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برائے مہربانی نوٹس کا پی اور استعمال کرتے وقت اس لائسنس کا خیال رکھیں۔

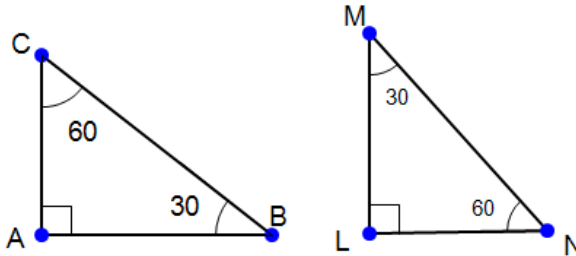
Q.1 Which of the following statements are true and which are false?

- (i) A ray has two end points.
- (ii) In a triangle, there can be only one right angle.
- (iii) Three points are said to be collinear, if they lie on same line.
- (iv) Two parallel lines intersect at a point.
- (v) Two lines can intersect only at one point.
- (vi) A triangle of congruent sides has non-congruent angles.

Solution: (i) F (ii) T (iii) T
(iv) F (v) T (vi) F

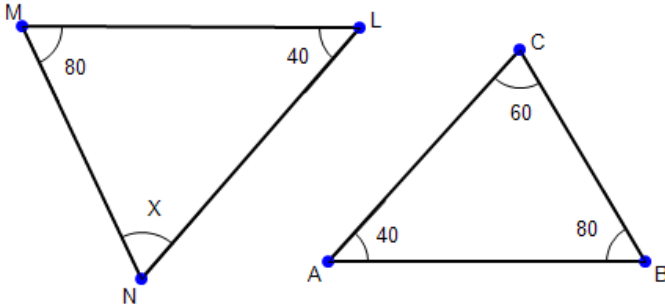
Q. 2 If $\triangle ABC \cong \triangle LMN$, then

- (i) $\angle M \cong$ _____
- (ii) $\angle N \cong$ _____
- (iii) $\angle A \cong$ _____



Solution: (i) $\angle B$ (ii) $\angle C$ (iii) $\angle L$

Q. 3 If $\triangle ABC \cong \triangle LMN$, then find the unknown x .



Solution: $m\angle A = m\angle L = 40^\circ$
 and $m\angle B = m\angle M = 80^\circ$
 $m\angle N = m\angle C$
 $\Rightarrow x = 60^\circ$

Q.4 Find the value of unknowns for the given congruent triangles.

Solution: As triangles are congruent, so

$$m\angle C = m\angle B$$

$$\Rightarrow (5x+5)^\circ = 55^\circ$$

$$\Rightarrow 5x+5=55$$

$$\Rightarrow 5x=50$$

$$\Rightarrow x=10.$$

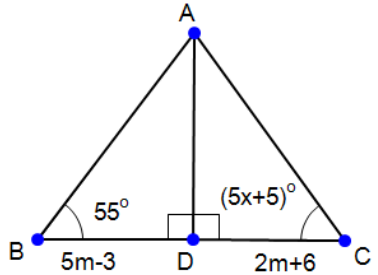
Also $\overline{BD} = \overline{DC}$

$$\Rightarrow 5m-3=2m+6$$

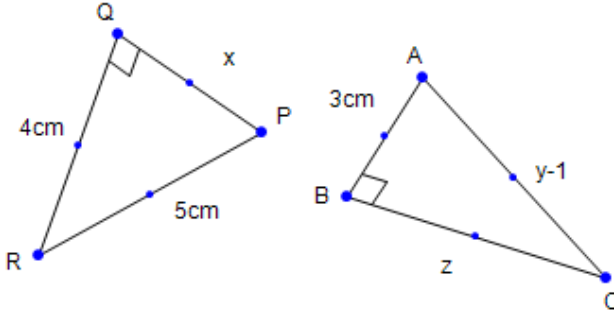
$$\Rightarrow 5m-2m=6+3$$

$$\Rightarrow 3m=9$$

$$\Rightarrow m=3.$$



Q.5 If $\triangle PQR \cong \triangle ABC$, then find the unknown.



Solution: As triangles are congruent, so

$$\overline{QP} \cong \overline{AB}$$

$$x = 3 \text{ cm} .$$

Also $\overline{BC} \cong \overline{QR}$

$$z = 4 \text{ cm} .$$

Also $\overline{AC} \cong \overline{PR}$

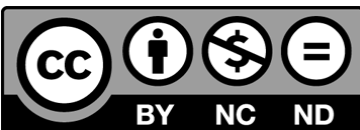
$$y - 1 = 5 .$$

$$\Rightarrow y = 5 + 1 \quad \Rightarrow y = 6 \text{ cm}$$

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Mathematics 9

by Dr. Karamat H. Dar and Prof. Irfan-ul-Haq.
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