




MATHEMATICS WITHOUT BORDERS























AGE GROUP 1
























AUTUMN 2018






















INSTRUCTIONS

1. Please DO NOT open the test papers before receiving the proctor's permission.
2. The test contains 20 problems with open answers. Please write down your answer in the following field: 
3. You will get 2 points for each correct answer and 0 points for a wrong or missing answer.
4. You have no more than 60 minutes to complete the test.
5. Taking the test papers and any other notes out of the room is NOT ALLOWED.
6. Receiving any help from a proctor or anyone else during the competition is NOT ALLOWED.

GOOD LUCK

1	 $8 - \square = 6 + \square$	 $\square + \square = ?$	
2	 $\begin{array}{r} 6 + \Delta \\ \hline 7 + \circ \\ \hline 9 \end{array}$	 $\Delta - \circ = ?$	
3	 $\rightarrow +3$ $\rightsquigarrow -1$ $7 \rightarrow \circ \rightsquigarrow \Delta \rightsquigarrow \bullet$	 $\bullet = ?$	
4	 1, 2, 4, ♥, 11, 16	 $\heartsuit + 4 = ?$	
5	 Replace the symbols Δ , \square , \circ , \bullet with the numbers 1, 2, 3, 5 so that the following expression would be correct: $\Delta > \square > \circ > \bullet$	 $\Delta + \bullet = ?$	
6	 1, 2, 3, ☺, 5, 4, 3, ☹, 1	 $< > =$ ☺ ? ☹	
7	 	 $\Delta = ?$	

<p>8</p>	 $7 - 3 ? 4 + 0$	 $< > =$ <p>?</p>	 <p>....</p>									
<p>9</p>	 $2 \uparrow 5 = 2 + 5$ $8 \downarrow 3 = 8 - 3$	 $2 \uparrow 2 + 2 \downarrow 2 = ?$	 <p>....</p>									
<p>10</p>	 $2 + 4 + 2 - 1 = 5$ <p>This expression is wrong.</p>	 + or - $2 + 4 ? 2 + 1 = 5$ <p>How can we make it correct?</p>	 <p>....</p>									
<p>11</p>	 <p>Nicole has 4 dolls, and Maria has 1 more.</p>	 <p>How many dolls do Nicole and Maria have in total?</p>	 <p>....</p>									
<p>12</p>	 <p>The number of dots that you can see on the die below is 11.</p> 	 <p>What is the total number of dots that you can see on the dice below?</p> 	 <p>....</p>									
<p>13</p>	 <table border="1" data-bbox="402 1528 626 1766"> <tbody> <tr> <td>◆</td> <td>●</td> <td>○</td> </tr> <tr> <td>●</td> <td>○</td> <td>◆</td> </tr> <tr> <td>○</td> <td>◆</td> <td>?</td> </tr> </tbody> </table>	◆	●	○	●	○	◆	○	◆	?	 <p>◆ ○ ●</p> <p>?</p>	 <p>....</p>
◆	●	○										
●	○	◆										
○	◆	?										
<p>14</p>	 $\bigcirc \xrightarrow{+2} 5 \xrightarrow{+\square} \bigcirc + \bigcirc$	 $\square = ?$	 <p>....</p>									

15	 $5 + ☺ = 9 - ☺$	 $☺ = ?$	
16	 Ivan calculated $1 + 7 - 4$. Peter calculated $9 - 2 - 1$.	 What is the sum of the resulting numbers?	
17	  2 ears and 4 feet	 By how much is the number of feet of 3 rabbits greater than the number of their ears?	
18	 1, 3, 2, 4, 3, 5, 4, ?, 5, 7, 6	 ? =	
19	  = 4  = 3	  = ?	
20	 There are 7 days in a week.	 How many days are there in two weeks?	