

Olympic Dream

Group 1: China, United States of America **Group 2:** Germany
Group 3: Jamaica **Group 4:** Kenya

What connection do the countries in Group 1 have with each other and the Olympic Games?

All the countries in group one have hosted the Olympic's between the years of 1988-2012, except for Brazil who are hosting the Olympic's in 2016.

Why is the mode of no value in this investigation?

The mode is of no value in this investigation because it does not take all the values and statistics into account. All the numbers are so vast and different that the mode does not accurately represent all the data.

GROUP 1: China 🇨🇳

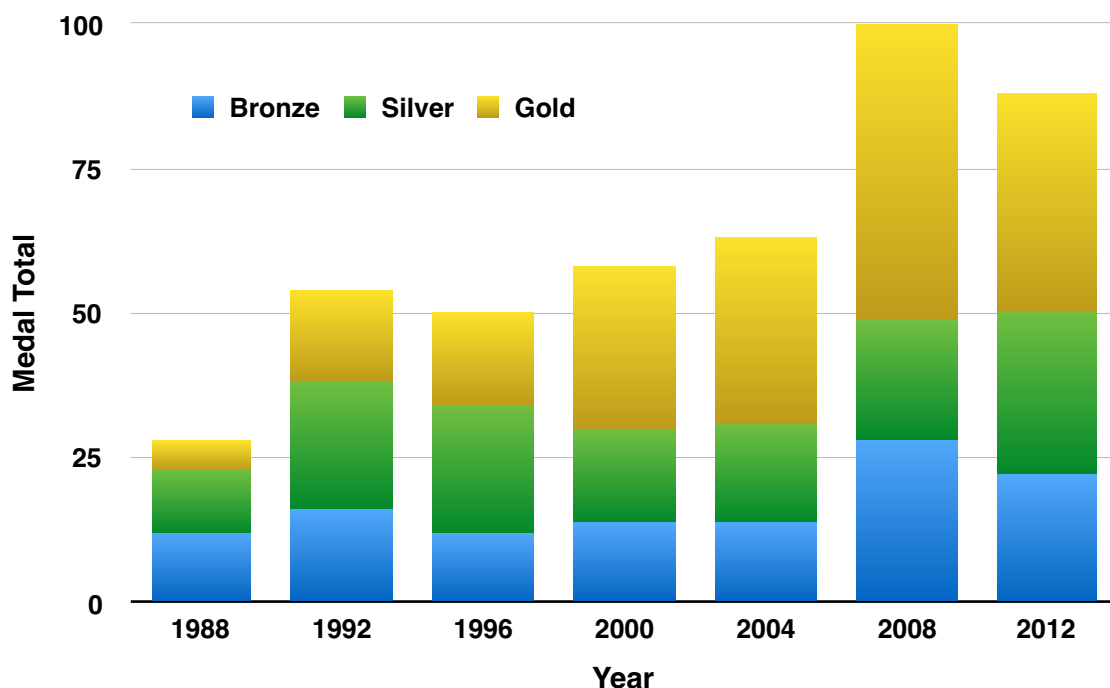
Table:

