



STATISTICAL REVIEW AND MATCH ANALYSIS

TRI NATIONS 2009

IRB GAME ANALYSIS



CONTENTS

	Page
Commentary	1
Final Standings & Results	6
Section 1	
Summary of Constituent Game Elements	
Overall	7
Team Performances	9
Section 2	
Statistical Analysis and Match Summary	
Scoring	10
Try Scoring	12
Tries	13
Kicks at Goal	17
Ball in Play	17
Activity Cycles	18
Restarts	23
Lineouts	23
Scrums	24
Penalties	24
Cards	26
TMO	26

This Report is divided into 2 sections.

- Section 1 takes a brief look at **constituent game elements** in Tri Nations 2009 and compares them to Tri Nations 2008, 2007 and 2006. It also includes a summary of each team's activities and performance in certain critical areas of the game
- Section 2 comprises a **detailed statistical analysis** of all 9 matches played in the tournament

INTRODUCTION

Last year – 2008 - produced what proved to be a unique rugby experiment at senior international level. The Tri Nations competition introduced a raft of Experimental Law Variations (ELVs), the object of which was to produce a body of data that would allow comparisons to be made with identical matches played a year earlier under the set of rugby laws that existed at that time.

In the event, many elements of the game saw very little change. Points scored, lineout and scrum for example were very similar. There were however some striking differences – and these largely concerned outcomes.

THE WHOLE BALANCE OF SCORING CHANGED

- ◆ In 2008, under the ELVs, tries scored went up by 50% when compared with the previous year,
- ◆ Conversely, under the ELVs, penalty goals went down by almost 40% over the same period
- ◆ In addition, tries exceeded penalty goals for the first time in 7 years and for only the third time in the history of Tri Nations
- ◆ Fewer penalty goals were kicked than in any of the previous 14 years of Tri Nations competition.

In 2008, tries became the most significant element in the scoring mix – and this was reflected in the final results of matches. In the 9 matches played, the team scoring the most tries won eight. This was the highest proportion since Tri Nations began.

This suggested that the sanctions ELV had had a major impact – at least on methods of scoring through the enhanced contribution of tries and a reduction in the impact of penalties.

THE ELVS

At this stage it may be helpful to revisit, albeit briefly, certain of the ELVs in order to clarify the context in which the game has been played in Tri Nations over the last 3 years. The progression has been as follows:

- 1 **Tri Nations 2007** - no ELVs implemented
- 2 **Tri Nations 2008 and Tri Nations 2009** – certain ELVs incorporated in both years, the most significant ones being:
 - ◆ Playing the ball back into the 22m
 - ◆ Quick lineout throws extended
 - ◆ Scrum offside line set at 5metres

- 3 **Tri Nations 2009** – those ELVs **excluded** from 2009 but which were applied in Tri Nations 2008 were as follows:
- ◆ Maul pulling down allowed in 2008 – but not in 2009
 - ◆ No limit on number of players in lineout allowed in 2008 – but not in 2009
 - ◆ For all offences in 2008, other than offside and foul play, free kicks only awarded.
– (the sanctions ELV)

With the sanctions ELV being applied and fewer penalties being awarded, it was inevitable that in 2008 fewer penalty goals would be kicked – and so it proved, with the results noted above. What was perhaps surprising however was that kicks out of hand increased in 2008 – despite the fact that breakdown sanctions were almost invariably free kicks.

What was to be of major interest in 2009 - because of the rejection of certain of the ELV proposals, especially that related to sanctions - was to see if the shape of the game had changed in 2009 and/or had reverted back to what was seen in 2007.

TRI NATIONS 2009

Some of the results were not long in coming. By the time the first few games had ended, it was clear that the primacy of the try had gone and that penalty goals had reasserted their domination.

At the conclusion of the 5th game of the competition, **11** tries had been scored and **47** penalties kicked. At that stage, the average of 2.2 tries per game was the lowest ever seen in Tri Nations while an average of over 9 penalty goals per game had never been exceeded. There had been 4 times more penalty goals than tries.



This ratio, however, changed somewhat in the last 4 games when the difference between tries and penalty goals became closer. Nevertheless, by the end of the championship

- ◆ The average of 3 tries per game was the lowest for 9 years
- ◆ The average penalty goals per game of almost 8 was the highest in the 14 year history of the tournament.

This, not surprisingly, had an impact on the scoring profile of the winning teams. Whereas 8 of the 9 games in 2008 had been won by the team scoring the most tries, this year the corresponding figure was just 5. In addition, in one game this year, the team scoring the fewest number of tries won, something last seen 5 years ago.

There were also other measurable differences in addition to scoring outcomes:

- ◆ Despite the recent increases in aerial kicking, only one try was scored from an opponent's kick. This compares with an average of just over 6 in each of the previous 3 years.

- ◆ Only 3 tries started from within the scoring team's own half. This equates to 1 try in 9 compared to 1 try in 5, 1 try in 3 and 1 try in just over 2 in the three preceding years.
- ◆ 50% of tries did not contain a single ruck or maul in the build up while the comparative figure for the 3 previous years hovered around 30%.

Possible reasons for such changes are largely conjecture – but an emerging playing strategy that emphasises the importance of gaining territory and minimising the risk of conceding kickable penalties especially at the breakdown, could have contributed towards these changes. With penalty goals capable of being kicked from 60 metres, and transgressions at a ruck being punished by a penalty and not a free kick, it is hardly surprising that teams place a premium on playing rugby in their opponent's half whenever possible.

The impact of the set piece also changed in 2009. Whereas over the last several years, the lineout has been the major possession vehicle from which tries were scored, in 2009 this was not the case. Tries from scrum possession accounted for almost a third of all tries, a proportion far higher than that seen in recent years.

