KIRAN TUTORIALS   Seat No.

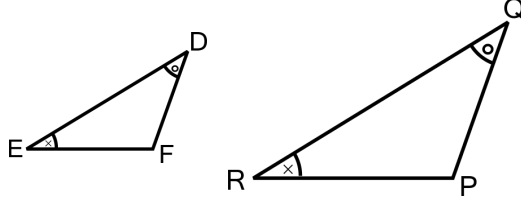| **Std 10 (English)**	**Mathematics Part - II**	**Date 01-10-20**
Time 1HRS	**Chapter 1st chp**	**Marks 20**

Q.1   **Multiple Choice Questions**   **1**

1   If in $\triangle$DEF and $\triangle$PQR, $\angle D \cong \angle Q$, $\angle R \cong \angle$ Ethen which of the following statements is false?
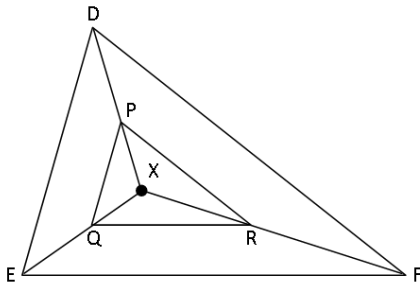
     a. $\dfrac{EF}{PR} = \dfrac{DF}{PQ}$ b. $\dfrac{DE}{PQ} = \dfrac{EF}{RP}$ c. $\dfrac{DE}{QR} = \dfrac{DF}{PQ}$ d. $\dfrac{EF}{RP} = \dfrac{DE}{QR}$

Q.2   **Attempt the following (Activity)**   **2**

1   In the figure, X is any point in the interior of triangle. Point X is joined to vertices of triangle. Seg PQ || seg DE, seg QR || seg EF. Fill in the blanks to prove that, seg PR || seg DF.
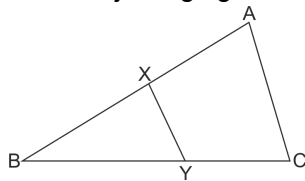

     In $\triangle$XDE, PQ||DE... _____

$\therefore$ _____ = _____   ... (I) (Basic proportionality theorem)

     In$\triangle$XEF, QR||EF   ... Given

$\therefore$ $\dfrac{XQ}{QE}$ = _____   ... (II) (Basic proportionality theorem)

$\therefore$ _____ = $\dfrac{XR}{RF}$ ... from (I) and (II)

$\therefore$ seg PR||seg DF   ... (Converse of basic proportionality theorem)

Q.3   **Solve the following**   **6**

1   In the adjoining figure, seg XY || seg AC, If 3AX = 2BX and XY = 9 then find the length of AC.


2   Ratio of areas of two triangles with equal heights is 2 : 3. If base of the smaller triangle is 6 cm then what is the corresponding base of the bigger triangle?

Q.4   **Answer the following (Non textual)(Any One)**   **4**

1   A model of a ship is made in the ratio 1 : 200.

     i) The length of the model is 4 m. calculate the length of the ship.

     ii) The area of the deck of the ship is 1,60,000 m². Find the area of the deck of the model.
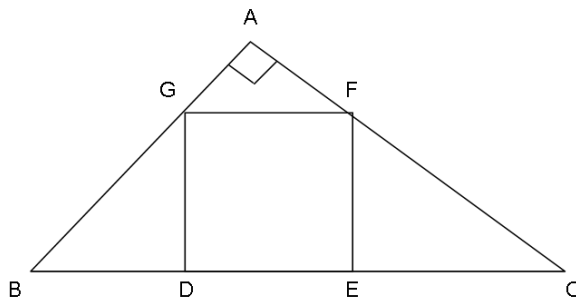
2
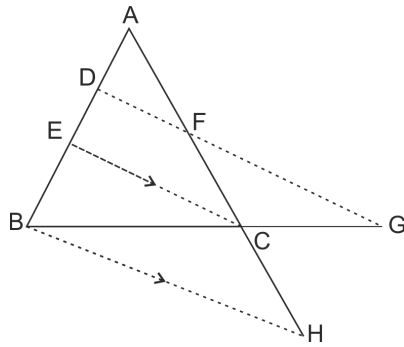
In the given figure, 2AD = BD, E is mid-point of BD and F is mid-point of AC and EC ∥ BH. Prove that :
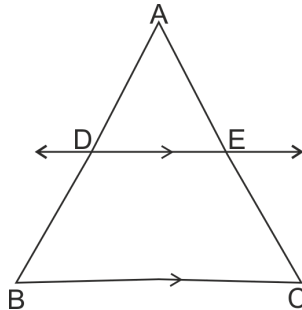i) DF ∥ BH
ii) AH = 3 AF.

Q.5   **Answer the following**   **4**

1

In the figure, the vertices of square DEFG are on the sides of △ ABC. ∠ A = 90°. Then prove that $DE^2 =$ BD×EC

Q.6   **Answer the following**   **3**

1

In the given figure. DE ∥ BC.
i. If AD = x, DB = x - 2, AE = x + 2 and
EC = x - 1, find the value x.
ii. If DB = x - 3, AB = 2x, EC = x - 2 and
AC = 2x + 3, find the value of x.