

Measure line segment

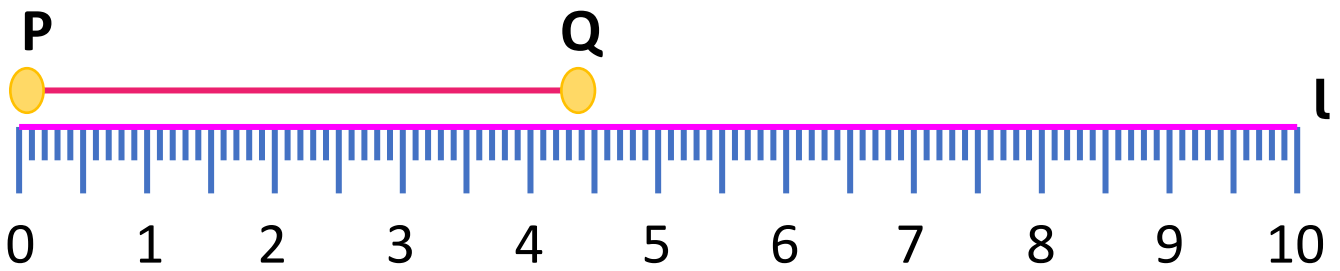
Rules:

- ◆ Note the **beginning of the line and ending of the line**, you want to measure.
- ◆ The **beginning must be in 0**.
- ◆ Look at the **other end of the line** and note where it falls on. That number is your **measurement in centimeter**.
- ◆ If the **end of the line doesn't land exactly on a centimeter mark**, there are smaller markings between the centimeters called **millimeters**. Count the number of mm past the whole cm mark.
- ◆ Write down the length of the line in centimeter. Including any millimeter (Divide 10) if you used them.

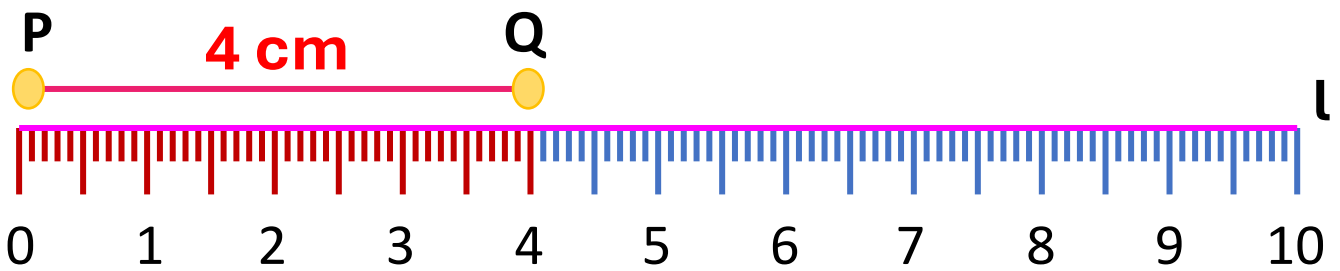
Example:

5.3
↙ ↘
cm mm

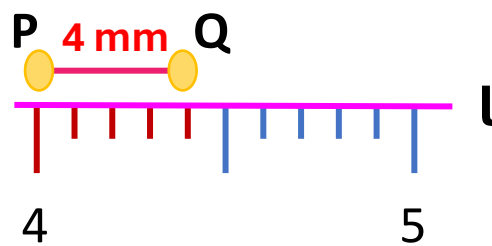
Example : 1 Measure the length PQ ?



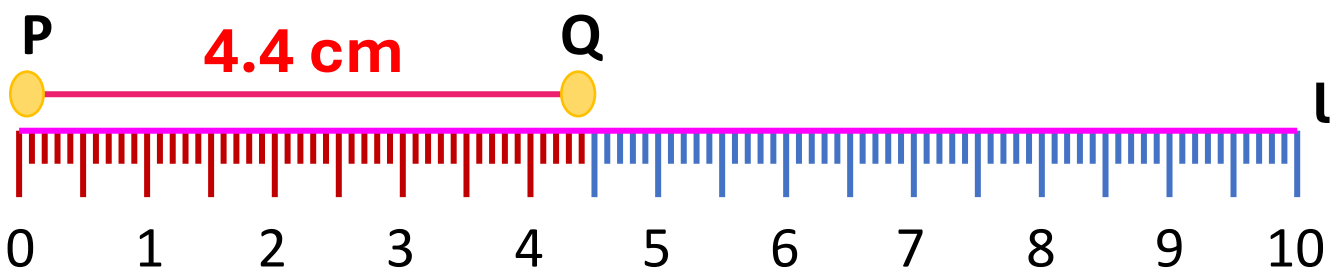
Solution: The beginning of the line(P) is at 0.
 The end of line(Q) line crossed 4 but didn't reach 5. So, therefore, it is denoted by **4 cm**.