Again, this is not altogether surprising with the introduction of a 5 metre scrum offside line creating space away from a set piece where 16 players are temporarily committed. The importance of the scrum could explain, therefore, the elevated scrum battles that were seen this year, which saw a constant series of collapses and resets producing an average of 10 collapses and 5 penalties per game with scrums taking up as much as 25% of ball in play time.

The game in 2009 therefore was attritional, territorial and based on the minimisation of risk – and nowhere is this better illustrated than in the examination of the performance of South Africa, the winner of this year's Tri Nations.

SOUTH AFRICA

Over recent years, the South African senior team has developed a clearly identified but highly effective and successful playing strategy. It involves, in broad terms, exerting territorial pressure on its opponents through tactical kicking combined with intense physical pressure while minimising risk and effectively converting opponents errors into points - Possession is not a priority.

This means that an analysis of South Africa's matches invariably fall into a clearly identifiable profile

- ◆ they obtain less possession than their opponents.
- ◆ as a result, they make fewer rucks
- ◆ and make fewer passes than their opponents
- ◆ but make more kicks because of the importance attached to territorial advantage

This approach is then enhanced by a highly competent scrum and a hugely successful lineout.

The question which is now addressed is – was this the approach that brought South Africa success in Tri Nations 2009? The answer is an emphatic “**yes**” - and this is illustrated by commenting on the playing characteristics outlined above.

(a) Possession

Over the series and as anticipated, South Africa obtained less possession than the other two teams. In two of their matches, they gained just 39% of possession as against their opponents' 61% but still won both games. Lack of possession therefore was not an impediment to success.

(b) Rucks/Mauls

Lack of possession meant that South Africa made fewer rucks than Australia and New Zealand but they also rucked at a lower rate ie they made fewer rucks per minute's possession. Only one of their 10 tries contained more than one phase.

(b) Passing

Since passing is a product of possession, a team that obtains less possession than its opponents almost invariably (but not always) passes less. South Africa confirmed this once again – but to an extent that has almost certainly not been seen before in the professional era.

- ◆ The average passes per game of 83 made by South Africa was the lowest by any team in at least the last 6 years of Tri Nations– (New Zealand and Australia each averaged 125 - or 50% more)
- ◆ Not one of the 10 tries scored by South Africa contained more than three passes (Australia had 3 such tries, New Zealand 6)
- ◆ 7 of South Africa's 10 tries comprised 1 pass or less.



Fewest Passes made by a Team in a Match

	6 NATIONS	TRI NATIONS
2003	90	90
2004	98	66
2005	66	82
2006	55	64
2007	73	71
2008	83	90
2009	82	43

What was even more remarkable was that in one match against New Zealand, which South Africa won, they made a total of just 43 passes, an exceptionally low figure as illustrated in the following table

(It is important to note that only once in recent rugby history has a team come close to the figure of 43 – and that was also South Africa who made just 49 passes when winning the first test against the British and Irish Lions in June this year)

The game with 43 passes contained some remarkable statistics

♦	the New Zealand scrum half made almost 30% more passes than the entire South African team
♦	the New Zealand front row players made 3 times as many passes as the 2 South African wings, 2 centres and full back combined
♦	the South African hooker made as many passes as the South Africa outside half and as many as the remaining 5 three quarters
♦	the South Africa centres touched the ball 8 times and made a total of 2 passes, while the New Zealand centres touched the ball on 43 occasions and passed the ball 21 times

The overall South Africa approach of minimizing risk and exerting pressure was enhanced in other ways

- ♦ Over 70% of **restarts** were kicked long - thereby exerting territorial pressure - which contrasted with Australia's 35% and New Zealand's 29%
- ♦ and despite having less possession than Australia and New Zealand, they maintained territorial pressure by making more kicks out of hands, kicking at a rate that was 40% greater than their opponents.

Pressure was also maintained through other sources

- ♦ South Africa possessed the ability to kick successful penalties from inside their own half making possible the 60 metre penalty goal
- ♦ Most of South Africa's scoring came in the first half so that in 5 of their 6 they had the psychological benefit of leading at half time.

It was however through the lineout that South Africa managed to maintain a constant pressure throughout the entire 80 minutes of the game. Their lineout figures were hugely impressive




- ♦ their success rate was 88% compared with 78% and 74% for the other 2 countries
- ♦ they had a success rate of 38% on their opposition throw – an exceptionally high figure that contrasted with the 10% and 15% of their opponents
- ♦ their lineout was stolen only 6 times compared with Australia's 16 and New Zealand's 14
- ♦ they stole their opponents lineout 24 times. Australia and New Zealand managed just 6 each.
- ♦ this superiority was recognised by the other two teams who only challenged the South Africa lineout on 44% of occasions while Australia's was challenged on 65% of occasions and New Zealand's on 58%.
- ♦ conversely, South Africa challenged their opponent's lineout on 64% of occasions compared with Australia's and New Zealand's 49% and 56% respectively.



The ability to dominate the lineout was one of the core elements of a playing formula that is currently producing success for South Africa. What is now going to be of interest is to see how successful South Africa will be in maintaining such an approach, how effective other teams will be in challenging such an approach and whether certain teams will look to emulating the South African strategy in their search for success.

The other area of interest lies in seeing whether the shape of the game will change. Will the constricted pattern of play evinced in Tri Nations 2007 and 2009, for example, be maintained or will the organic nature of the game produce a platform upon which tries and not penalty goals become the most important imperative as experienced in the Tri Nations ELV experiment of 2008.

