**Group MCC1; home work for MS5 on 10-07-2023**

S.M.ART School

**“Take care in your minutes, and the hours will take care of themselves. “**

H1 Prove that diagonals of rhombus are perpendicular to each other using formally the language adopted in school (Statement, Reason).

 (Put it on a separate sheet)

H2

 

1. We have solved this problem recently. Make sure you know how to find value of h the most efficient way.
2. Also find the ratio of the segments of the base of the triangle by which the altitude h divides the hypotenuse (base).

H3 A median dropped on hypotenuse of a right triangle has a length is N inches long.

 It divides the right angle in two angles with the ratio 1:2.

 Figure all three sides of the triangle.

H4 In a right triangle point D on the hypotenuse is chosen in such a way that it is equidistant from both legs. It divides a hypotenuse in to segments of 30” and 40”. Find the lengths of both legs of the triangle.

H5 If a chord 8 inches long has an arc of 120 degree, find the radius, in inches, of

the circle.

H6 The coordinates of vertices P and Q of an equilateral triangle PQR are (-5,2) and

(5,2) respectively. The coordinates of R may be

1. ( 0, 5\*√3 )
2. ( 0, 5\*√3 )
3. ( 0, 2+5\*√3 )
4. (0, 7\*√3 )
5. (-2, 5\*√3)

H7

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Q1 How many integers are there between 100 and 1000 all of whose digits are odd ?

Q2 There are 150 people in the school. Some of them take English, some Math, and some both subjects. If 75 people take Math, and 99 people take English, then how many people take English only?

Q3 (From the last homework)

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M1 If a line 12\*x - (1/12)\*y + 1 = 0

 is perpendicular to the a line -x - (b/3)\*y = 4, then how much is b?

 I1 Solve inequality

 (x - 5)2 > 25