

1. If two men share a surname, how should the genetic distance at 12 Y-chromosome STR markers be interpreted? faq id: 920

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation
0	Related	A perfect 12/12 match between two men who share a common surname (or variant) means they likely share a common male ancestor within the genealogical time frame. The combination of these facts demonstrates their relatedness. However, if the surname is one of the most common (trades or towns), i.e., Smith, Taylor, Miller, etc., then we suggest you utilize additional markers to eliminate the possibility of a coincidental surname and genetic match.
1	Possibly Related	An 11/12 match between two men who share a common surname (or variant) means they may share a common male ancestor within the genealogical time frame. To ensure that the match is authentic, you should utilize additional markers. For most closely related or same surnamed individuals, the mismatch markers are likely to be DYS439, DYS385, DYS389i or DYS389ii.
2	Probably Not Related	A 10/12 match between two men who share a common surname (or variant) means they are unlikely to share a common male ancestor within the genealogical time frame. To ensure that the match is authentic, you should utilize additional markers. There are two ways with DNA testing to confirm or deny the relationship. One is to test additional family members to search for a line that shows a mutation that is 1 point closer. The other is to test additional markers. Testing additional markers greatly enhances science's ability to determine relatedness -- geared towards the most accurate assessment of the number of generations to a shared ancestor. Only by further testing can you find the person in between each of you. This in 'betweener' becomes essential for you to find, and in their absence, we feel you are not related.
3	Not Related	A 9/12 match is too far off to be considered related within the genealogical time frame. It is unlikely but vaguely possible that the rule for Probably Not Related applies.
4	Not Related	An 8/12 match precludes a relationship within the genealogical time frame. The odds greatly favor that the two men have not shared a common male ancestor within thousands of years.
5	Not Related	A 7/12 match between two people means they are not related within the genealogical time frame. The odds greatly favor that the two men have not shared a common male ancestor within thousands of years.
>5	Not Related	The two men are totally unrelated within the genealogical time frame on their direct paternal line. Their shared ancestry is deeply anthropological and dates to the common African heritage of the human race.

2. If two men share a surname, how should the genetic distance at 25 Y-chromosome STR markers be interpreted? faq id: 921

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation
0	Related	A perfect 25/25 match between two men who share a surname (or variant) means they likely share a common male ancestor within the genealogical time frame. The probability of a close relationship is very high.
1	Related	A 24/25 match between two men who share a surname (or variant) means they likely share a common male ancestor within the genealogical time frame. For most closely related and same surnamed individuals, the mismatch markers are often DYS439, DYS385, DYS389i, DYS389ii, DYS458, DYS459, DYS449, and DYS464 which have shown themselves to move most rapidly.
2	Probably Related	A 23/25 match between two men who share a surname (or variant) means they may share a common male ancestor within the genealogical time frame. The probability of a relationship is good. However, your results show mutations and therefore more time between you and the other same surnamed person. For most closely related and same surnamed individuals, the mismatch markers are often DYS439, DYS385, DYS389i, DYS389ii, DYS458, DYS459, DYS449, and DYS464 which have shown themselves to move most rapidly.
3	Probably Not Related	A 22/25 match between two men who share a surname (or variant) means they may but are unlikely to share a common male ancestor within the genealogical time frame. The probability of a relationship is poor. If enough time has passed, it is possible that you and another distantly related family members' line each have had a mutation, or perhaps 2. The only way to prove that is to test additional family lines and find where the mutation took place. Through further testing, you can find the person in between

		each of you. This 'in betweener' becomes essential for you to find.
4	Not Related	A 21/25 match is too far off to be considered related within the genealogical time frame. It is vaguely possible that the rule for Probably Not Related applies. The only way to confirm to relationship is to test additional family lines and to find where the mutations took place. By testing additional family lines, you can find the person in between. This 'in betweener' is essential for you to find. Without him, it is highly unlikely that the match is genealogical.
5	Not Related	A 20/25 match between two people means they are not related within the genealogical time frame. The odds greatly favor that the two men have not shared a common male ancestor within thousands of years.
6	Not Related	A 19/25 match between two people means they are not related within the genealogical time frame. The odds greatly favor that the two men have not shared a common male ancestor within thousands of years.
>6	Not Related	The two men are totally unrelated within the genealogical time frame on their direct paternal line. Their shared ancestry is deeply anthropological and dates to the common African heritage of the human race.

