TOPIC- Mid point theorem

CLASS:9   **Sub: Mathematics**   **F. M. 15**

WORK SHEET NO. -22   **Date: 1.5.2020**

Q.1) **Choose the correct options:** **1x15=15**

i) In equilateral triangle ABC the mid points of AB and AC are D and E respectively. IfAB =10cm then DE=

   a)5cm   b)8cm   c)10cm   d)13cm

ii) In triangle ABC, BE and CD are two medians. If DE=8cm then BC =

   a)4cm   b)8cm   c)12cm   d)16cm

iii) In triangle ABC, mid points of AB and AC are X and Y. If BC + XY =12units then BC-XY =

   a) 4 units   b) 5 units   c) 6 units   d) 7 units

iv) ABC is equilateral triangle. D, E, F are the mid points of AB, AC, BC then triangle DEF is

   a) equilateral   b) isosceles   c)scalene   d) right angled

v) In triangle ABC, AB is bisected at D and CD is bisected at E. If extended AE intersect BC at F then FC =

   a) 1/2 BC   b) 1/4 BC   c)1/3 BC   d)1/5 BC

vi) D and E are the mid points of AB and BC of triangle ABC. DA is extended upto P so that DA =AP. If PE intersect AC at F then AF =

   a) 1/2 AC   b) 1/3 AC   c) 1/4 AC   d) 1/5 AC

vii) P, Q, R, S are the mid points of the sides of the rectangle ABCD. Then PQRS is a

   a)square   b)rectangle   c)rhombus   d)none of the above.

viii) P is the mid point of AD of parallelogram ABCD. If BP and AC intersect at Q then AC =

   a)AQ   b)2AQ   c)3AQ   d)4AQ

ix) In triangle ABC, D and E are the mid points of AB and AC. P and Q are mid points of AD and AE. If BC =10cm, then PQ =

   a)5cm   b)2.5cm   c)7.5cm   d)3cm

x) ABCD is a square. The diagonals AC and BD meet at O. The bisector of <BAC meet BO at P and BC at. Then OP =

   a)3CQ   b)2CQ   c)1/3CQ   d)1/2 CQ

xi) The length of the diagonals of a parallelogram are 12cm and 8cm. The perimeter of the quadrilateral obtained by joining the mid points of the sides of the Parallelogram is

   a)10cm   b)16cm   c)20cm   d)24cm

xii) In triangle ABC, D, E, F, are the mid points of BC, CA and AB. If BE and DF intersect at P and CF and DE intersect at Q then PQ is equal to

   a)BC   b)1/4 BC   c)4BC   d)1/8 BC

xiii) In triangle ABC, O is the mid point of median AD. Extended BO intersect AC at X. Y is the mid point of CX, if AC=12.6cm then XY =

   a)6.3cm   b)4cm   c)6cm   d)4.2cm

xiv) In triangle ABC, D is the mid point of BC. BE is perpendicular on the external bisector of <BAC. Then DE =

   a)1/2 (AB +AC)   b)(AB +AC)   c)1/2 (AB-AC)

xv) In triangle ABC, <A is a right angle and D is the mid point of hypotenuse BC. Then AD=

   a)2BC   b)BC   c)1/2 BC   d)1/4 BC

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