FINAL STANDINGS & RESULTS

		P	W	D	L	F	A	PD	BP	PTS
	SOUTH AFRICA	6	5	0	1	158	130	+28	1	21
	NEW ZEALAND	6	3	0	3	141	131	+10	1	13
	AUSTRALIA	6	1	0	5	103	141	-38	3	7

P = Played W = Won D = Draw L = Lost F = Points for A = Points against PD = Points difference
BP = Bonus Points PTS = Points

	NEW ZEALAND	22		AUSTRALIA	16
	SOUTH AFRICA	28		NEW ZEALAND	19
	SOUTH AFRICA	31		NEW ZEALAND	19
	SOUTH AFRICA	29		AUSTRALIA	17
	AUSTRALIA	18		NEW ZEALAND	19
	AUSTRALIA	25		SOUTH AFRICA	32
	AUSTRALIA	21		SOUTH AFRICA	6
	NEW ZEALAND	29		AUSTRALIA	32
	NEW ZEALAND	33		AUSTRALIA	6



TRI NATIONS 2009 – OVERALL

In certain of the core elements, Tri Nations 2009 showed little change from Tri Nations 2008 as shown in the following comparisons. There were however certain areas that were noticeably different from previous years – and these have already been identified in the earlier Commentary and have been highlighted in the table below.

Averages per game

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006
POINTS	45	43	40	46
TRIES	3.0	4.8	3.2	4.7
PENALTY GOALS	7.7	3.7	5.8	5.0
DROP GOALS	0.7	0.4	0.7	0.3
BALL IN PLAY	42%	47%	46%	41%
PASSES	222	275	264	230
RUCK/MAULS	131	161	167	133
KICKS	60	67	59	58
LINEOUTS	24	24	30	32
SCRUMS	19	18	16	19
PENALTIES	23	28	19	19



SECTION 1 – SUMMARY OF THE CONSTITUENT GAME ELEMENTS




The following data also comes from the detailed report that follows and reflects in summary form the modern game as expressed through this year's Tri Nations championship:

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI ATIONS 2006
% of points from TRIES	34%	56%	39%	50%
% of points from PENALTY GOALS	51%	25%	43%	33%
% of points from CONVERSIONS	10%	16%	13%	15%
% of points from DROP GOALS	5%	3%	5%	2%
TRIES per game	3.0	4.8	3.2	4.7
PENALTY GOALS per game	7.7	3.7	5.8	5.0
DROP GOALS per game	0.7	0.4	0.7	0.3
TRIES SCORED BY BACKS	85%	72%	68%	68%
TRIES SCORED BY FORWARDS	15%	28%	32%	31%
MATCHES with point margin of 20 or less	8 of 9	7 of 9	5 out of 6	7 out of 9
CONVERSION SUCCESS RATE	78%	70%	79%	76%
PENALTY GOAL SUCCESS RATE	80%	69%	71%	72%
DROP GOAL SUCCESS RATE	32%	27%	50%	31%
matches won by TEAM SCORING MOST TRIES	56%	89%	50%	56%
MATCHES WHERE TRIES EQUAL	33%	11%	50%	44%
matches won by TEAM SCORING LEAST TRIES	11%	0%	0%	0%
% of TRIES FROM LINEOUT POSSESSION	15%	31%	32%	33%
% of TRIES FROM SCRUM POSSESSION	29%	21%	11%	7%
% of TRIES FROM PENALTY/FREE KICKS	15%	19%	5%	5%
% of TRIES FROM TURNOVER/ERROR	19%	9%	21%	21%
% of TRIES FROM OPPONENTS KICKS	11%	14%	26%	24%
OTHER	11%	6%	5%	10%
BALL IN PLAY TIME	42%	47%	46%	41%
% of all PASSES MADE BY BACKS	38%	36%	35%	37%
% of all PASSES MADE BY SCRUM HALF	41%	42%	40%	41%
% of all PASSES MADE BY FORWARDS	21%	22%	25%	22%
% of LINEOUT POSSESSION RETAINED	78%	80%	81%	83%
% of SCRUM POSSESSION RETAINED	88%	95%	91%	94%
% of RUCK/MAUL POSSESSION RETAINED	91%	89%	93%	92%
YELLOW AND RED CARDS	8 yellow – 0 red	2 yellow – 0 red	6 yellow – 0 red	3 yellow – 0 red
REFERENCES TO TMO	5 in 9 games	13 in 9 games	6 in 6 games	12 in 9 games




TRI NATIONS 2009 – THE TEAMS PERFORMANCES

This section summarises each team's activities and performances in certain critical areas of the game.




The number of tries scored by each team, the number conceded by each team and the number of penalty goals kicked is shown in the following table

		TRIES SCORED 2009	TRIES SCORED 2008	TRIES CONCEDED 2009	TRIES CONCEDED 2008	PEN GOALS 2009	PEN GOALS 2008	DROP GOALS 2009	DROP GOALS 2008
	NEW ZEALAND	9	16	6	11	26	15	0	1
	AUSTRALIA	8	14	10	21	14	7	3	1
	SOUTH AFRICA	10	13	11	11	29	11	3	2



This table shows where each team's points came from - distinguishing between points from tries and points from kicks.

	% of points from Tries	% of points from Kicks
 AUSTRALIA	39%	61%
 SOUTH AFRICA	32%	68%
 NEW ZEALAND	32%	68%




The attached table shows how effective each team was in converting possession into tries.

	TRI NATIONS 2009	TRI NATIONS 2008
 SOUTH AFRICA	1 try scored every 9.3 mins	1 try scored every 7.6 mins
 NEW ZEALAND	1 try scored every 12.3 mins	1 try scored every 7.5 mins
 AUSTRALIA	1 try scored every 12.7 mins	1 try scored every 8.3 mins




The effectiveness in preventing opponents from converting possession into tries is in the attached table.

