2017/18 The Thirteen Hong Kong Mathematics Creative Problem Solving Competition For Primary Schools Solution

Answers		Marks
1.	The three integers are $2, 7, 71 \circ (\text{one correct} - 1; \text{all correct} - 2)$ (Accept any possible answers)	/2
2.	The smallest possible value of N is 1026 .	/2
3.	Area of the shaded parts : Area of the solid parts = $1:2$ •	/2
4.	The distance between Town of Peace and Sunshine City is 60 km.	/2
5.	Joyce was walking towards North / N.	/2
6.	The 3 prime numbers are 2, 41 and 89.	/2
7.	(a) The possible dimensions of the box can be,	
	$1 \times 1 \times 288$	
	$2 \times 2 \times 72$	
	$3 \times 3 \times 32$	
	$4 \times 4 \times 18$	/3
	$6 \times 6 \times 8$	
	$12 \times 12 \times 2$	
	(Any one of the answers above)	
	(b) There are totally 6 different possible dimensions of the boxes.	





End

Appendix (A)

Question 14:





Appendix (B) Question 18:





Most of the participants used the above methods to fold a square.



Most participants used the above method to fold a rhombus. But some participants started by folding a square first, and further folded it into a rhombus. A few participants observed that the process of folding a paper crane could form a rhombus. This shows that they observe daily life objects by a geometric perspective.

Fold PM, PN, QN, QM.





Various methods used by the participants indicate their knowledge about kite is far beyond primary school level.





Participants usually formed a pair of parallel edges by bisecting two right angles. A few participants even used the properties taught in secondary schools.