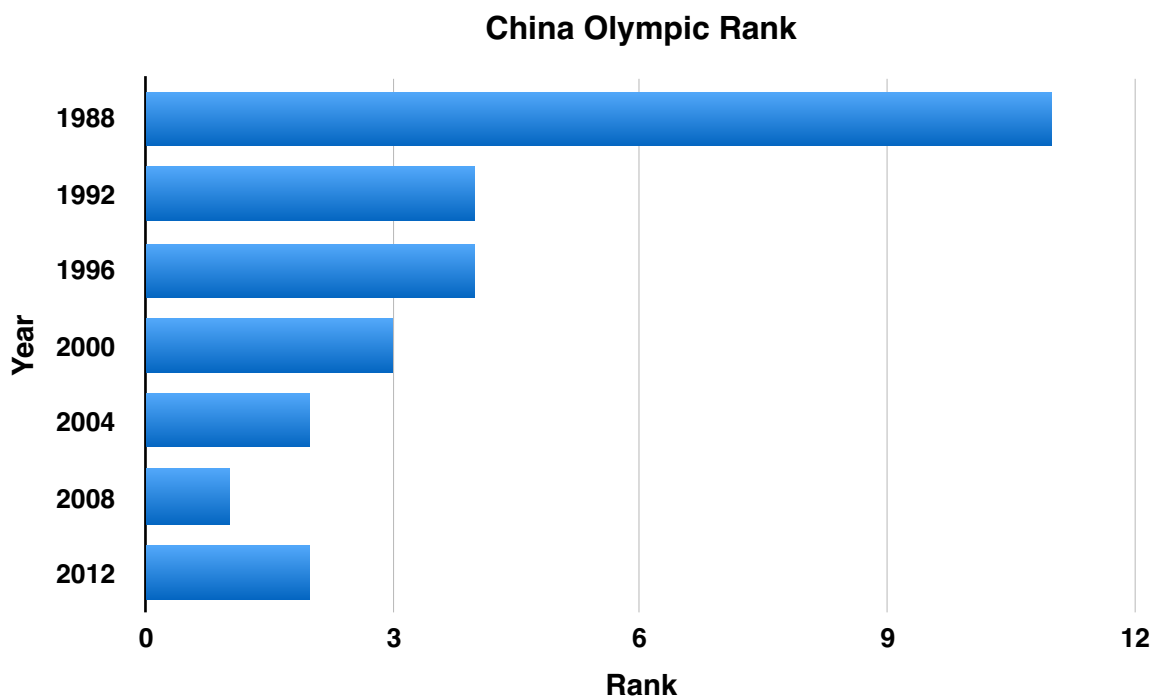
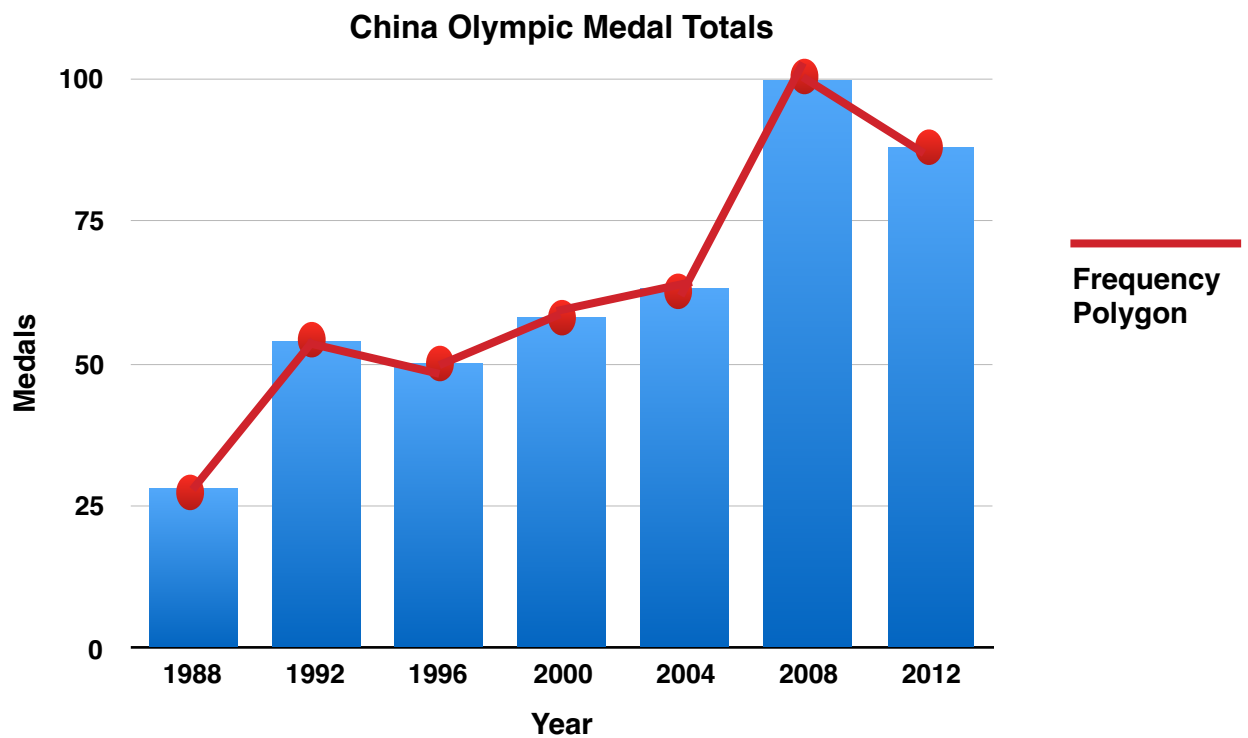
Medals won by China

Year	Bronze	Silver	Gold	Total	Rank
1988	12	11	5	28	11
1992	16	22	16	54	4
1996	12	22	16	50	4
2000	14	16	28	58	3
2004	14	17	32	63	2
2008	28	21	51	100	1
2012	22	28	38	88	2

Graphs:

China Olympic Medal Totals





Report/Analysis: From 1988-2008 China steadily improved their Olympic record and in 2008 at their home Olympic's they won the most medals. In 2012 however their medal tally decreased and they won the second most medals, behind the USA. The 'China Olympic Medal Totals' graph is negatively skewed and illustrates accelerated growth. China's rapid Olympic improvement can be attributed to an incredibly large population and a booming economy. It's rank has been relatively consistent and has stayed between one and four since 1992.

