



PHYSICS

BOOKS - SURA PHYSICS (TAMIL ENGLISH)

Measurement

Exercise

1. The girth of a tree can be measured by

A. metre scale

B. metre rod

C. plastic ruler

D. measuring tape

Answer:



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2. The conversion of 7 m into cm gives

A. 70m

B. 7m

C. 700m

D. 7000m

Answer:



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3. Quantity that can be measured is called

A. Physical quantity

B. Measurement

C. unit

D. motion

Answer:



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4. Choose the correct one

A. $km > mm > cm > m$

B. $km > mm > m > cm$

C. $km > m > cm > mm$

$$D. km > cm > m > mm$$

Answer: $km > cm > m > mm$



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5. While measuring length of an object using a ruler, the position of your eye should be

A. Left side of the point.

B. Vertically above the point where the measurement is to be taken.

C. Right side of the point

D. Any where according to one's
convenience.

Answer:



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6. True or False: We can say that mass of an
object is 126 kg.



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7. True or False: Length of one's chest can be measured by using metre scale.



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8. True or False: Ten millimetres makes one centimetre.



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9. True or False: A hand span is a reliable measure of length.



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10. True or False: The SI system of units is accepted everywhere in the world.



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11. Fill up the blanks: SI Unit of length is symbolically represented as _____



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12. Fill up the blanks: 500 gm= _____ kilogram



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13. Fill up the blanks: Distance between Delhi and Chennai can be measured in _____



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14. Fill up the blanks: $1\text{m} = \underline{\hspace{1cm}}\text{cm}$.



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15. Fill up the blanks: $5\text{km} = \underline{\hspace{1cm}}\text{m}$.



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16. Analogy:

Sugar : Beam balance, Lime juice?



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17. Anlogy:

Height of a person : cm, length of your sharpened pencil lead?



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18. Anlogy:

Milk : volume, vegetables?



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19. Match the following :

| Column A | Column B |
|---------------------------|-----------|
| 1. Length of the fore arm | Metre |
| 2. SI unit of length | Second |
| 3. Nano | 10^3 |
| 4. SI Unit of time | 10^{-9} |
| 5. Kilo | Cubit |



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20. Complete the given table.

| | |
|------------------------------|-------|
| Volume | _____ |
| Length of your little finger | Kg |
| _____ | Km |



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21. Arrange In Increasing order of unit.

1 Metre, 1 centimetre, 1 kilometre, and 1 millimetre.



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22. Find the answer for the following questions within the grid. 10^{-3} is one_____.

| | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|----------------|---|-----------------|---|---|---|----------------|---|----------------|
| A | | P | | L ⁷ | | | | | | | | R | | K |
| C | | O | | E | | | | | | | | O | | S |
| M | | K | | N | | | | | | | | R | | I |
| P | | R ¹ | | G | | | | | | | | R | | T ⁹ |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | A |
| L | | T | | H | | | | | | D | | H | | P |
| O | | E | | O | | | | | N | | | K | | E |
| A ⁶ | | M ⁵ | A | S | S | | | | O | | | R | | V |
| V | | I | | E | | | | | C | | | T | | O |
| E | | L | | K | | E | | | | | | S | | S |
| R | | L | | I | | S ² | | | | | | K | | H |
| A | | I | | T | | | | | | I | | V | | P |
| G | | M | | X | | | | M | | | | N | | U |
| E | | Z | | D | | | | E | | | | S | K | P |
| Z | T | D | K | H | | | | | | | | O ⁸ | D | O |
| | | | | | | | | | | | | | M | E |
| | | | | | | | | | | | | | T | E |
| | | | | | | | | | | | | | R | |

A. t

B.

C.

D.

