

MODULE 2/3

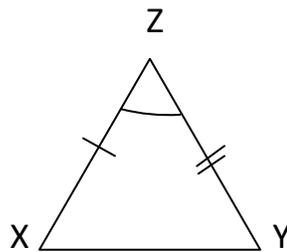
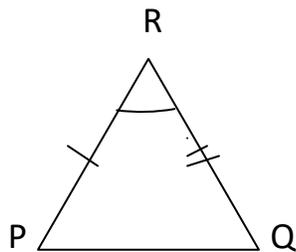
Worksheet

CLASS-VII

Mathematics

CONGRUENCE OF TRIANGLES

1. Which angle is included between the \overline{DE} and \overline{EF} of $\triangle DEF$?
2. By applying SAS congruence rule, you want to establish that $\triangle PQR \cong \triangle FED$. It is given that $PQ=FE$ and $RP=DF$. What additional information is needed to establish the congruence?
3. You want to show that $\triangle ART \cong \triangle PEN$.
 - a) If you have to use SSS criterion, then you need to show
i) $AR = \underline{\hspace{2cm}}$ ii) $RT = \underline{\hspace{2cm}}$ iii) $AT = \underline{\hspace{2cm}}$
4. Which congruence criterion do you use in the following.



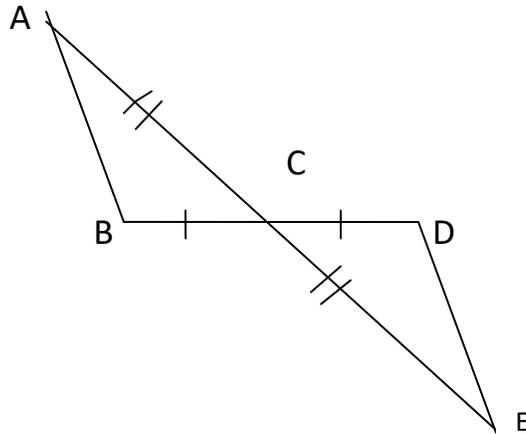
Given $ZX = RP$

$RQ = ZY$

$\angle PRQ = \angle XZY$.

5. In the following figure, state the condition you would use to show that $\triangle ABC$

and $\triangle CDE$ are congruent.



6. $\triangle PRQ \cong \triangle LMN$, If $PQ = 6\text{cm}$, $PR = 5\text{cm}$ and $\angle P = 50^\circ$. Find NL and $\angle L$ if $LM = 5\text{cm}$ and $QR = MN$.

7. In the figure $AB = AD$ and $\angle BAC = \angle DAC$.

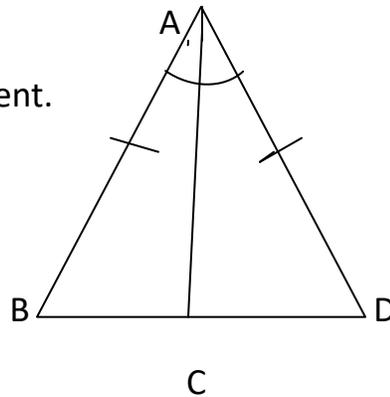
(i) State if the two triangles are congruent.

(ii) State the congruence condition.

(iii) Complete the following

$\angle ABC =$ _____

$\angle ACD =$ _____



8. If $\triangle ABC$ and $\triangle XYZ$ are equilateral triangles and $AB = XY$. Write the condition under which $\triangle ABC \cong \triangle XYZ$.

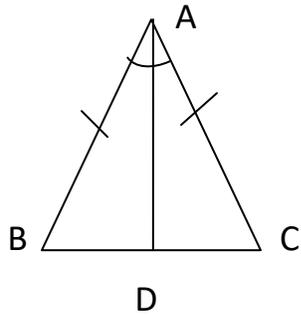
(a) ASA

(b) RHS

(c) SSS

(d) AAS.

9. In the figure $AB = AC$ and AD is the bisector of $\angle BAC$.



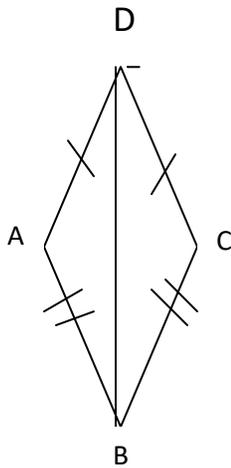
(i) State three pairs of equal parts in triangles ADB and ADC.

(ii) Is $\triangle ADB \cong \triangle ADC$? Give reason.

(iii) Is $\angle B = \angle C$? Give reason.

10. In the figure $AD = CD$ and $AB = CB$.

(i) State the three pairs of equal parts in $\triangle ABD$ and $\triangle CBD$



(ii) Is $\triangle ABD \cong \triangle CBD$? Why or Why not?

(iii) Does BD bisect $\angle ABC$? Give reasons.