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DPM CLASSES

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TRIANGLES

SESSION -2024-25

CLASS - 10th

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Add: Block -B, Near Glory Villa, 60 feet Road (Nearest land mark Scindia Statue), Shatabdipuram, Gwalior

Time : 1 hr Triangles mm : 50

Q. 1. Fill in the blanks :-

(i) All circles are .....

(ii) All Squares are .....

(iii) All ..... triangles are similar.

(iv) Two polygons of same number of sides are similar if :

(a) Their corresponding angles are ..... and

(b) Their corresponding sides are .....

(v) All congruent triangles are .....

Q. 2. True/ False Statements :-

(i) In right angled triangle hypotenuse is the largest side.

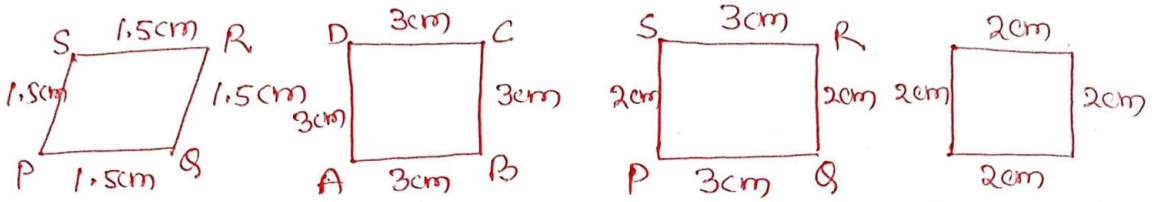
(ii) The corresponding sides of two similar triangles are in proportion

(iii) All Squares are similar.

(iv) Area of similar triangles are always equal.

(v) Area of right angled triangle $= \frac{1}{2} \times$ base $\times$ height

Q. 3. State whether the following figures are similar or not.



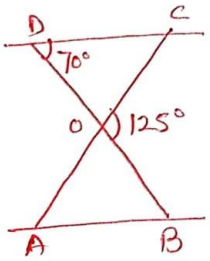
(i) (ii)

Q. 4. Write the statement of Basic proportionality theorem.

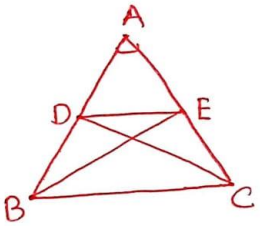
Q. 5. Prove that, If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct point, then the other two sides are divided in the same ratio.

Q. 6. If a line intersects sides AB and AC of a ΔABC at D and E respectively and is parallel to BC, then prove that $\frac{AD}{AB} = \frac{AE}{AC}$

Q. 7 In the given figure $\triangle ODC \sim \triangle OBA$, $\angle BOC = 125°$ and $\angle CDO = 70°$. Find $\angle DOC$, $\angle DCO$ and $\angle OAB$.



Q. 8. In the given figure if $\triangle ABE \cong \triangle ACD$, show that $\triangle AED \sim \triangle ABC$

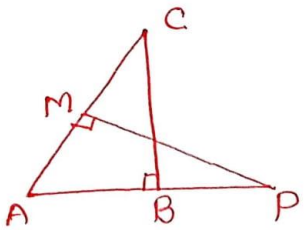


Q. 9. In the given figure ABC and AMP are two right triangles, right angled at B and M respectively.

Prove that :-

(i) $\triangle ABC \sim \triangle AMP$

(ii) $\frac{CA}{PA} = \frac{BC}{MP}$



Q.10 Observe the given figure and then find $\angle P$