	TRI NATIONS 2009	TRI NATIONS 2008
 NEW ZEALAND	1 try conceded every 16.0 mins.	1 try conceded every 9.7 mins
 AUSTRALIA	1 try conceded every 10.2 mins	1 try conceded every 5.0 mins
 SOUTH AFRICA	1 try conceded every 9.7 mins	1 try conceded every 11.32 mins

Each team's overall kicking success rate was as follows:

	TRI NATIONS 2009	TRI NATIONS 2008
 NEW ZEALAND	88%	75%
 SOUTH AFRICA	78%	58%
 AUSTRALIA	71%	75%

The average time in possession of the ball per game by each team is shown in the attached table:

	TRI NATIONS 2009	TRI NATIONS 2008
 NEW ZEALAND	18 mins 24 secs	20 mins 01 secs
 AUSTRALIA	16 mins 53 secs	19 mins 21 secs
 SOUTH AFRICA	15 min 27 secs	16 mins 33 secs

Again, further and far more extensive analysis can be found in the main report.

SCORING

There were **402** points scored in the 9 matches played, giving an average of **45** points per game (**2008 – 43**). They were made up as follows:

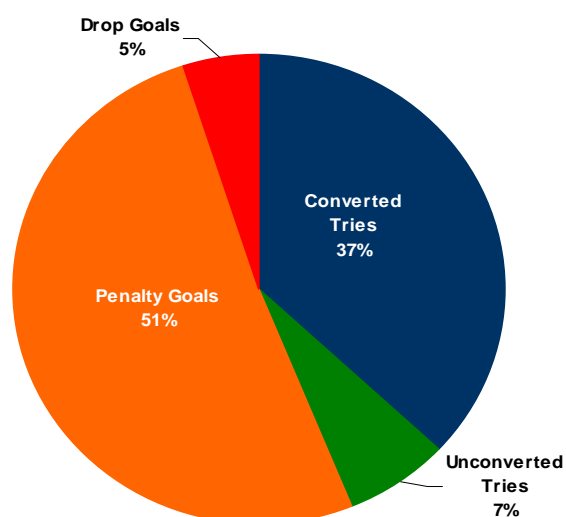
Type of Score			% of points scored by Tries	
	Total	Points		%
Converted Tries	21	147	TRI N 2009	34%
Unconverted Tries	6	30	TRI N 2008	56%
Penalty Goals	69	207	TRI N 2007	39%
Drop Goals	6	18	TRI N 2006	50%
		402	TRI N 2005	47%

Of the total points scored:

34% came from **TRIES** (2008 - 56%)
 51% came from **PENALTY GOALS** (2008 - 25%)
 10% came from **CONVERSIONS** (2008 - 16%)
 5% came from **DROP GOALS** (2008 - 3%)



Points Makeup



It can be seen above that the % of points scored by tries was the lowest for at least 5 years. This is because there were **fewer tries** scored than in any of the previous 5 years, and **far more penalty** goals:




	Av Points per game	Av Tries per game	Conversion success rate	Av Pen Goals per game	Try : Penalty ratio	Av Drop Goals per game
TRI N 2009	45	3.0	78%	7.7	1 to 2.6	0.7
TRI N 2008	43	4.8	70%	3.7	1 to 0.8	0.4
TRI N 2007	40	3.2	79%	5.8	1 to 1.8	0.7
TRI N 2006	46	4.7	76%	5.0	1 to 1.1	0.3
TRI N 2005	46	4.3	73%	5.3	1 to 1.2	0.7

WINNING MARGINS

The winning margins in each of the 9 matches fell into the following ranges. It shows that 8 of the 9 matches had margins of less than 20 points. Last year's was 7 out of 9 and in 2007 it was 5 out of 6.

Points Difference	No of matches	Cumulative	2008
1 – 5	2	2 with 5 points or less	2
6 – 10	3	5 with 10 points or less	1
11– 20	3	8 with 20 points or less	4
21– 30	1	9 with 30 points or less	1
31- 40		with 40 points or less	-
41 - 50		with 50 points or less	1




Not surprisingly, points scored and conceded varied between the teams. The points scored and conceded by each team are shown below.

	Points For		Points Against	
	TOTAL	AVERAGE	TOTAL	AVERAGE
 SOUTH AFRICA	158	26	130	22
 NEW ZEALAND	141	24	131	22
 AUSTRALIA	103	17	141	24

PENALTY GOALS

There were **69** penalty goals kicked in 2009 – this is over twice as many as in 2008 which reflected the fact that in 2008 the sanctions ELV was in operation.

A further breakdown shows that in 2009, all 3 teams kicked more penalty goals than tries. In 2008 it was the reverse - **all teams** scored more tries than penalty goals.

	Tries Scored		Penalties Goals Kicked		Ratio Tries : PGs	
	2009	2008	2009	2008	2009	2008
 NEW ZEALAND	9	16	26	15	1 to 2.9	1 to 0.9
 AUSTRALIA	8	14	14	7	1 to 1.8	1 to 0.5
 SOUTH AFRICA	10	13	29	11	1 to 2.9	1 to 0.8

IMPACT OF THE PENALTY GOAL ON MATCH RESULTS

Tries continue to win matches. In Tri Nations, the winning team scored the most tries in 5 of the 9 matches or 56% of matches. In 3 matches, the tries were equal – and in one game, one team scored fewer tries than their opponents and won the game.

In the last 87 Tri Nations matches, the losing team has scored more tries than the winning team on just 7 occasions – and the last of those 6 occasions happened in 2004.



TRY SCORING

The total number of tries, penalty goals and drop goals scored by each country in Tri Nations 2009 was as follows:




	Tries	Penalty Goals	Drop Goals		% of points from Tries	% of points from Kicks
 NEW ZEALAND	9	26	0	 NEW ZEALAND	2009	2008
 SOUTH AFRICA	10	29	3	 SOUTH AFRICA	2009	2008
 AUSTRALIA	8	14	3	 AUSTRALIA	2009	2008
					2009	2008
					2009	2008
					2009	2008

RATE OF TRY SCORING

The table immediately above shows the number of tries scored by each country. The table does not show however how effective each team was in scoring tries in relation to the possession that it obtained. A team may obtain little possession but still manage to score a significant number of tries. The following paragraphs consider this and attempt to show how successful each team was in converting possession into tries.