Answer:



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23. Find the answer for the following questions within the grid. SI Unit of time _____.

| | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|---|---|-----------------|---|---|---|----------------|---|----------------|
| A | | P | | L ⁷ | | | | | | | | R | | K |
| C | | O | | E | | | | | | | | R | | S |
| M | | K | | N | | | | | | | | R | | I |
| P | | R ¹ | | G | | | | | | | | R | | T ⁹ |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | A |
| L | | T | | H | | | | | | | | H | | P |
| O | | E | | O | | | | | | | | K | | E |
| A ⁶ | | M ⁵ | A | S | S | | | | | | | R | | V |
| V | | I | | E | | | | | | | | T | | O |
| E | | L | | K | | | | | | | | S | | S |
| R | | L | | I | | | | | | | | K | | H |
| A | | I | | T | | | | | | | | V | | P |
| G | | M | | X | | | | | | | | N | | U |
| E | | Z | | D | | | | | | | | S | K | P |
| Z | T | D | K | H | | | | | | | | O ⁸ | D | O |
| | | | | | | | | | | | | M | E | T |
| | | | | | | | | | | | | E | R | |



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24. Find the answer for the following questions within the grid. Cross view of reading for a measurement leads to ____

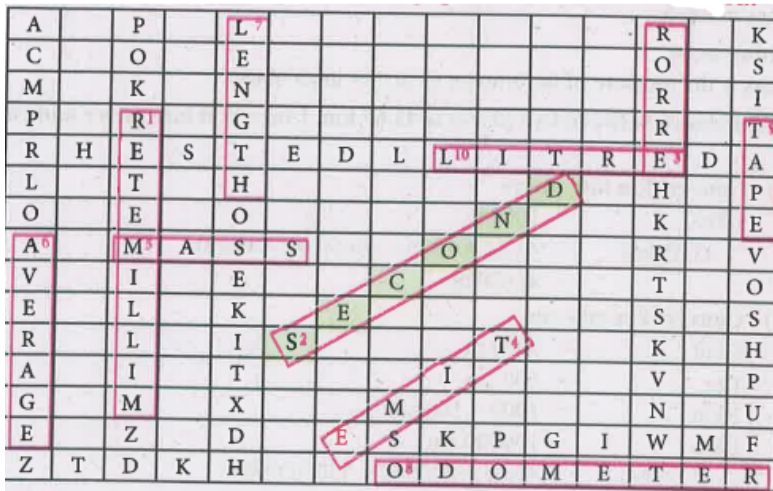
| | | | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|----------------|---|-----------------|----------------|---|---|----------------|---|---|---|---|
| A | | P | | L ⁷ | | | | | | | | | R | | K | |
| C | | O | | E | | | | | | | | | O | | S | |
| M | | K | | N | | | | | | | | | R | | I | |
| P | | R ¹ | | G | | | | | | | | | R | | | |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | A | | |
| L | | T | | H | | | | | | | D | | H | P | | |
| O | | E | | O | | | | | | N | | | K | E | | |
| A ⁶ | | M ⁵ | A | S | S | | | | | O | | | R | V | | |
| V | | I | | E | | | | | | C | | | T | O | | |
| E | | L | | K | | E | | | | | | | S | S | | |
| R | | L | | I | | S ² | | | | | | | K | H | | |
| A | | I | | T | | | | | | I | | | V | P | | |
| G | | M | | X | | | | | M | | | | N | U | | |
| E | | Z | | D | | E | | | S | K | P | G | I | W | M | F |
| Z | T | D | K | H | | | | | O ⁸ | D | O | M | E | T | E | R |



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25. Find the answer for the following questions within in grid. an object the grid.

_____ is the amount of substance present in an object.



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26. Find the answer for the following questions within the grid : _____ can be taken to get the final reading of the recordings of different of students for a single measurement.

| | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|----------------|---|-----------------|---|---|----------------|----------------|---|----------------|
| A | | P | | L ⁷ | | | | | | | | R | | K |
| C | | O | | E | | | | | | | | O | | S |
| M | | K | | N | | | | | | | | R | | I |
| P | | R ¹ | | G | | | | | | | | R | | T ⁹ |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | A |
| L | | T | | H | | | | | | | D | | H | P |
| O | | E | | O | | | | | | | | | K | E |
| A ⁶ | | M ⁵ | A | S | S | | | | | | | | R | V |
| V | | I | | E | | | | | O | N | | | T | O |
| E | | L | | K | | E | C | | | | | | S | S |
| R | | L | | I | | S ² | | | | | | | K | H |
| A | | I | | T | | | | | | I | T ⁴ | | V | P |
| G | | M | | X | | | | M | | | | | N | U |
| E | | Z | | D | | E | | S | K | P | G | I | W | M |
| Z | T | D | K | H | | | | O ⁸ | D | O | M | E | T | E |
| | | | | | | | | | | | | | | R |