Medal Total: Median- 58 medals

Mean- 63 medals

Range- 72 medals

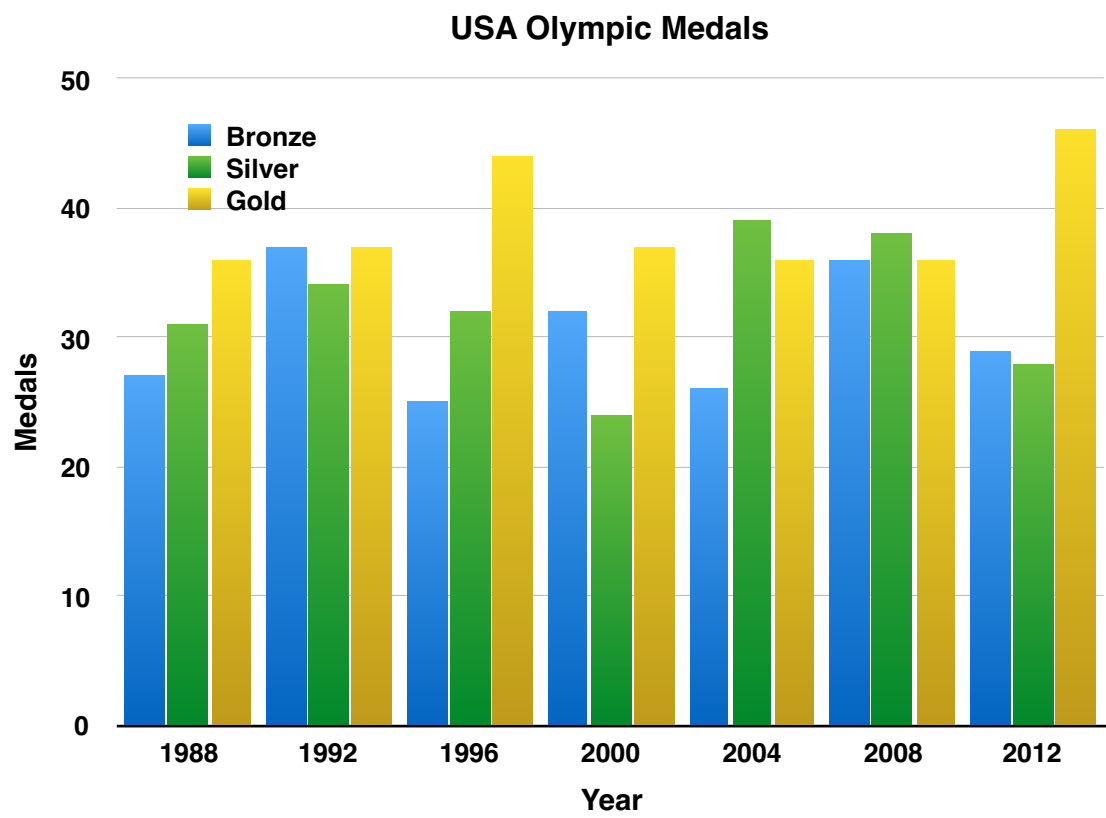
GROUP 1: United States of America 🇺🇸