This was done by adding together the time each team was in possession of the ball in each of the matches played and then dividing it by the number of tries scored. The result then gave a rate of try scoring – or a measure of how effective each country was in converting possession into tries.

Because each team scored fewer tries than last year, possession required to score a try increased proportionately.

	TRI NATIONS 2009	TRI NATIONS 2008
 SOUTH AFRICA	1 try scored every 9.3 mins	1 try scored every 7.6 mins
 NEW ZEALAND	1 try scored every 12.3 mins	1 try scored every 7.5 mins
 AUSTRALIA	1 try scored every 12.7 mins	1 try scored every 8.3 mins

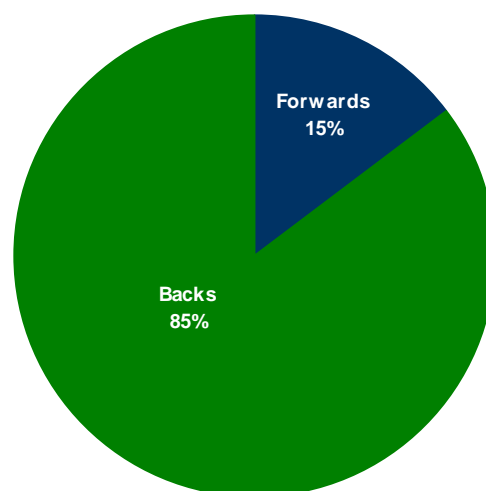
RATE OF TRY CONCEDED

Following the above exercise, the converse was looked at ie. how effective was each team in restricting tries in relation to the possession that their opponents obtained. The following paragraph tries to measure this by illustrating how successful each team was in preventing their opposition from converting possession into tries. This was done by adding together the total time the team's opponents were in possession of the ball - and then dividing it by the number of tries conceded. The result then gave a rate of try scoring by the opposition.

	TRI NATIONS 2009	TRI NATIONS 2008
 NEW ZEALAND	1 try conceded every 16.0mins.	1 try conceded every 9.7mins.
 AUSTRALIA	1 try conceded every 10.2mins	1 try conceded every 5.0mins
 SOUTH AFRICA	1 try conceded every 9.7mins	1 try conceded every 11.5mins

PLAYERS AND TRIES

It has been noted above that there were 27 tries scored in the 9 matches:



23 or 85% of tries were scored by Backs (2008 - 31 or 72%)
4 or 15% of tries were scored by Forwards (2008 - 12 or 28%)

The breakdown between the 3 competing teams is shown below:

	TRI NATIONS 2009		TRI NATIONS 2008	
	Tries by Backs	Tries by Forwards	Tries by Backs	Tries by Forwards
NEW ZEALAND	6	3	9	7
SOUTH AFRICA	9	1	12	1
AUSTRALIA	8	0	10	4
TOTAL	23	4	31	12

Over the last 5 years, South Africa's backs have scored 40 of their 46 tries - a far higher proportion than the other 2 teams. In that 5 year period, South Africa's forwards have scored a total of 5 tries compared to Australia's 12 and New Zealand's 22.

TRIES

1. SOURCE OF TRIES

There were 27 tries scored in Tri Nations 2009.

The teams scoring the tries obtained possession of the ball prior to the scoring of the try from a variety of sources. Analyses of matches played at international level, over several years, have shown that the most fruitful source of possession has consistently and clearly been the lineout. This was not the case in 2009 when scrums were the major source.

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006
Lineout – Own	4 (15%)	13 (31%)	6	14
Opponents Kick	1 (4%)	7 (16%)	5	7
Turnover/Handling Error	5 (19%)	4 (9%)	4	9
Scrum –Own	8 (29%)	9 (21%)	2	3
Penalty/Free Kick	4 (15%)	8 (19%)	1	2
Lineout – Opp	2 (7%)	0	0	2
Restart – Own	0	0	1	1
Restart – Opp	2 (7%)	1 (2%)	0	3
Scrum – Opp	1 (4%)	1 (2%)	0	1
TOTAL	27	43	19	42

The following table shows the source of **tries scored** by the 3 teams:

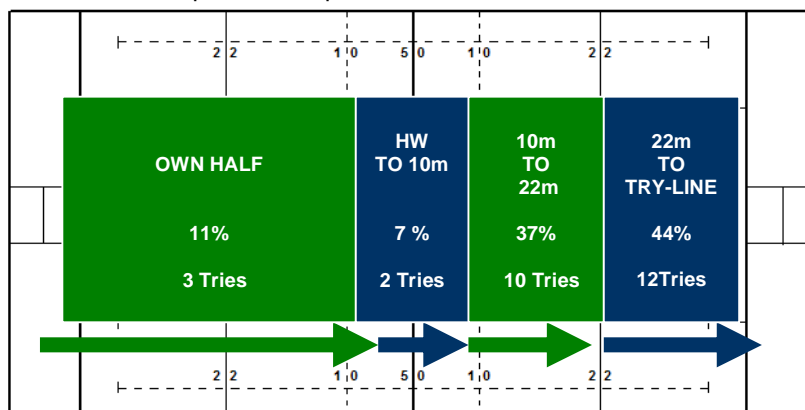
	Lineout	Scrum	Pen/Fk	Kick	Turnover	Restart	Total Scored
NEW ZEALAND	3	3	1	1	1		9
AUSTRALIA	2	2	2		1	1	8
SOUTH AFRICA	1	4	1		3	1	10

The next table shows the source of **tries conceded** by the 3 teams:

	Lineout	Scrum	Pen/Fk	Kick	Turnover	Restart	Total Conceded
NEW ZEALAND	1	2			2	1	6
SOUTH AFRICA	3	4	3		1		11
AUSTRALIA	2	3	1	1	2	1	10

2. ORIGIN OF TRIES

Tries originate from various parts of the pitch – this is illustrated below:



In 2009, 1 in 9 tries came from within the scoring team's own half. In 2008, it was 1 in 5 tries – in 2007, it was 1 in 3 and in 2006, 1 in 2.5

This year therefore, far fewer tries started from within the scoring team's half with 81% starting less than 40 metres from the goalline. This compares with 67% in 2008, 47% in 2007 and 50% in 2006.