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27. Find the answer for the following questions within the grid. ____ is a fundamental quantity.

| | | | | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|---|---|-----------------|---|----------------|---|----------------|---|---|----------------|---|---|
| A | | P | | L ⁷ | | | | | | | | | | R | | K | |
| C | | O | | E | | | | | | | | | | O | | S | |
| M | | K | | N | | | | | | | | | | R | | I | |
| P | | R ¹ | | G | | | | | | | | | | R | | | |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | | T ⁹ | A | |
| L | | T | | H | | | | | | D | | | H | | | P | |
| O | | E | | O | | | | | | | | | K | | | E | |
| A ⁶ | | M ⁵ | A | S | S | | | | | | | | R | | | V | |
| V | | I | | E | | | | | C | | | | | T | | O | |
| E | | L | | K | | | | E | | | | | S | | | S | |
| R | | L | | I | | | | S ² | | | | | | K | | H | |
| A | | I | | T | | | | | | I | | | | V | | P | |
| G | | M | | X | | | | | | M | | | | N | | U | |
| E | | Z | | D | | | | E | | S | K | P | G | I | W | M | F |
| Z | T | D | K | H | | | | | | O ⁸ | D | O | M | E | T | E | R |



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28. Find the answer for the following questions within the grid. ____ shows the distance covered by an automobile.

| | | | | | | | | | | | | | | | | | | | |
|----------------|---|----------------|---|----------------|---|---|---|-----------------|---|---|---|----------------|---|----------------|---|---|---|---|---|
| A | | P | | L ⁷ | | | | | | | | R | | K | | | | | |
| C | | O | | E | | | | | | | | O | | S | | | | | |
| M | | K | | N | | | | | | | | R | | I | | | | | |
| P | | R ¹ | | G | | | | | | | | R | | T ⁹ | | | | | |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | A | | | | | |
| L | | T | | H | | | | | | | | H | | P | | | | | |
| O | | E | | O | | | | | | | | K | | E | | | | | |
| A ⁶ | | M ⁵ | A | S | S | | | | | | | R | | V | | | | | |
| V | | I | | E | | | | | | | | T | | O | | | | | |
| E | | L | | K | | | | | | | | S | | S | | | | | |
| R | | L | | I | | | | | | | | K | | H | | | | | |
| A | | I | | T | | | | | | | | V | | P | | | | | |
| G | | M | | X | | | | | | | | N | | U | | | | | |
| E | | Z | | D | | | | | | | | I | | F | | | | | |
| Z | T | D | K | H | | | | | | | | O ⁸ | D | O | M | E | T | E | R |



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29. Find the answer for the following questions within the grid. A tailor use _____ to take measurements to stich a cloth.

| | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---|----------------|----------------|----------------|---|---|---|-----------------|---|---|---|----------------|---|--|--|--|--|--|----------------|--|---|---|
| A | | P | | L ⁷ | | | | | | | | | | | | | | | R | | K | |
| C | | O | | E | | | | | | | | | | | | | | | O | | S | |
| M | | K | | N | | | | | | | | | | | | | | | R | | I | |
| P | | | R ¹ | G | | | | | | | | | | | | | | | R | | | |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | | | | | | T ⁹ | | | |
| L | | T | | H | | | | | | | | | | | | | | | H | | P | |
| O | | E | | O | | | | | | | | | | | | | | | K | | E | |
| A ⁶ | | M ⁵ | A | S | S | | | | | | | | | | | | | | R | | V | |
| V | | I | | E | | | | | | | | | | | | | | | T | | O | |
| E | | L | | K | | | | | | | | | | | | | | | S | | S | |
| R | | L | | I | | | | | | | | | | | | | | | K | | H | |
| A | | I | | T | | | | | | | | | | | | | | | V | | P | |
| G | | M | | X | | | | | | | | | | | | | | | N | | U | |
| E | | Z | | D | | | | | | | | | | | | | | | | | F | |
| Z | T | D | K | H | | | | | | | | | | | | | | | | | R | |
| | | | | | | | | | | | | | | | | | | | | | | R |