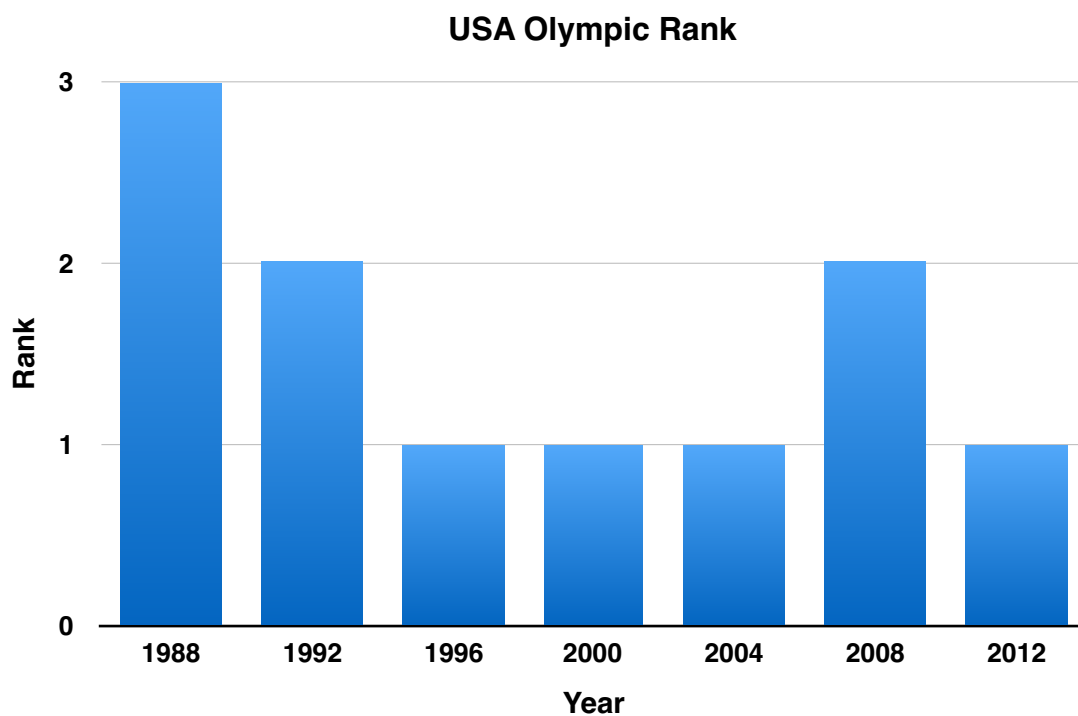
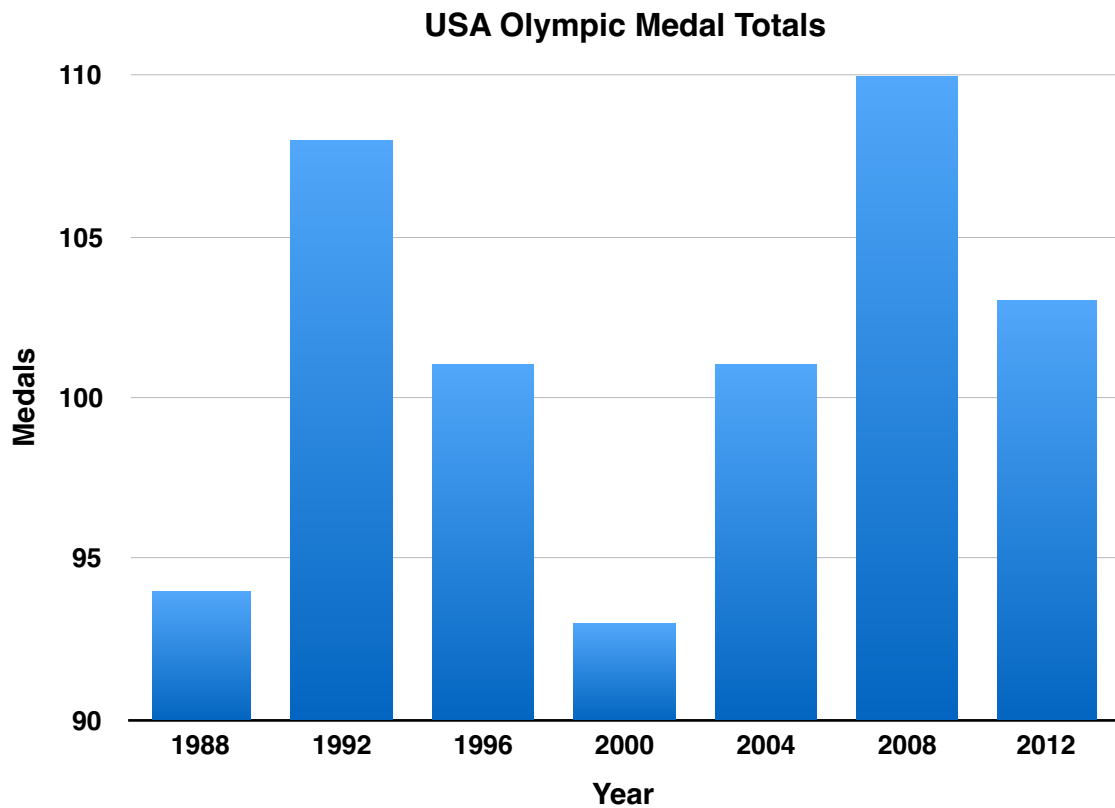
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Medals won by the USA