Origin
of tries
scored



	Own Half	Halfway to 10m	10m to 22m	22m to Try-line	Total Scored
NEW ZEALAND	2	1	3	3	9
AUSTRALIA		1	2	5	8
SOUTH AFRICA	1		5	4	10

The following table provides the converse to the above ie. It shows – for each team – the origin of all tries conceded.

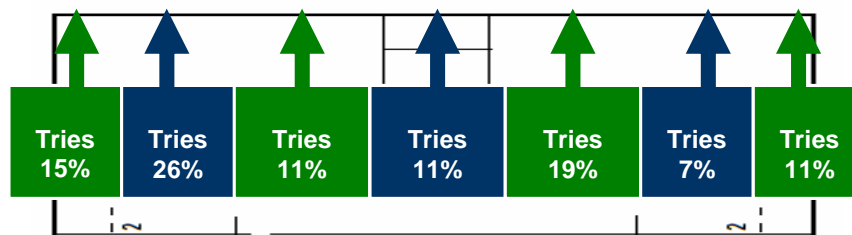


	Opp Half	Halfway to 10m	10m to 22m	22m to Tryline	Total Conceded
NEW ZEALAND		1	3	2	6
SOUTH AFRICA	1	1	3	6	11
AUSTRALIA	2		4	4	10

3. TRY LOCATIONS

The chart below indicates where across the goal-line tries were scored. It shows that:

11% were scored under the posts	2007 - 9%
52% on the left side of the posts	2007 - 51%
37% on the right side of the posts	2007 - 40%



4. BUILD-UP TO TRIES

Possession of the ball that leads to tries is obtained from a number of sources – and they are listed above. More often than not, other actions – second phase, kicks and passes – then take place before the try is scored. The first table below shows the number of rucks and mauls (2nd phase) that preceded each of the 27 tries scored in Tri Nations 2009

The table shows that 85% of tries were preceded by 3 or fewer second phases (2008 – 75%; 2007 – 64%)

	Number	%	Cumulative %	2008
0 R/Ms	13	49%	49%	26%
1 R/Ms	6	22%	71%	47%
2 R/Ms	2	7%	78%	63%
3 R/Ms	2	7%	85%	75%
4 R/Ms				80%
5 R/Ms				87%
6 R/Ms				91%
7 R/Ms	1	4%	89%	96%
8 R/Ms				-
9 R/Ms	2	7%	96%	-
10+ R/Ms	1	4%	100%	100%
Total	27	100%		

The next table below shows the number of passes that preceded each of the 27 tries scored in Tri Nations 2009

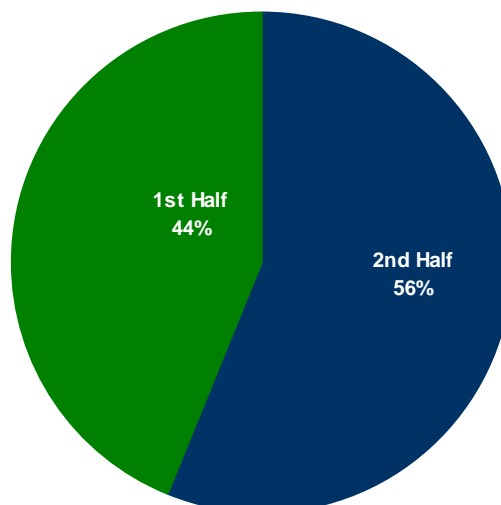
The table shows that 67% of tries were preceded by 3 or fewer passes. (2008 – 40%, 2007 – 42%)

There was also a sharp difference between the teams. Only 1 of New Zealand's 9 tries contained less than 3 passes whereas in South Africa's case it was 9 out of 10.

	Number	%	Cumulative %	2008
0 pass	5	19%	19%	5%
1 pass	6	22%	41%	10%
2 passes	2	7%	48%	12%
3 passes	5	19%	67%	40%
4 passes	2	7%	74%	49%
5 passes	3	11%	85%	70%
6 passes				77%
7 passes	1	4%	89%	86%
8 passes				91%
9 passes	1	4%	93%	
9+passes	2	7%	100%	100%
Total	27			

TIMING OF SCORES - TRIES

12 or 44% of tries were scored in the first half – 15 or 56% in the second half. All but identical percentages to last year.



The following table breaks down these figures further and shows the halves in which teams scored tries and the halves in which they conceded tries.



NEW ZEALAND

AUSTRALIA

SOUTH AFRICA

Tries scored		Tries conceded	
1st half	2nd half	1st half	2nd half
3	6	4	2
2	6	6	4
7	3	2	9

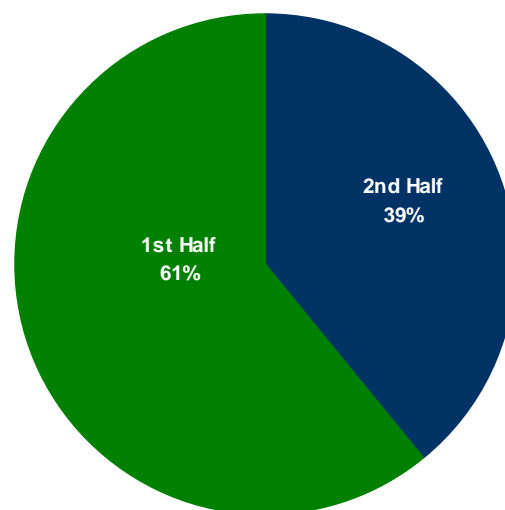
It can be seen that South Africa scored 70% of their tries in the first half but conceded 82% of their tries in the second half.

