

First	Second	Third	Triangle Possible?	Number of ways	Number of possible triangles
1	1	1	Yes	1	1
1	1	2		3	
1	1	3		3	
1	1	4		3	
1	1	5		3	
1	1	6		3	
1	2	2	Yes	3	3
1	2	3		6	
1	2	4		6	
1	2	5		6	
1	2	6		6	
1	3	3	Yes	3	3
1	3	4		6	
1	3	5		6	
1	3	6		6	
1	4	4	Yes	3	3
1	4	5		6	
1	4	6		6	
1	5	5	Yes	3	3
1	5	6		6	
1	6	6	Yes	3	3
2	2	2	Yes	1	1
2	2	3	Yes	3	3
2	2	4		3	
2	2	5		3	
2	2	6		3	
2	3	3	Yes	3	3
2	3	4	Yes	6	6
2	3	5		6	
2	3	6		6	
2	4	4	Yes	3	3
2	4	5	Yes	6	6
2	4	6		6	
2	5	5	Yes	3	3
2	5	6	Yes	6	6
2	6	6	Yes	3	3
3	3	3	Yes	1	1
3	3	4	Yes	3	3
3	3	5	Yes	3	3
3	3	6		3	
3	4	4	Yes	3	3
3	4	5	Yes	6	6
3	4	6	Yes	6	6
3	5	5	Yes	3	3
3	5	6	Yes	6	6
3	6	6	Yes	3	3
4	4	4	Yes	1	1
4	4	5	Yes	3	3
4	4	6	Yes	3	3
4	5	5	Yes	3	3
4	5	6	Yes	6	6
4	6	6	Yes	3	3
5	5	5	Yes	1	1
5	5	6	Yes	3	3

5	6	6	Yes	3	3
6	6	6	Yes	1	1
<b>TOTAL:</b>				<b>216</b>	<b>111</b>

**Conclusion:** 111 out of 216 combinations of three dice give a triangle.