

# 2010 IWYMIC Answers

## Individual

### Part I

<b>1.</b>	<b>803</b>	<b>2.</b>	<b>60</b>	<b>3.</b>	<b>336</b>	<b>4.</b>	<b><math>10\sqrt{5}</math></b>
<b>5.</b>	<b>1458</b>	<b>6.</b>	<b>2</b>	<b>7.</b>	<b><math>3+\sqrt{2}+\sqrt{3}+\sqrt{6}</math></b>	<b>8.</b>	<b>5</b>
<b>9.</b>	<b>50</b>	<b>10.</b>	<b><math>20^\circ</math></b>	<b>11.</b>	<b>341</b>	<b>12.</b>	<b>W</b>

### Part II

<b>1.</b>	<b>12</b>	<b>2.</b>	<b>43</b>	<b>3.</b>	<b><math>\frac{2}{2011}</math></b>
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### Team

<b>1.</b>	<b><math>w = -8, x = -\frac{12}{5}, y = \frac{12}{5}, z = 8</math></b>	<b>3.</b>	<b>1</b>																																																																																																																																																																		
<b>4.</b>	<b>84</b>	<b>5.</b>	<b>112</b>																																																																																																																																																																		
<b>6.</b>	<p><b>28,</b></p> <table border="1" style="border-collapse: collapse; text-align: center; font-size: small;"> <tr><td>1</td><td>2</td><td>3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>10</td><td>19</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td></tr> <tr><td>4</td><td>5</td><td>6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>28</td><td>2</td><td>11</td><td>20</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td></tr> <tr><td>7</td><td>8</td><td>9</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>28</td><td>28</td><td>3</td><td>12</td><td>21</td><td>28</td><td>28</td><td>28</td><td>28</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>10</td><td>11</td><td>12</td><td>0</td><td>0</td><td>0</td><td>28</td><td>28</td><td>28</td><td>4</td><td>13</td><td>22</td><td>28</td><td>28</td><td>28</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>13</td><td>14</td><td>15</td><td>0</td><td>0</td><td>0</td><td>28</td><td>28</td><td>28</td><td>28</td><td>5</td><td>14</td><td>23</td><td>28</td><td>28</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>16</td><td>17</td><td>18</td><td>0</td><td>0</td><td>0</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>6</td><td>15</td><td>24</td><td>28</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>19</td><td>20</td><td>21</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>7</td><td>16</td><td>25</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>22</td><td>23</td><td>24</td><td>26</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>8</td><td>17</td></tr> <tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>25</td><td>26</td><td>27</td><td>18</td><td>27</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>28</td><td>9</td></tr> </table>	1	2	3	0	0	0	0	0	0	1	10	19	28	28	28	28	28	28	4	5	6	0	0	0	0	0	0	28	2	11	20	28	28	28	28	28	7	8	9	0	0	0	0	0	0	28	28	3	12	21	28	28	28	28	0	0	0	10	11	12	0	0	0	28	28	28	4	13	22	28	28	28	0	0	0	13	14	15	0	0	0	28	28	28	28	5	14	23	28	28	0	0	0	16	17	18	0	0	0	28	28	28	28	28	6	15	24	28	0	0	0	0	0	0	19	20	21	28	28	28	28	28	28	7	16	25	0	0	0	0	0	0	22	23	24	26	28	28	28	28	28	28	8	17	0	0	0	0	0	0	25	26	27	18	27	28	28	28	28	28	28	9	<b>7.</b>	<b><math>30^\circ</math></b>
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<b>8.</b>	<p><b><math>(1, 1, 1), (\frac{1}{2}, 2, 1), (2, 1, \frac{1}{2}),</math></b>  <b><math>(1, \frac{1}{2}, 2), (\frac{3}{2}, 2, \frac{1}{3}), (2, \frac{1}{3}, \frac{3}{2}),</math></b>  <b><math>(\frac{1}{3}, \frac{3}{2}, 2), (3, \frac{1}{2}, \frac{2}{3}), (\frac{1}{2}, \frac{2}{3}, 3)</math></b>  <b>and <math>(\frac{2}{3}, 3, \frac{1}{2}).</math></b></p>	<b>9.</b>																																																																																																																																																																			
<b>10.</b>	<b>The letter which may not be used is the third A in the fifth row from top</b>																																																																																																																																																																				