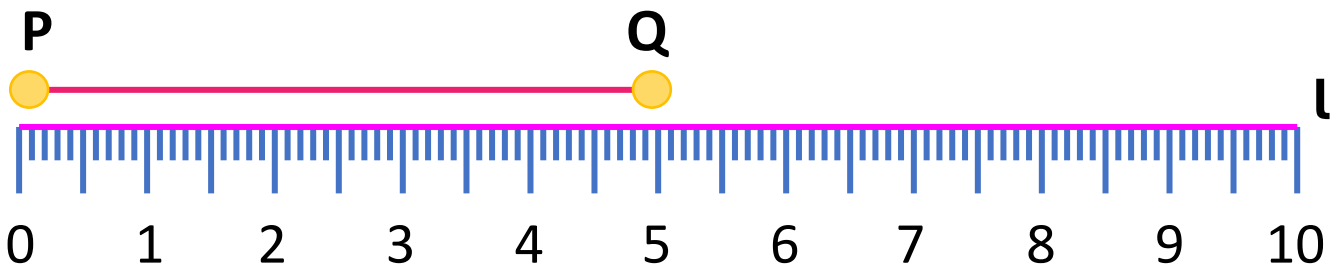
After 4 cm, the line passed 4 small lines.
 Therefore, it is denoted by **4 mm**.



The length of the line segment is
PQ is 4.4 cm



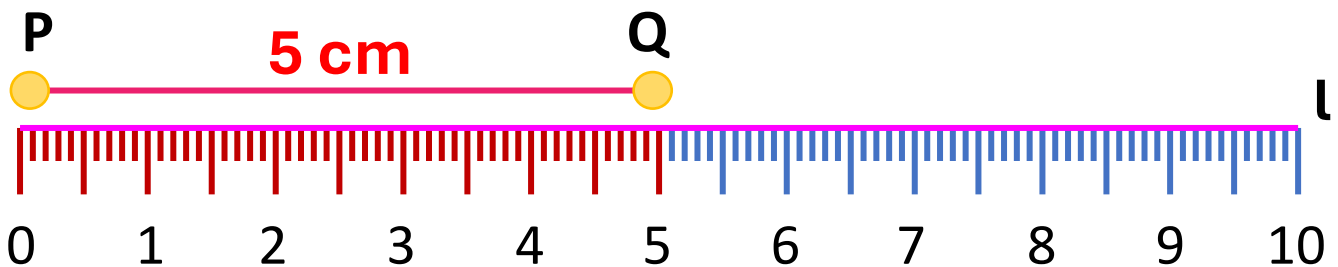
Example : 2 Measure the length PQ ?



Solution:

The beginning of the line(P) is at 0.

The end point of the line(Q) is at 5,
therefore, it is denoted by **5 cm**.



The length of the line segment is **PQ is 5 cm**

Draw line
segment of given
length

Example : 1

Draw a line segment of length $PQ = 4.2$ cm using ruler.

