

2021 年  
小学  
数学奥林匹克国手遴选赛  
初赛  
中年级组  
时间: 90 分钟

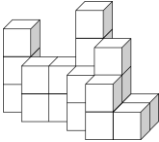
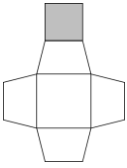




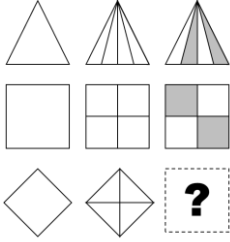




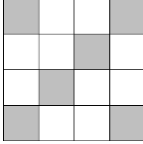
联办单位:

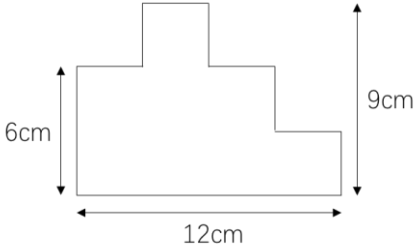
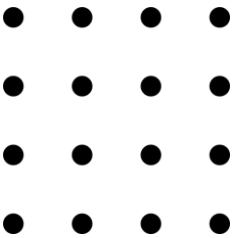
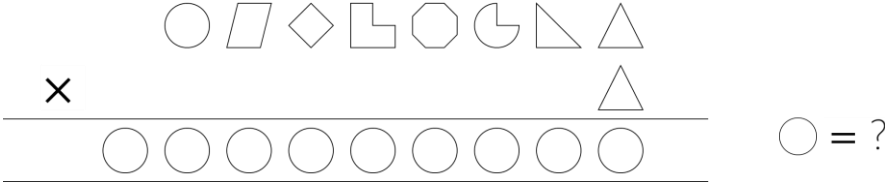
Persatuan Matematik Olympiad Malaysia (PERMATO)  
E Mathematics Olympiad System (EMOS)

考生资讯:

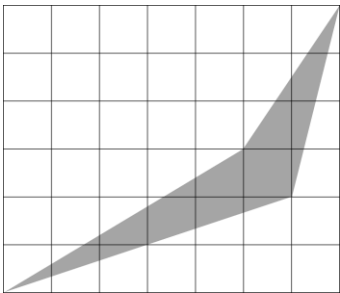
1. 在未获监考官通知前, 请勿翻阅试卷。
2. 请将答案填在指定空格内。
3. 回答所有问题, 每题 4 分, 不部分给分, 做错不扣分。
4. 请使用铅笔, 蓝色或黑色圆珠笔作答。
5. 试卷内所有几何图形并非按照比例绘制。
6. 不可使用计算机。
7. 考后回收试卷。

姓名:	年级:
学校:	分数:

问题	答案
<p>1. 数方块。 Count the cubes.</p> 	<p>20</p>
<p>2. 下列图形可以折成哪一个立体? Which of the figures can be folded into the picture below?</p>  <p>A  B  C  D </p>	<p>C</p>
<p>3.</p>  <p>A  B  C  D </p>	<p>B</p>
<p>4. <math>25 \times 469 \times 4 = ?</math></p>	<p>46900</p>
<p>5. 下图中阴影部分面积占全图的百分之几? Find the fraction of the shaded area.</p>  <p>A 25%    B 33.5%    C 37.5%    D 75%</p>	<p>C</p>

问题	答案
<p>6. 请计算下图的周长。 Find the perimeter of the shape.</p> 	42
<p>7. 下列个数中, 哪一个最小? Which is the smallest?</p> <p>A 0.7    B 45%    C <math>\frac{4}{7}</math>    D <math>\frac{1}{2}</math></p>	B
<p>8. 1, 3, 7, 15, 31, ( ? ), 127</p>	63
<p>9. 花花的妈妈的年龄减去 5, 除以 6, 再加上 4, 乘以 9 得 81, 花花的妈妈的年龄是多少岁? Hannah's mother's age minus 5, divided by 6, plus 4, multiplied by 9 to get 81, what is the age of Hannah's mother?</p>	35
<p>10. 在下面的钉子版上一共可以围出几个正方形? How many squares can be encircled on the nail plate below?</p> 	18
<p>11.</p> 	1

