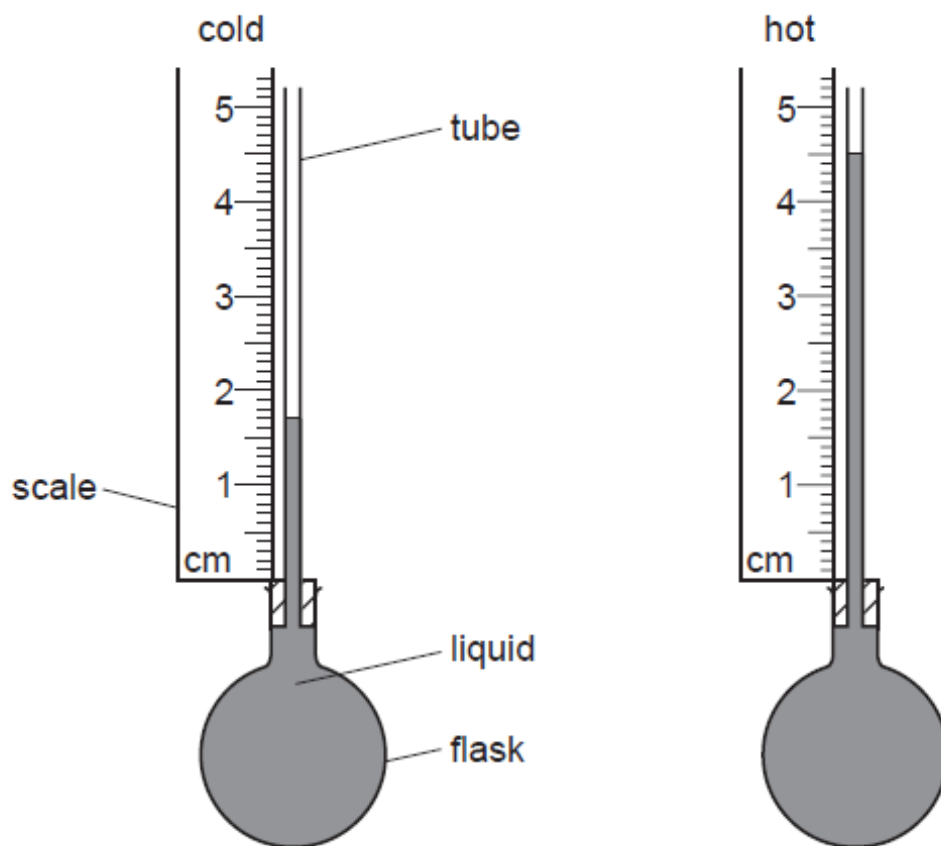


13. The diagram below shows a ball held in place by two blocks. The diameter of the ball is shown between the two blocks. What is the diameter of the ball?

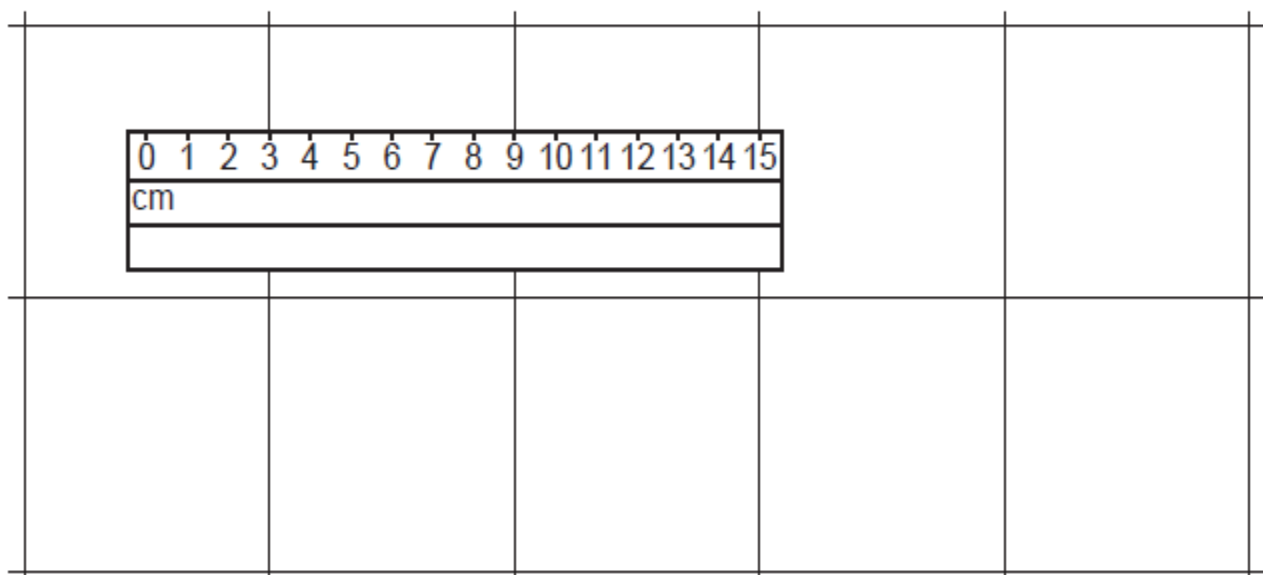


14. Some liquid is heated in a flask.

The diagrams show the height of the liquid in the tube when the liquid is cold and when it is hot. What is the difference in the heights?



15. A floor is covered with square tiles. The diagram shows a ruler on the tiles. How long is one tile?



- 16.** The diagram shows four identical spheres placed between two wooden blocks on a ruler. What is the diameter of one sphere?