Year	Bronze	Silver	Gold	Total	Rank
1988	27	31	36	94	3
1992	37	34	37	108	2
1996	25	32	44	101	1
2000	32	24	37	93	1
2004	26	39	36	101	1
2008	36	38	36	110	2
2012	29	28	46	103	1

Graph:





Report/Analysis: The USA has performed remarkably consistently and has been ranked in the top 3 at all Olympic's since 1988. It has won between 93-110 medals at all these Olympic's. The 'USA Olympic Medal Totals' graphs shows that the medal tallies either side of 2000 are quite symmetrical and 2000 was the country's lowest total. The USA is a first world country and it is an established sporting force, the USA has a large population to develop athletes.

Medal Total: Median- 101 medals

Mean- 101.4 medals

Range- 17 medals

GROUP 2: Germany 🇩🇪

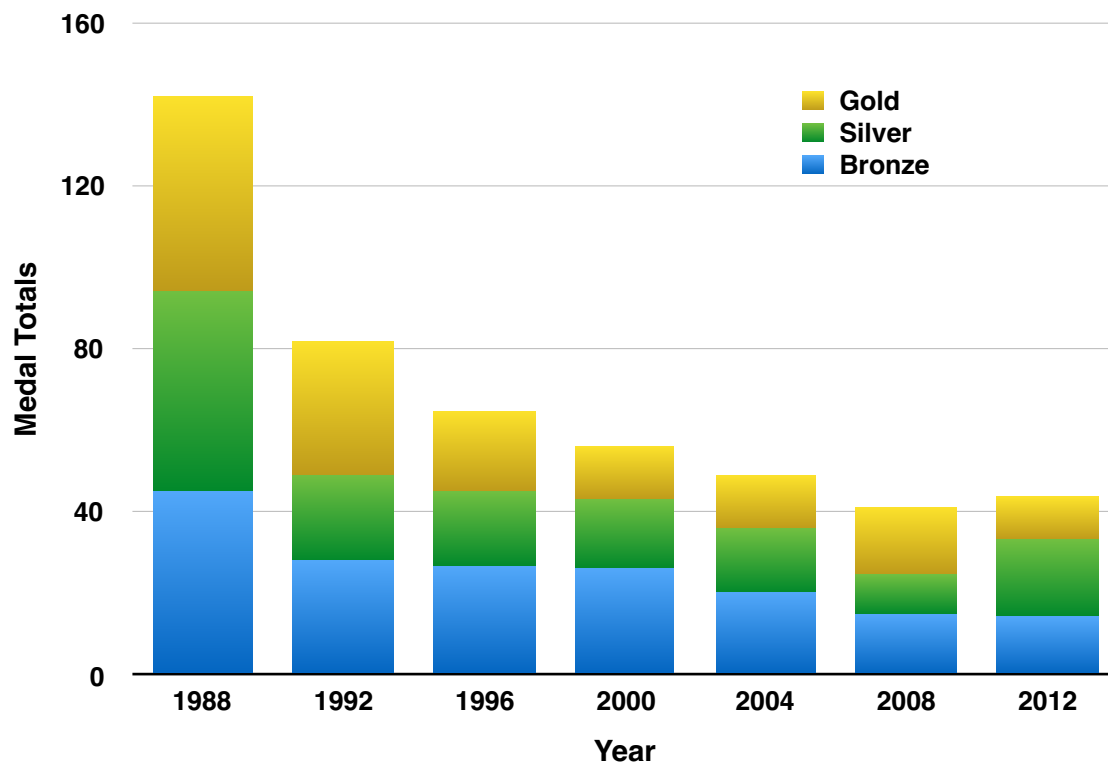
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Medals won by Germany

Year	Bronze	Silver	Gold	Total	Rank
1988 (West Germany + East Germany)	15+30 Total=45	14+35 Total=49	11+37 Total=48	40+102 Total=142	N/A
1992	28	21	33	82	3
1996	27	18	20	65	3
2000	26	17	13	56	5
2004	20	16	13	49	6
2008	15	10	16	41	5
2012	14	19	11	44	6

Graph:

Germany Olympic Medal Totals





Report/Analysis: Germany's medal total gradually decreased from 1988-2008, however it increased slightly in 2012. Both the graphs are both positively skewed, displaying Germany's medal decline. Germany is a first world country and has a relatively large population. In 1988 when both West and East Germany competed at the Olympic's they won more medals because they had double the amount of competitors.