Solution:

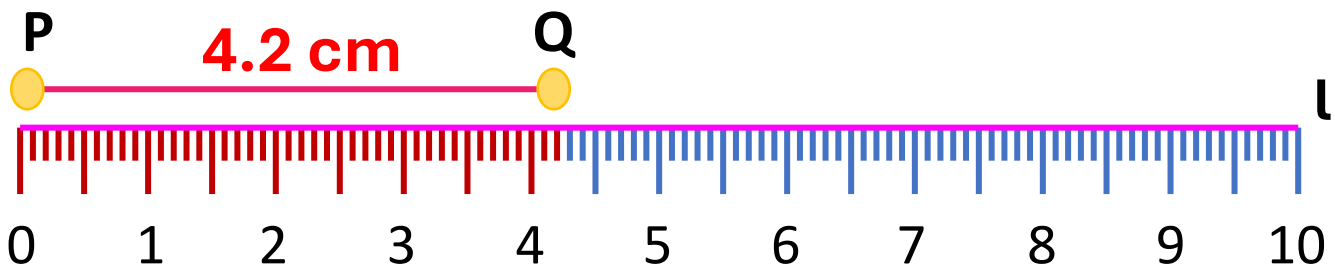
Step: 1

Draw a line 'l' and mark a point 'P'



Step: 2

Measure 4.2 cm using ruler as placing the pointer at '0' and the pencil pointer (Q) at 4.2 cm



Step: 3

PQ is the required line segment of length **4.2 cm**



Example : 2

Draw a line segment of length $PQ = 6$ cm using ruler.

Solution:

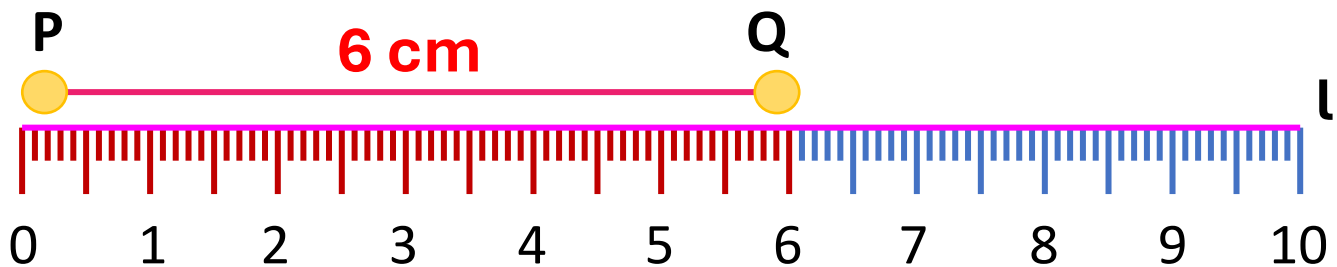
Step: 1

Draw a line 'l' and mark a point 'P'



Step: 2

Measure 6 cm using ruler as placing the pointer at '0' and the pencil pointer (Q) at 6 cm



Step: 3

PQ is the required line segment of length **6 cm**



Example : 3

Draw a line segment of length $PQ = 7.5$ cm using ruler.

Solution:

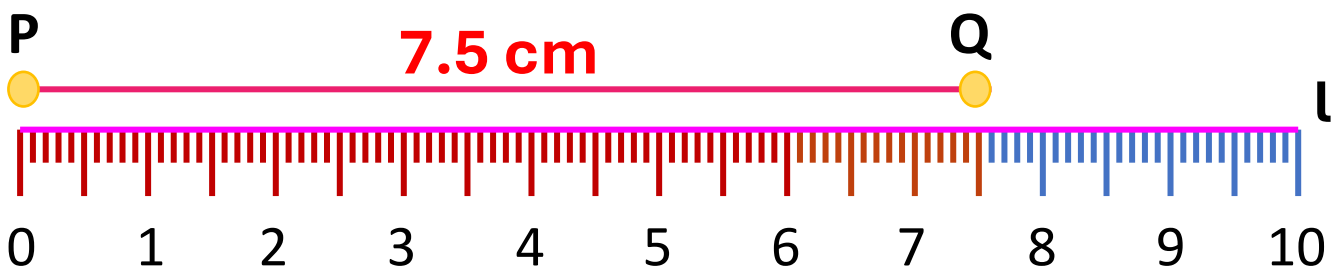
Step: 1

Draw a line 'l' and mark a point 'P'



Step: 2

Measure 7.5 cm using ruler as placing the pointer at '0' and the pencil pointer (Q) at 7.5 cm



Step: 3

PQ is the required line segment of length **7.5 cm**



Example : 4

Draw a line segment of length $PQ = 9$ cm using ruler.