问题	答案
<p>12. 阿都拉开车带一家人到百货公司购物，百货公司的停车场收费标准为每小时 RM0.90，超过半小时且不到一小时按一小时收费；半小时 RM0.50，不到半小时按半小时收费。如果他们停了 2 小时 20 分钟，阿都拉需要付多少令吉停车费？</p> <p>Abdullah drove his family to the department store for shopping. The parking fee of the department store is RM0.90 per hour, and charge for one hour when parked more than half-hour but less than one hour; RM0.50 for half an hour, and charge for a half-hour when parked less than half-hour. If they stopped for 2 hours and 20 minutes, how much would Abdullah pay for parking?</p>	2.30
<p>13. 张伯伯家的榴莲大丰收。如果用大箱装，每箱装 25 颗，可装 200 箱。如果用小箱装，每箱比大箱少装 5 颗。问用小箱装可装多少箱？</p> <p>Uncle Zhang's durian harvest was abundant. If packed with a large box, 25 durians per box, 200 boxes used. Small box pack 5 durians less than the large box. How many small boxes in needed to pack those durians?</p>	250
<p>14. 如果 <math>6 \# 5 = 6 + 5 - 4 + 3 - 2 = 8</math>，<math>7 \# 3 = 7 + 6 - 5 = 8</math>。 求 <math>10 \# 6 = ?</math></p> <p>Given <math>6 \# 5 = 6 + 5 - 4 + 3 - 2 = 8</math>，<math>7 \# 3 = 7 + 6 - 5 = 8</math>。 Find <math>10 \# 6 = ?</math></p>	17
<p>15. 班级里一共有 45 名同学，每人至少会游泳和骑脚踏车 2 种运动的一种。据统计，26 位同学会游泳，32 位同学会骑脚踏车。问会游泳又会骑脚踏车的同学有几名？</p> <p>There are a total of 45 students in the class, each of them at least able to swim or ride a bicycle. According to statistics results, 26 students can swim, and 32 students can ride bicycles. How many students can swim and ride bicycles?</p>	13
<p>16. 一个口袋里有 4 颗球，它们的编号分别是 1、2、3、4，每次从中任意摸出 2 个球，将它们的编号数相加，一共可能出现多少种答案？</p> <p>There are 4 balls in a pocket. Their numbers are 1, 2, 3, and 4. Each time we draw 2 balls from them, add their numbers together. How many answers are possible?</p>	5
<p>17. 一支钥匙是能开一把锁，现在有 8 支钥匙和 8 把锁搞混了。最多要试多少次才能配对好全部的钥匙和锁？</p> <p>One key can open a lock. Now there are 8 keys and 8 locks mixed up. How many tests does it take at most to match all the keys and locks?</p>	28

问题	答案
<p>18. 2个数的和是979, 其中一个数的个位数是0, 如果把0去掉, 则与另一个数相同。问这2个数中较小的数是多少?</p> <p>The sum of the two numbers is 979, and the unit digit of one number is 0. If 0 is removed, it has the same value as the other number. Find the smaller number of these two numbers.</p>	89
<p>19. 小伟, 阿里和木都三人共有120颗玻璃弹珠, 如果小伟给阿里15颗, 阿里给木都20颗后, 他们每人的玻璃弹珠数量就相等了。问原来3人中拥有最少玻璃弹珠的人有几颗玻璃弹珠?</p> <p>Xiaowei, Ali and Muthu have a total of 120 marbles. If Xiaowei gives Ali 15 marbles, and Ali gives Muthu 20 marbles, they will each have the same number of marbles. How many marbles does the person who has the least marbles among the three?</p>	20
<p>20. 一根木棒长150cm, 从一端开始, 每隔15cm画一个红点; 再从同一端开始, 每隔10cm画一个黑点。然后在画有红点和黑点的地方用锯子锯断, 一共可以锯成多少段?</p> <p>A stick is 150cm long, starting from one side, draw a red dot every 15cm; starting from the same side, draw a black dot every 10cm. Then cut the places marked with red and black dots. How many stick will we get?</p>	20
<p>21. 图中每个小正方形都是<math>1\text{cm}^2</math>, 求阴影部分面积是多少<math>\text{cm}^2</math>?</p> <p>The area of each small square in the figure is <math>1\text{cm}^2</math>. Find the area of the shaded area (in <math>\text{cm}^2</math>).</p> 	7
<p>22. <math>\overline{ab}</math>比<math>\overline{cd}</math>大24, <math>1\overline{ab}</math>比<math>\overline{cd}1</math>大15, <math>\overline{ad} = ?</math></p> <p><math>\overline{ab}</math> is 24 greater than <math>\overline{cd}</math>, <math>1\overline{ab}</math> is 15 greater than <math>\overline{cd}1</math>, <math>\overline{ad} = ?</math></p>	32

问题	答案
<p>23. 一支队伍长 900 米前进速度是 3600 米每小时，队长从队伍的前端至后端观察队员的状况，共用了 4 分钟。问队长的速度是多少米每分钟？</p> <p>A troop with a length of 900m march at a speed of 3,600 meters per hour, and the leader observes the status of each member from the front to the back of the troop, he used 4 minutes. Find the moving speed of the leader.</p>	165
<p>24. 一辆汽车从甲地到乙地，如果以每小时 10km 的速度行驶可提早 2 小时到达；如果以每小时 8km 的速度行驶则会迟到 3 小时。问甲乙两地相距多少 km？</p> <p>A car move from A to B, if it drives at a speed of 10km per hour, it can arrive 2 hours earlier; if it drives at a speed of 8km per hour, it will arrive 3 hours late. Find distance between A and B (in kilometer)?</p>	200
<p>25. 松鼠采果子，晴天采 20 颗，雨天采 12 颗，它一共采了 112 颗，平均一天采 14 颗。问这些天中有几天是雨天？</p> <p>The squirrel love to pick fruit, it picked 20 on every sunny day and picked 12 on every rainy day. It picked 112 pieces of fruits in total, on average it picked 14 in a day. How many days of these days are rainy days?</p>	6

**Good Luck**