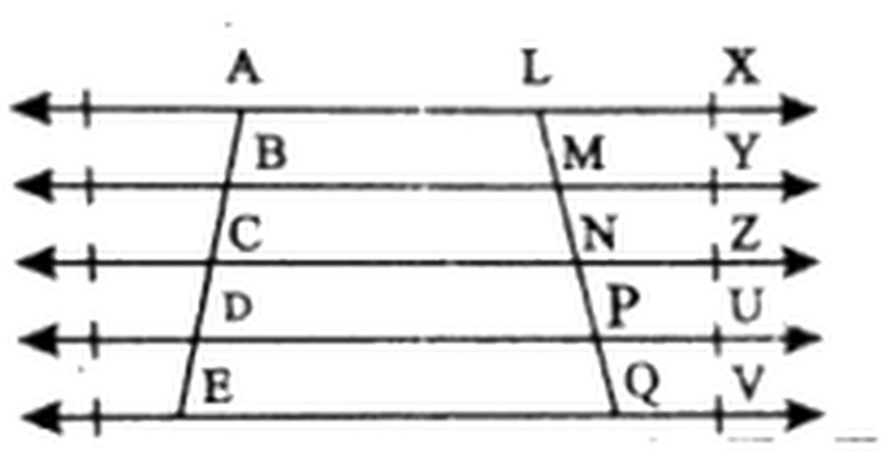
EXERCISE 11.5

Q1. In the given figure $\overline{AX} \parallel \overline{BY} \parallel \overline{CZ} \parallel \overline{DU} \parallel \overline{EV}$ and $\overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{DE}$ If m$\overline{MN}$ = 1cm, then find the length of $\overline{LN}$ and $\overline{LQ}$.

Solution:



$\overline{AX} \parallel \overline{BY} \parallel \overline{CZ} \parallel \overline{DU} \parallel \overline{EV}$ and $\overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{DE}$

$\overline{LM} \cong \overline{MN} \cong \overline{NP} \cong \overline{PQ}$

m$\overline{LN}$ = m$\overline{LM}$ + m$\overline{MN}$

= m$\overline{MN}$ + m $\overline{MN}$

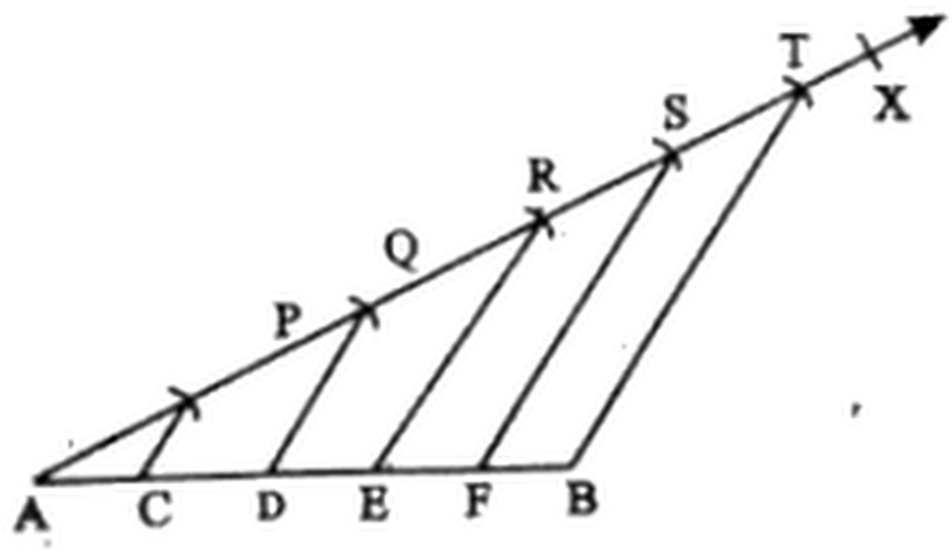
= 1 cm + 1 m = 2 cm

m$\overline{LQ}$ = m$\overline{LM}$ + m$\overline{MN}$ + m$\overline{NP}$ + m$\overline{PQ}$

= 1cm + 1 cm + 1 cm + 1 cm = 4 cm

Q2. Take a line segment of length 5.5 cm and divide it into five congruent parts

Solution



Construction:

(i) Draw a line segment $\overline{AB}$ of length 5 cm.

(ii) Draw an acute angle ∠BAX.

(iii) On AX with the help of compass take five points P, Q, R, S, T such that $\overline{AP} \cong \overline{PQ} \cong \overline{QR} \cong \overline{RS} \cong \overline{ST}$.

(IV) Join T to B.

(v) Draw lines $\overline{SF}, \overline{RE}, \overline{QD}, \overline{PC}$ parallel to $\overline{TB}$.

The points C, D, E, F divide the line Segment $\overline{AB}$ into five congruent parts.