

2013 Canadian Team Mathematics Contest (CTMC)

Answer Key for Team Problems

Question	Answer												
1	80												
2	\$25												
3	30 : 33 or 10 : 11												
4	-23												
5	3												
6	-5 and 3												
7	$\frac{1}{3}$												
8	1 : 3 : 5 or $20^\circ : 60^\circ : 100^\circ$												
9	4												
10	106												
11	2560												
12	45 m												
13	8												
14	4 : 9												
15	8												
16	92%												
17	5												
18	250 km/h												
19	<table style="border-collapse: collapse; margin: auto;"> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">9</td> <td style="border-right: 1px solid black; padding: 0 5px;">6</td> <td style="padding: 0 5px;">5</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 0 5px;">4</td> <td style="border-right: 1px solid black; padding: 0 5px;">2</td> <td style="padding: 0 5px;">7</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; border-right: 1px solid black; padding: 0 5px;">1</td> <td style="border-top: 1px solid black; padding: 0 5px;">3</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 0 5px;"></td> <td style="border-right: 1px solid black; padding: 0 5px;">8</td> <td style="padding: 0 5px;">+</td> </tr> </table>	9	6	5	4	2	7	1		3		8	+
9	6	5											
4	2	7											
1		3											
	8	+											
20	20												
21	$\frac{2\pi}{3} - \frac{\sqrt{3}}{2}$												
22	5												
23	1485												
24	12 916												
25	$\frac{7}{20}$												

Answer Key for Individual Problems

Question	Answer
1	3
2	14
3	22
4	$\frac{1}{18}$
5	←
6	1984
7	98
8	13
9	$\frac{25\pi}{72}$
10	$16\,003\,008 = 2^6 3^6 7^3$

Answer Key for Relays

Question	Answer
1	144, 50, 23
2	5, 30, 19
3	5, 4, $16(\pi - 1) \approx 34$