Solution:

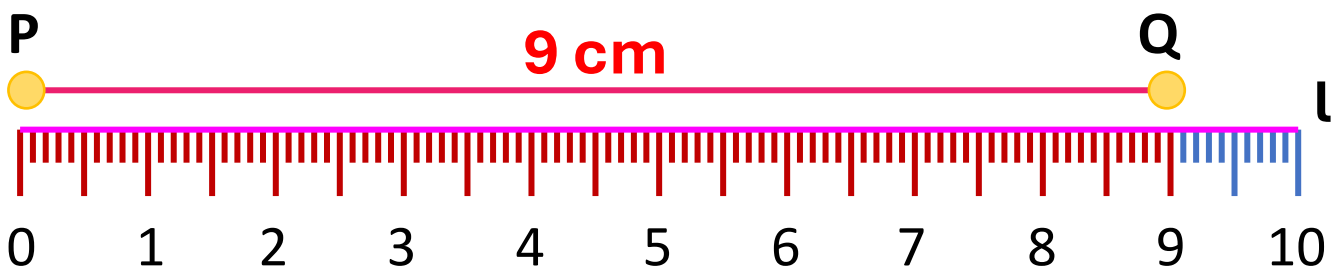
Step: 1

Draw a line 'l' and mark a point 'P'



Step: 2

Measure 9 cm using ruler as placing the pointer at '0' and the pencil pointer (Q) at 9 cm



Step: 3

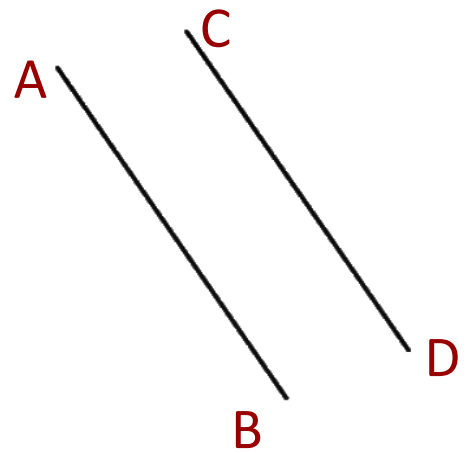
PQ is the required line segment of length **9 cm**



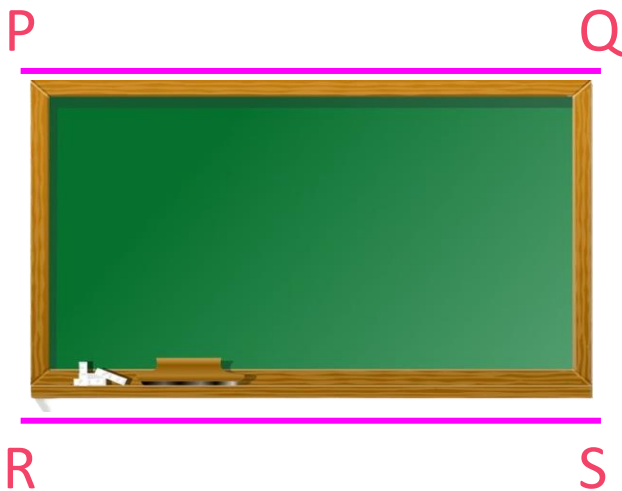
Parallel lines

What is parallel lines?

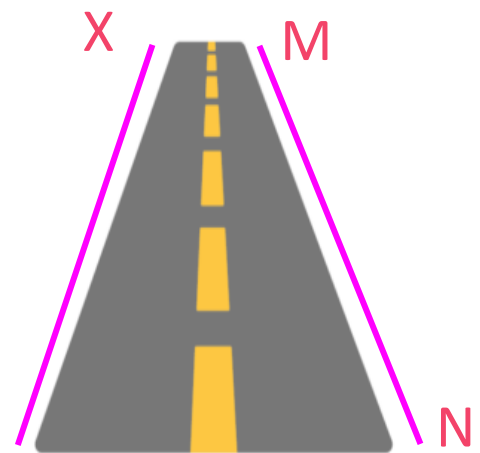
- ★ The lines that **never intersect and are equidistant** are parallel.
- ★ The **slope of parallel lines is always equal**.
- ★ The symbol for **parallel line** is \parallel
- ★ It is denoted by $AB \parallel CD$