Medal Total (As one nation): Median- 52.5 medals

Mean- 56.16 medals

Range- 41 medals

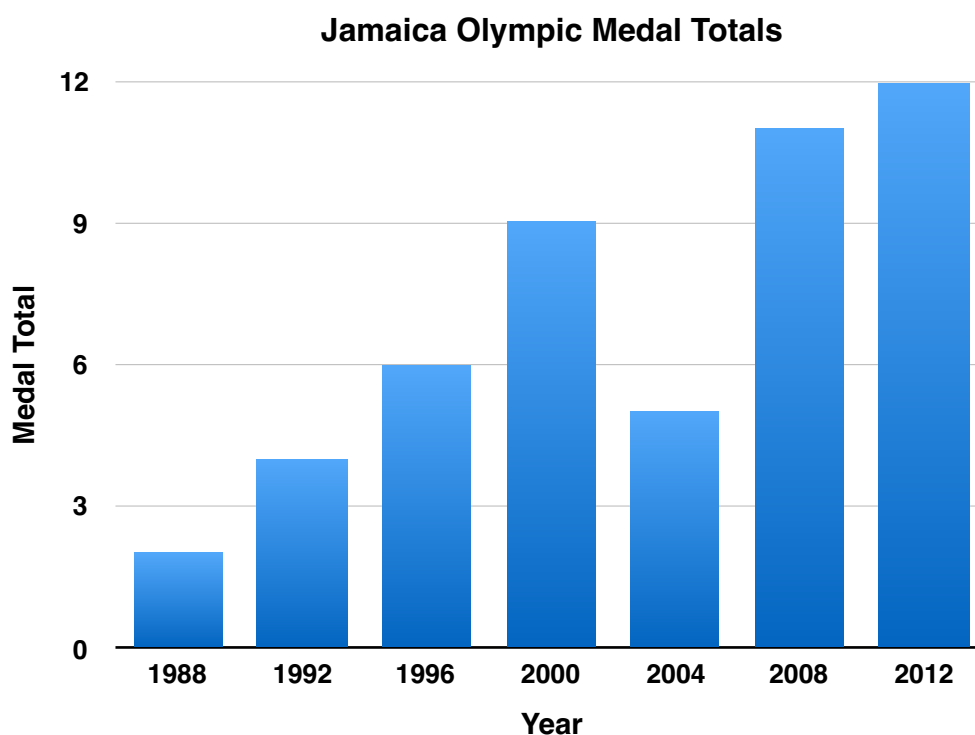
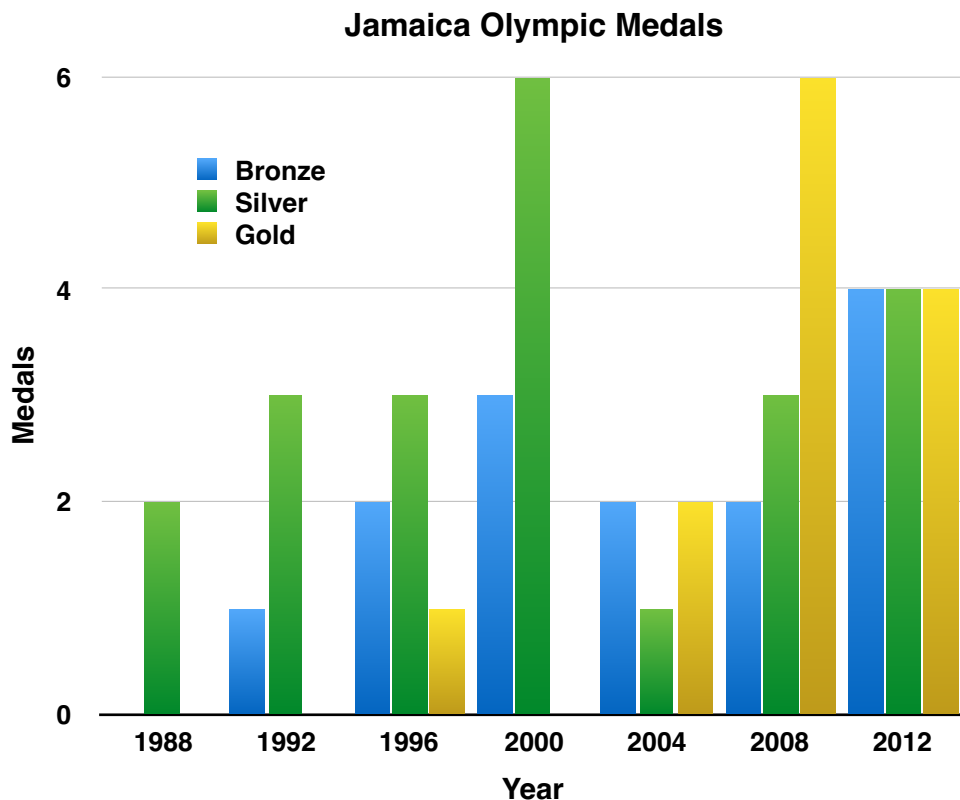
GROUP 3: Jamaica 🇯🇲