3. If two men share a surname, how should the genetic distance at 37 Y-chromosome STR markers be interpreted? [faq id: 922](#)

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation
0	Very Tightly Related	A 37/37 match between two men who share a common surname (or variant) means they share a common male ancestor. Their relatedness is extremely close with the common ancestor predicted, 50% of the time, in 5 generations or less and over a 95% probability within 8 generations. Very few people achieve this close level of a match. All confidence levels are well within the time frame that surnames were adopted in Western Europe.
1	Tightly Related	A 36/37 match between two men who share a common surname (or variant) indicates a close genealogical match. Very few people achieve this close level of a match, and it is within the range of most well-established surname lineages in Western Europe. It's most likely that they matched 24/25 or 25/25 on a previous Y-DNA test, and the mismatch will be found within DYS576, DYS570, or CDY.
2	Related	A 35/37 match between two men who share a common surname (or variant) means they share a common male ancestor. The mismatch is likely within the range of most well-established surname lineages in Western Europe. It is most likely that you matched exactly or closely on previous Y-DNA tests and the mismatch is within DYS439 or DYS385, DYS389i, 389ii, DYS458, DYS459, DYS449, DYS464, DYS576, DYS570, or CDY.
3	Related	A 34/37 match between two men who share a common surname (or variant) means they share a common male ancestor. The relationship is likely within the range of most well-established surname lineages in Western Europe. It is most likely that they matched exactly or closely on previous Y-DNA tests, and the mismatch is within DYS439 or DYS385, DYS389i, 389ii, DYS458, DYS459, DYS449, DYS464, DYS576, DYS570, or CDY.
4	Probably Related	A 33/37 match between two men who share a common surname (or variant) means they may share a common male ancestor. This relationship should be confirmed with additional testing. The only way to confirm the relationship is to test additional family lines and to find where the mutations took place. By testing additional family lines you can find the person in between. This 'in betweener' is essential for you to find.
5	Possibly Related	A 32/37 match between two men who share a common surname (or variant) means that they may be related within the genealogical time frame, but additional evidence is needed to confirm the relationship. If several or many generations have passed since the suspected common ancestor, it is possible that these two men are related. That would require that each line had experienced separate mutations and line would have experienced at least two mutations. The only way to confirm is to test additional family lines and find where the mutations took place. By testing additional family members you can find the person in between each of you. This 'in betweener' becomes essential for you to find, and without him the possibility of a match exists, but further evidence must be pursued.
6	Not Related	A 31/37 match between two men who share a common surname (or variant) means that they are not likely to be related within the genealogical time frame. The common surname is a coincidence. If there is a strong family tradition of a relationship, it is distantly possible that these two men are related. That would require that each line had experienced separate mutations and line would have experienced at least two mutations. The only way to confirm the relationship is to test additional family lines and find where the mutation took place. By testing additional family members you can find the person in between the two men. This 'in betweener' becomes essential for you to find, and without him a genealogical relationship is unlikely.

>6	Not Related	The two men are totally unrelated within the genealogical time frame on their direct paternal line. Their shared ancestry is deeply anthropological and dates to the common African heritage of the human race.
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4. If two men share a surname, how should the genetic distance at 67 Y-chromosome STR markers be interpreted? faq id: 923

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation
0	Very Tightly Related	A 67/67 match between two men who share a common surname (or variant) means they share a common male ancestor within the genealogical time frame. Their relatedness is extremely close. All confidence levels are well within the time frame that surnames were adopted in Western Europe with the common ancestor predicted, 50% of the time, in 3 generations or less and with a 90% probability within 5 generations. Very few people achieve this close level of a match.
1 or 2	Tightly Related	A 65/67 or 66/67 match between two men who share the same surname (or a variant) indicates a close relationship. It is most likely that they matched 36/37 or 37/37 on a previous Y-DNA test. Very few people achieve this close level of a match. All confidence levels are well within the time frame that surnames were adopted in Western Europe.
3 or 4	Related	A 63/67 or 64/67 match between two men who share the same surname (or a variant) means that they are likely to share a common ancestor within the genealogical time frame. The common ancestor is probably not extremely recent, but is likely within the range of most well-established surname lineages in Western Europe. It is most likely that they matched 24/25, 36/37 or 37/37 on previous Y-DNA tests and mismatches are within DYS458, DYS459, DYS449, DYS464, DYS576, DYS570, and CDY.
5 or 6	Related	A 61/67 or 62/67 match between two men who share the same surname (or a variant) means that they may to share a common ancestor within the genealogical time frame. The common ancestor is probably not recent, but may still be within the range of most well-established surname lineages in Western Europe. It is most likely that they matched 24/25, 36/37 or 37/37 on previous Y-DNA tests. Mismatches are within DYS458, DYS459, DYS449, DYS464, DYS576, DYS570, and CDY.
7	Probably Related	A 60/67 match between two men who share the same surname (or a variant) means that they may share a common ancestor within the genealogical time frame. Because of the volatility within some of the markers this is about the same as being 11/12 and it is most likely that they matched 23/25 or 24/25 or 33-34/37 on previous Y-DNA tests. If they test additional individuals they will most likely find that their DNA falls in-between the persons who are 7 apart demonstrating relatedness within this family cluster or haplotype. If several or many generations have passed, it is likely that these two lines are related through distant family lines. The only way to confirm the relationship is to test additional family lines and to find where the mutations took place. By testing additional family members you can find the person in between them. This 'in between' is essential, and without him the possibility of a match exists, but cannot be confirmed.
8 or 9	Only Possibly Related	A 58/67 or 59/67 match between two men who share the same surname (or a variant) means it is possible but unlikely that they share a common ancestor within the genealogical time frame. If you test additional individuals you may find the person whose DNA results falls in-between the persons that are 8 or 9 apart demonstrating relatedness within this family cluster or haplotype. It is most likely that they did not match 24-25/25 or 35-37/37 in previous Y-DNA tests. If several or many generations have passed, it is possible that they are related through other family members. The only way to confirm or deny the relationship is to test additional family lines and find where the mutation took place. By testing additional family members, you may find the person in between. This 'in between' is essential. Without him only the distant possibility of a match exists.
10 or 11	Not Related	A 56/67 or 57/67 match between two people means they are not related within the genealogical time frame. The odds greatly favor that the two men have not shared a common male ancestor within thousands of years.
>11	Not Related	The two men are totally unrelated within the genealogical time frame on their direct paternal line. Their shared ancestry is deeply anthropological and dates to the common African heritage of the human race.