TIMING OF SCORES - PENALTY GOALS

There is a noticeable difference between the time when tries are scored and the time when penalties are kicked.

In Tri Nations 2009, 12 tries were scored in the first half – 15 in the second. Penalty goals however showed a different profile – 42 penalties were kicked in the first half - 27 in the second – again similar proportions to last year.

The following chart shows the number of penalties kicked and conceded by each team in each half:



NEW ZEALAND

SOUTH AFRICA

AUSTRALIA

Pen Goals scored		Pen Goals conceded	
1st half	2nd half	1st half	2nd half
12	14	19	10
19	10	11	6
11	3	12	11

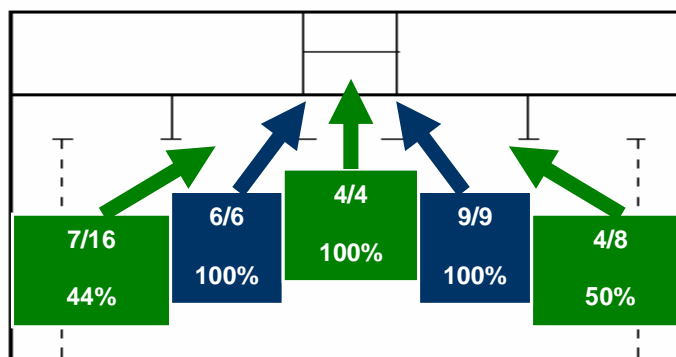
KICKS AT GOAL

Kicking success rates were as follows:



	TRI NATIONS 2009	TRI NATIONS 2008
Conversions	78%	70%
Penalty goals	80%	69%
Drop goals	6 of 19 = 32%	4 of 15 = 27%

Map of Conversion Success



The success rate for penalty goals, conversions and drop kicks for each of the participating countries was as follows:

Kicks at Goal Success

	Penalty Success	Conversion Success	Overall Success %	Drop goal Success
AUSTRALIA	14 of 20	6 of 8	71%	3 of 6
NEW ZEALAND	26 of 31	9 of 9	88%	0 of 1
SOUTH AFRICA	29 of 35	6 of 10	78%	3 of 12




BALL IN PLAY

In percentage terms, Tri Nations 2009 matches produced an average ball in play time of **33min 51secs – or 42%** (2008 47% or 37 mins 30 secs)

The highest Ball in play figure was **46% or 36 mins 34 secs**. The lowest was **39%**.

The winning team obtained most possession in 5 of the 9 matches. In one match the possession was the same.

The following table shows the ball in play times and possession per team per match

MATCH	BALL IN PLAY TIME	%	 NZ	 SA	 AUS
New Zealand 22 v Australia 16	32m 22s	40%	17m 01s 53%		15m 21s 47%
South Africa 28 v New Zealand 19	33m 12s	42%	15m 54s 48%	17m 18s 52%	
South Africa 31 v New Zealand 29	33m 43s	42%	16m 52s 50%	16m 51s 50%	
South Africa 29 v Australia 17	31m 22s	39%		16m 44s 53%	14m 38s 47%
Australia 18 v New Zealand 19	36m 34s	46%	18m 31s 51%		18m 03s 49%
Australia 25 v South Africa 32	34m 08s	43%		13m 18s 39%	20m 50s 61%
Australia 21 v South Africa 6	32m 37s	42%		15m 14s 47%	17m 23s 53%
New Zealand 29 v South Africa 32	34m 25s	43%	21m 04s 61%	13m 21s 39%	
New Zealand 33 v Australia 6	36m 10s	45%	21m 04s 58%		15m 06s 42%

ACTIVITY CYCLES

Activity cycles comprise - ruck/mauls, passes, and kicks.




The following paragraphs show the number of rucks/mauls, passes and kicks made in Tri Nations 2009 compared with Tri Nations 2008.

Rucks/Mauls
Passes
Kicks

TRI NATIONS 2009	TRI NATIONS 2008
131	161
222	275
60	67




PASSING

Games, on average, contained **222** passes (2008 - 275). The most in any game was 276 (Australia v South Africa) – the fewest was 181 (South Africa v Australia). The most by any team in a game was 181 (Australia) – the fewest, 43 (South Africa). The following table shows the average passes per game per team




	TRI NATIONS 2009	TRI NATIONS 2008
 AUSTRALIA	125	145
 NEW ZEALAND	125	144
 SOUTH AFRICA	83	122

The above table shows that Australia and New Zealand made almost 40% more passes than South Africa. This was not accounted for simply because they had more possession. It was also because Australia and New Zealand passed at a higher rate – and this next table shows this is the average number of passes per minute's possession

Rate of Passing per Team – ie passes per minutes possession

		TRI NATIONS 2009	TRI NATIONS 2008
	NEW ZEALAND	6.8	7.3
	AUSTRALIA	7.4	7.4
	SOUTH AFRICA	5.4	7.4

The number of passes made by a team can also vary considerably from match to match. The following table shows the average number of passes per country per game as shown above together with the most in a game and the least in a game

		Average 2009	Average 2008	Most in a game 2009	Most 2008	Least in a game 2009	Least 2008
	AUSTRALIA	125	145	181	175	91	122
	NEW ZEALAND	125	144	153	197	80	90
	SOUTH AFRICA	83	122	102	147	43	102

PLAYER PASSING

Total passes made in the championship were broken down into 3:

- Passes made by forwards
- Passes made by the scrum half
- Passes made by backs




When the almost 2000 passes made in Tri Nations 2009 were allocated into these 3 groups, the results were as follows:

% of Passes by forwards
% of Passes by scrum half
% of Passes by backs

	TRI NATIONS 2009	TRI NATIONS 2008
% of Passes by forwards	21%	22%
% of Passes by scrum half	41%	42%
% of Passes by backs	38%	36%
	100%	100%

The percentages for each country in each of the categories are shown below:

Total number of passes made by Forwards/Scrum Half/Backs per Team




		Passes by Forwards	Passes by Scrum half	Passes by Backs
	SOUTH AFRICA	121	222	152
	AUSTRALIA	158	300	294
	NEW ZEALAND	158	287	305

What the above table shows is the level of passing made by the three groups of players. It shows how active each group of players was in passing the ball.