Table:

Medals won by Jamaica

Year	Bronze	Silver	Gold	Total
1988	0	2	0	2
1992	1	3	0	4
1996	2	3	1	6
2000	3	6	0	9
2004	2	1	2	5
2008	2	3	6	11
2012	4	4	4	12

Graph:



Report/Analysis: Jamaica's medal tally has increased every Olympic's except for 2004, when the country's medal tally dipped substantially. The second graph is negatively skewed except for the dip in 2004. Jamaica medals have all come in track and field events where they are particularly strong.

Medal Total: Median- 6 medals

Mean- 7 medals

Range- 10 medals

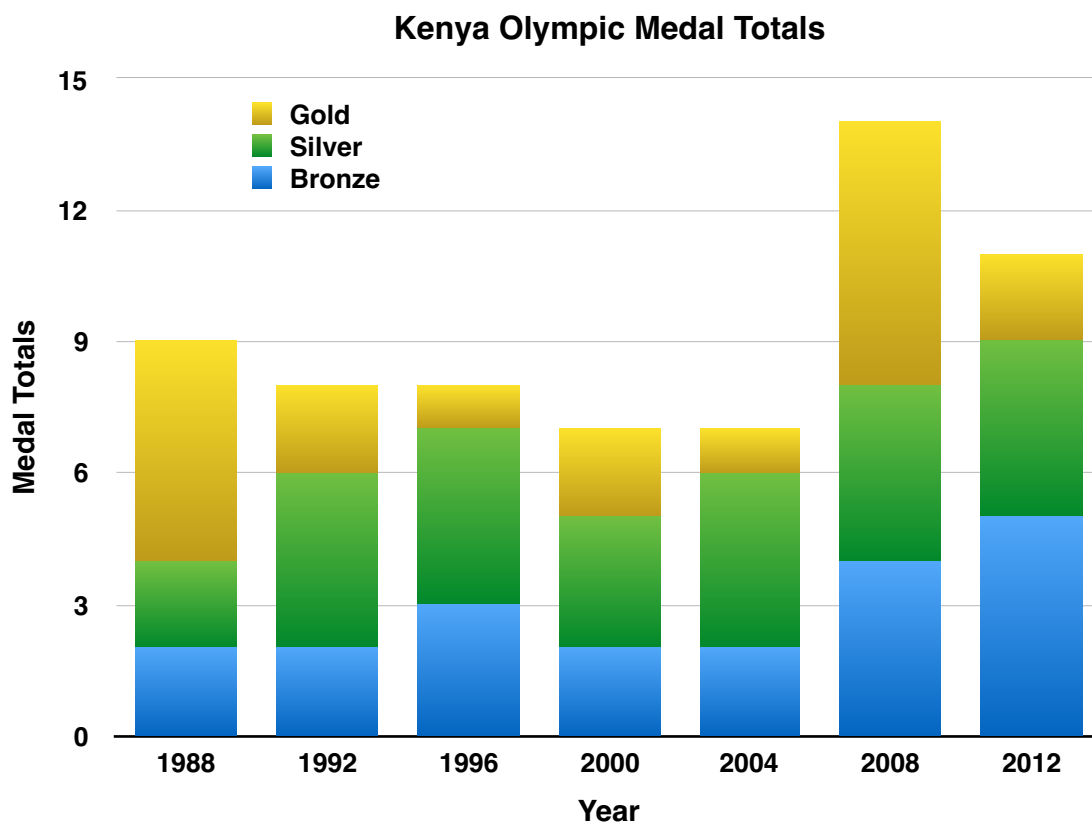
GROUP 4: Kenya 🇰🇪

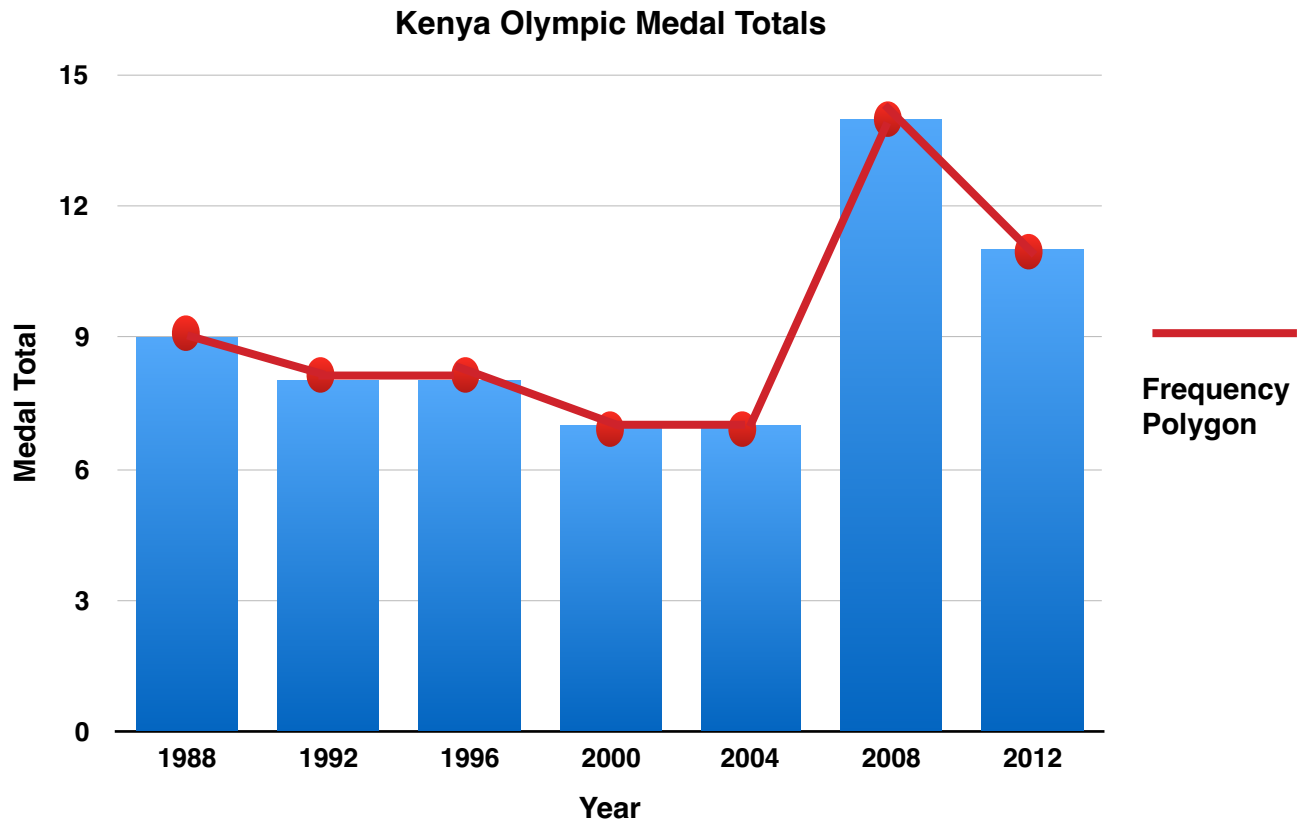
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Medals won by Kenya

Year	Bronze	Silver	Gold	Total
1988	2	2	5	9
1992	2	4	2	8
1996	3	4	1	8
2000	2	3	2	7
2004	2	4	1	7
2008	4	4	6	14
2012	5	4	2	11

Graph:





Report/Analysis: Kenya's medal total slowly decreased from 1988-2004 by 2 medals. However in 2008 their medal total soared to 14, before dropping again to 11 medals.

Medal Total: Median- 8 medals

Mean- 9.1 medals

Range- 7 medals

Conclusion: China and the USA easily have the most medals however they also have the largest population out of the countries analysed. I conclude that the best program for Mathmania to follow and model their future on is that of Jamaica. The small island nation's medal tally has grown every Olympic except for 2004. All the nations with more medals than it have a much larger population and are not increasing their medal tallies at a quicker rate.

Rio 2016 Predictions

Country	Total Medals	Gold	Silver	Bronze
CHINA	90	35	30	25
USA	105	42	31	32
GERMANY	42	15	15	12
JAMAICA	14	6	3	5
KENYA	11	3	4	4