5. If two men share a surname, how should the genetic distance at 111 Y-chromosome STR markers be interpreted? faq id: 925

In cultures where surnames are passed from father to son, there is additional evidence beyond a DNA match that two men who share a surname are related. Y-chromosome DNA (Y-DNA) test results should be interpreted based on both this information and the actual results.

Genetic Distance	Relationship	Interpretation	Related in This Number of Generations or LESS			
			Confidence			
			50	90	95	99%

			%	%	%	
0	Very Tightly Related	A 111/111 match indicates a very close or immediate relationship. Most exact matches are 3rd cousins or closer, and over half are related within two generations (1st cousins).	2	4	5	6
1	Tightly Related	A 110/111 match indicates a close relationship. Most one-off matches are 5th or more recent cousins, and over half are 2nd cousins or closer.	3	6	7	9
2	Tightly Related	A 109/111 match indicates a close relationship. Most matches are 7th cousins or closer, and over half are 4th or more recent cousins.	5	8	9	11
3	Related	A 108/111 match indicates a genealogical relationship. Most matches at this level are related as 9th cousins or closer, and over half will be 5th or more recent cousins. This is well within the range of traditional genealogy.	6	10	11	14
4	Related	A 107/111 match indicates a genealogical relationship. Most matches at this level are related as 10th or more recent cousins, and over half will be 6th or more recent cousins. This is well within the range of traditional genealogy.	7	11	13	16
5	Related	A 106/111 match indicates a genealogical relationship. Most matches at this level are related as 12th cousins or more recently, and over half will be 7th cousins or closer. This is well within the range of traditional genealogy.	8	13	15	18
6	Probably Related	A 105/111 match indicates a more distant genealogical relationship. Over half of matches will be 9th cousins or closer, and most matches at this level are related as or more recently than 14th cousins. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in betweener' is essential for you to find as their match proves the connection between the more distant matches.	10	15	17	20
7	Probably Related	A 104/111 match indicates a more distant genealogical relationship. Over half of matches at this level are related as 10th cousins or closer. Most matches at this level are related as 16th cousins or more recently. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in betweener' is essential for you to find as their match proves the connection between the more distant matches.	11	17	19	22
8	Only Possibly Related	A 103/111 match indicates a distant cousinship with only a chance of a genealogical relationship. Over half of matches at this level are related as 12th cousins or more recently. Most matches at this level are related as 18th cousins or more recently. The connections here can be highly informative for relationships with historic groups and events. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in betweener' is essential for you to find as their match proves the connection between the more distant matches.	13	19	21	24
9	Only Possibly Related	A 102/111 match indicates a distant cousinship with a chance of a genealogical relationship. Over half of matches at this level are related as 13th cousins or closer. Most matches at this level are related as or more recently than 20th cousins. The connections here can be highly informative for relationships with historic groups and events. If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines you can find the person in between who is a closer match to each of the others tested. This 'in betweener' is essential for you to find as their match proves the connection between the more distant matches.	14	21	23	27

10	Only Possibly Related	<p>A 101/111 match indicates a distant cousinship with some chance of a distant genealogical relationship. Over half of matches at this level are related as 15th cousins or closer. Most matches at this level are related as 22nd cousins or more recently. The connections here can be highly informative for relationships with historic groups and events.</p>	16	23	25	29
		<p>If there is a tradition of a recent genealogical relationship, the best way to confirm it is to test additional family lines. By testing additional family lines, you can find the person in between who is a closer match to each of the others tested. This 'in between' is essential for you to find as their match proves the connection between the more distant matches.</p>				
>10	Not Related	<p>The two men are totally unrelated within the genealogical time-frame on their direct paternal line. Their shared ancestry is historical or anthropological.</p>	-	-	-	-