Example of parallel lines

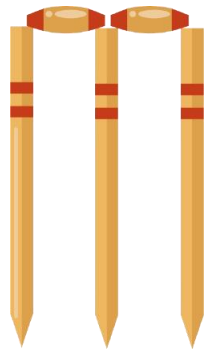


$PQ \parallel RS$

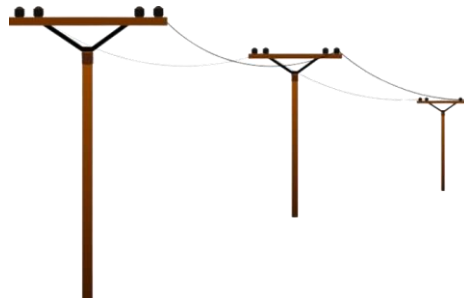


$XY \parallel MN$

Real life examples of parallel lines



Stumps



Powerlines



Ladder



Phone



Door



Bridge

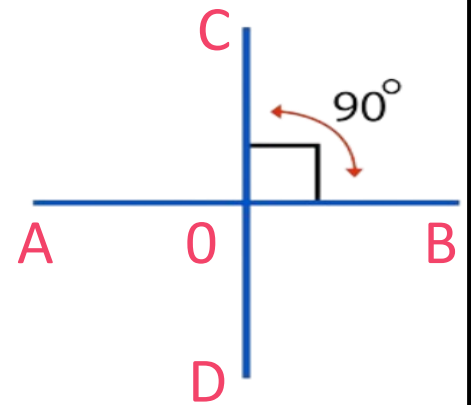


Escalator

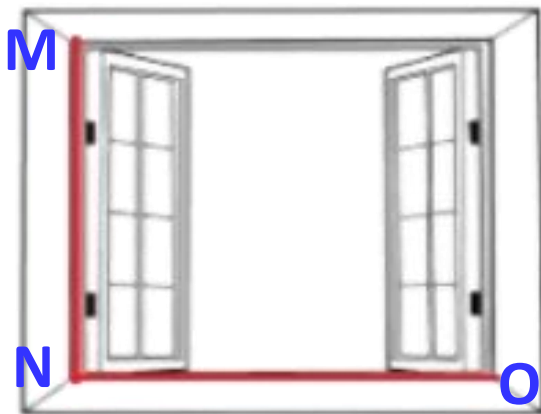
Perpendicular lines

What is perpendicular lines?

- ★ The lines which make right angles at the point of intersection are perpendicular.
- ★ If two lines are perpendicular to each other, the angle between them will be 90°
- ★ The symbol for perpendicular lines is \perp
- ★ The denoted by $AOB \perp COD$



Example of parallel lines

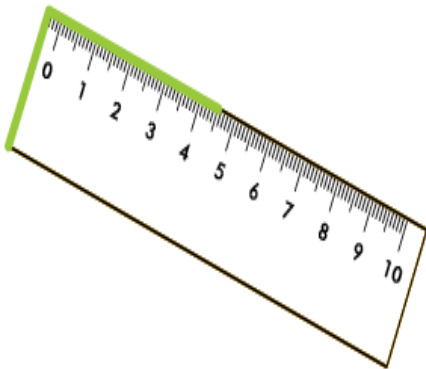


$$MN \perp NO$$

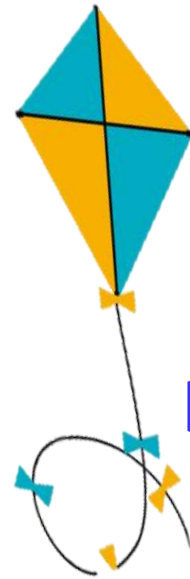


$$PQ \perp QR$$

Real life examples of perpendicular lines



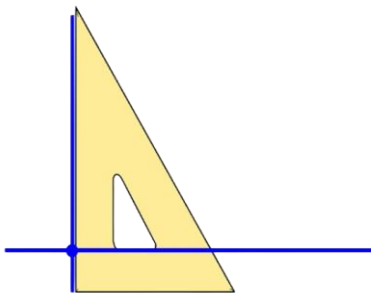
Ruler



Kite



Table



Trigonometry



Stairs