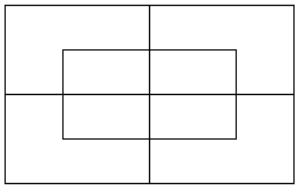
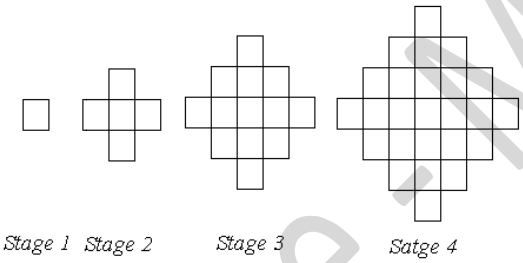
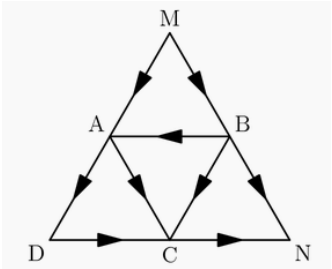
APMOPS MONTHLY MOCK TEST 02

Duration: 45 minutes – Calculator is not allowed!

***Name:* …….. *Class:* …….**

P1	How many rectangles are there in the following figure? 	
P2	X and Y are two different numbers selected from the first 40 counting numbers from 1 to 40 inclusive. What is the largest value that $\frac{X+Y}{X-Y}$ can have?	
P3	At each Stage, a new square is drawn on each side of the primeter of the figure in the previous stage. How many unit squares will be in Stage 10?  *Stage 1 Stage 2 Stage 3 Satge 4*	
P4	Find the last digit of 2017^{99}	
P5	Find the number of consecutive zeros at the end of $15\times16\times17\times\ldots\times99\times100$	
P6	Andrew, Jolene and Tommy each draw 3 cards from 9 cards numbered 1,2,3…9. Andrew: The product of all my number is 48 Jolene: The sum of all my number is 16 Tommy: The product of all my numbers is 63 What is the largest number among Jolene's cards?	
P7	Using only the paths and the directions shown, how many different routes are there from M to N?  	
P8	Jack wrote the word MINES on a window. From the other side of the window it appears as (A) SENIW (B) SENIM (C) SENIW (D) SENIM (E) SENIW	
P9	The children A, B, C and D made the following assertions.	

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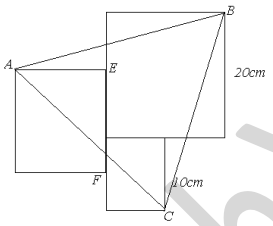
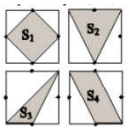
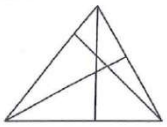
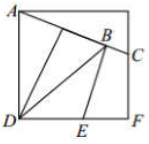
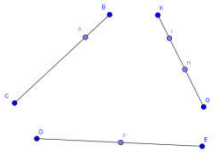
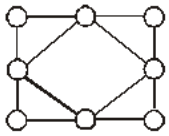
	A: B, C and D are girls. B: A, C and D are boys. C: A and B are lying. D: A, B and C are telling the truth. How many of the children were telling the truth? A) 0 B)1 C) 2 D) 3 E) Impossible to determine	
P10	In below figure, E, F are midpoint of 2 squares of 20cm side, 10 cm side respectively. Find the area of triangle ABC, in cm^2. 	
P11	There are four equal squares. The midpoints of some of their sides are marked, as shown on the picture. In each square, a certain area is coloured. These coloured areas are respectively S1, S2, S3 and S4. Which of the following relations is true?  A. S3<S4<S1=S2 B. S3<S1=S2=S4 C. S3<S1=S4<S2 D. S3<S4<S1<S2 E. S4<S3<S1<S2	
P12	Find the total number of triangles in the diagram. 	
P13	The square below is divided into five regions of equal area by 4 line segments. Find the ratio AB:BC and DE: EF. 	
P14	The points A, B, C, D, E ,F, G, H, I, K are on the 3 straight lines as below. How many triangles can be formed with any 3 of the 10 points as vertices ? 	
P15	In the figure, each circle is to be colored by one of the colors: red, yellow and blue. In how many ways can we color the 8 circles such that any two circles which are joined by a straight line have different colors? 	

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