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30. Find the answer for the following questions within the grid. Liquids are measured with this physical quantity.

| | | | | | | | | | | | | | | | | | | |
|----------------|---|----------------|----------------|----------------|---|---|---|-----------------|---|----------------|---|----------------|---|---|---|---|----------------|---|
| A | | P | | L ⁷ | | | | | | | | | | | | R | | K |
| C | | O | | E | | | | | | | | | | | | O | | S |
| M | | K | | N | | | | | | | | | | | | R | | I |
| P | | | R ¹ | G | | | | | | | | | | | | R | | |
| R | H | E | S | T | E | D | L | L ¹⁰ | I | T | R | E ³ | D | | | | T ⁹ | |
| L | | T | | H | | | | | | | D | | | | H | | P | |
| O | | E | | O | | | | | | N | | | | | K | | E | |
| A ⁶ | | M ⁵ | A | S | S | | | | | O | | | | | R | | V | |
| V | | I | | E | | | | | | C | | | | | T | | O | |
| E | | L | | K | | | | | | E | | | | | S | | S | |
| R | | L | | I | | | | S ² | | | | | | | K | | H | |
| A | | I | | T | | | | | | I | | | | | V | | P | |
| G | | M | | X | | | | | | M | | | | | N | | U | |
| E | | Z | | D | | | | E | | S | K | P | G | I | W | M | F | |
| Z | T | D | K | H | | | | | | O ⁸ | D | O | M | E | T | E | R | |



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31. Choose the correct answer:

In which SI unit, you can measure you height?

A. Kilogram

B. Litre

C. Metre

D. Second

Answer:



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32. The distance between one end and the other end is called_____.

A. mass

B. length

C. time

D. None

Answer:



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33. _____ is used to measure the accurate time of the activity.

A. Clock

B. Watch

C. Stop clock

D. Sundial

Answer:



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34. Five kilometre is equal to _____.

A. 500 cm

B. 500 m

C. 5000 m

D. 5000 cm

Answer:



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35. S.I unit for Volume is _____

A. m^2

B. m

C. m^3

D. none

Answer:



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36. Twenty decimetre is equal to _____

A. 2km

B. 20cm

C. 2metre

D. 200mm

Answer:



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37. _____ is used to measure mass.

A. Stop klok

B. Beam balance

C. Sundial

D. Graduated cylinder

Answer:



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38. The metric system of units was created by the ___ in 1790

A. Greek

B. Ausralianst

C. Russians

D. French

Answer:



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39. The moon's gravitational pull is one___ of the earth's pull.

A. seventh

B. sixth

C. fifth

D. fourth

Answer:



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40. The girth of a tree can be measured by

A. metre scale

B. metre rod

C. plastic ruler

D. measuring tape

Answer:



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41. The distance between one end and the other end is called ____.

A. mass

B. length

C. time

D. 200 mm

Answer:



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42. Twenty decimetre is equal to _____.

A. 2 km

B. 20 cm

C. 2 metre

D. None

Answer:



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43. _____ is used to measure mass.

- A. Stop clock
- B. Beam balance
- C. Sundial
- D. Graduated cylinder

Answer:



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44. Fill in the blanks.

SI Unit of length is symbolically represented
as _____



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45. Fill in the blanks.

1 m = _____ cm.



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46. Fill in the blanks.

_____ shows the distance covered by an automobile.



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47. Find whether the following sentences are true or false. If false Correct the statement.

We can say that mass of an object is 126 kg.



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48. Find whether the following sentences are true or false. If false Correct the statement.

The SI system of units is accepted everywhere in the world.



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49. Find whether the following sentences are true or false. If false correct the statement.

On moon, the gravitational force is greater than earth.





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50. Match the following.

| | | | |
|----|------------------------|-------|-----------|
| 1. | Length of the fore arm | (i) | metre |
| 2. | SI unit of length | (ii) | second |
| 3. | Nano | (iii) | cubit |
| 4. | SI unit of time | (iv) | 10^{-9} |



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51. What is meant by parallax?



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52. What are the clocks used to measure a smaller duration of time?



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53. Define mass.



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54. Where are the electronic balances used?



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55. The distance between your school and your house is 2250 m. Express this distance in kilometre.



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56. What is the full form of SI system?



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57. Explain anyone method to measure the length of a curved line.



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58. Fill in the following chart.

| Property | Definition | Basic Unit | Instrument used for measuring |
|----------|------------|------------|-------------------------------|
| Length | | | |
| Mass | | | |
| Volume | | | |
| Time | | | |



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Example

1. Answer in a word or two. What is the full form of SI system?



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2. Answer in a word or two. Name any one instrument used for measuring mass.



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3. Answer in a word or two. Find the odd one out : Kilogram, Millimetre, Centimetre, Nanometre



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4. Answer in a word or two. What is the SI Unit of mass?



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5. Answer in a word or two What are the two parts present in a measurement?



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6. Answer In a sentence or two. Define measurement



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7. Define mass.



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8. Answer in a sentence or two .The distance between two places is 43.65 km. Convert it into metre and cm.



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9. Answer in a sentence or two. Convert km into metre



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10. Answer in a a sentence or two.What are the rules to be followed to make accurate measurement with scale?



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11. The distance between your school and your house is 2250 m. Express this distance in kilometre.



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12. While measuring the length of a sharpened pencil, reading of the scale at one end is 2.0 cm and at the other end is 12.1 cm. What is the length of the pencil?



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13. Write in detail.

Explain two methods those you can use to measure the length of a curved line.



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14. Fill in the following chart.

| Property | Definition | Basic Unit | Instrument used for measuring |
|----------|------------|------------|-------------------------------|
| Length | | | |
| Mass | | | |
| Volume | | | |
| Time | | | |



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15. Find whether the following sentences are true or false. If false correct the statement.

Kerosene is measured with the help of graduated cylinder





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16. Length is a fundamental quantity



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17. Find whether the following sentences are true or false. If false correct the statement.

On moon, the gravitational force is greater than earth.



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18. Find whether the following sentences are true or false. If false correct the statement.

An electronic balance is a device used to find accurate mass.



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19. Find whether the following sentences are true or false. If false correct the statement.

Speedometer is a device used for indicating distance travelled by an automobile.





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20. Find whether the following sentences are true or false. If false correct the statement.

A ruler or scale used now a days to measure length was invented by William Bedwell.



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21. Find whether the following sentences are true or false. If false correct the statement.

Length, mass and time are some of the derived quantities.



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22. Find whether the following sentences are true or false. If false correct the statement.

Leaves and piece of paper are heavier things.



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23. Find whether the following sentences are true or false. If false correct the statement.

National physical laboratory is located in Delhi.



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24. Analogy.

Potatoes: Kilogram, Water?



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25. Analogy.

Stop clock : accurate time, _____:accurate weight



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26. Analogy.

Mass : Balance, Length?



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27. Analogy.

Amount of matter : mass, Gravitational Pull?



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28. What are the materials needed to find the length of a banana?



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29. What formula is used to measure area of your class room?



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30. Give an example of a device used to find the accurate measurement of weight.



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31. In earlier days, which instruments are used to measure time?



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32. What are the clocks used to measure a smaller duration of time?



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33. Who invented a ruler or scale?



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34. Which alloy is used to make the standard metre rod?



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35. Match the following :

| Prefix | Symbol |
|----------|--------|
| a. Centi | i. k |
| b. Nano | ii. c |
| c. milli | iii. n |
| d. kilo | iv. m |



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36. What is length?



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37. Give some examples of larger length measures.



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38. List the SI units of length, mass and time.



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39. What is meant by parallax?



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40. Differentiate mass and weight.



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41. Where are the electronic balances used?



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42. Hold a sheet paper in one hand and a book in other hand. Which hand feels heaviness? Why?



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