The following table takes this further. It shows the proportion of a teams passes made by each group. Where certain teams can use forwards more as suppliers of the ball for onward transmission by the backs, other teams involve the forwards themselves in the distribution process. This is what the table shows:

Percentage of total passes made by forwards/scrum half /backs

		% by Forwards	% by Scrum Half	% by Backs
	SOUTH AFRICA	24%	45%	31%
	AUSTRALIA	21%	40%	39%
	NEW ZEALAND	21%	38%	41%




The next tables show what each rank of forwards of each team did with the ball when they were in possession of it. The first table shows the number of times each countries' forwards had the ball in their hands and then notes the number of times they passed it. This is then expressed as a ratio so that if a team's forwards passed the ball 20 times having received it 100 times, the ratio would be expressed as 1 to 5 – ie 1 pass for every 5 possessions. The following table shows that Australia's forwards were the most likely to pass the ball.

Ratio of Passes to Possession – by Forwards per Team




		TRI NATIONS 2009	TRI NATIONS 2008
	SOUTH AFRICA	1 to 3.0	1 to 2.3
	NEW ZEALAND	1 to 2.8	1 to 3.0
	AUSTRALIA	1 to 2.5	1 to 3.0

This similarity between the forwards of each country is also shown when the forwards are broken down into the 3 groups of (a) front row, (b) second row and (c) back row. This time the relationship between passes and possession is expressed in percentage terms, so that if a group of forwards received the ball 20 times and passed it 6 times, it means they passed it on 30% of occasions.

% of times ball passed by Front Row




		TRI NATIONS 2009	TRI NATIONS 2008
	AUSTRALIA	32%	34%
	SOUTH AFRICA	30%	34%
	NEW ZEALAND	35%	32%

% of times ball passed by Second Row

		TRI NATIONS 2009	TRI NATIONS 2008
	SOUTH AFRICA	45%	55%
	NEW ZEALAND	31%	33%
	AUSTRALIA	27%	23%



Percentage of times ball passed by Back Row

		TRI NATIONS 2009	TRI NATIONS 2008
	SOUTH AFRICA	32%	45%
	AUSTRALIA	49%	38%
	NEW ZEALAND	38%	35%

What was interesting this year – just as last year - was the fact that each rank of New Zealand forwards passed the ball at similar rates – around 35% of every time they had the ball in their hands. There was a far wider variation within the other two teams.

PASSING MOVEMENTS

Passes are grouped into passing movements – i.e. one pass movement, two pass movements and so on. The data shows that 82% of all passing movements contained two passes or less. This now appears to be a constant and varies little from year to year. It also varies little between teams. All 3 countries fell within 81% and 87%.




RUCKS/MAULS (2ND PHASE)

The average number per game was **131**. (2008 – 161)

The most in any game was **163** – the fewest was **108** (2007 – 188 and 133)




The most by any team in a game was **108**, the least **47** (2008 – 115 and 54)

The average for all countries is shown below. The table indicates the total number of rucks/mauls created by each of the 3 teams expressed as an average per game.

		TRI NATIONS 2009	TRI NATIONS 2008
	NEW ZEALAND	77	93
	AUSTRALIA	66	90
	SOUTH AFRICA	53	60

However, the number of rucks and mauls made by one team may be constrained because it obtained only limited possession of the ball. In order to address this, an alternative calculation has been made which relates the number of rucks/mauls to the share of ball in play time won by each team. This is expressed in the number of rucks created for every minutes' possession obtained by a team and shows, for example, that while New Zealand and Australia made around 50% more rucks than South Africa, their rate of rucking was only 27% more.




Rate of Rucks/Mauls per Team

		TRI NATIONS 2009	TRI NATIONS 2008
	NEW ZEALAND	4.2	4.6
	AUSTRALIA	3.9	4.6
	SOUTH AFRICA	3.4	3.6

BREAKDOWN RETENTION

At the breakdown the team taking in the ball retained possession by either winning the ball or being awarded a penalty on 91% of occasions.(2008 – 89%)

The percentage success rate for each team was very similar and was as follows:

		TRI NATIONS 2009	TRI NATIONS 2008
	NEW ZEALAND	93%	92%
	AUSTRALIA	90%	90%
	SOUTH AFRICA	89%	83%




KICKING

The average number per game was **60**. (2008 – 67)

The most open play kicks in a game was **75** - the fewest **47** (2008 - 78 and 54)




The most by a team was **44** – the least **22** (2008 – 46 and 24)

The average number of kicks per team per game is shown in the table below:

		TRI NATIONS 2009	TRI NATIONS 2008
	AUSTRALIA	28	36
	SOUTH AFRICA	22	32
	NEW ZEALAND	28	32

When an adjustment is made to take account of the possession obtained by each team, then the kicking table changes - but only slightly




Rate of Kicking per Team – ie kicks per minutes possession

		TRI NATIONS 2009	TRI NATIONS 2008
	AUSTRALIA	1.6	1.9
	SOUTH AFRICA	2.2	1.9
	NEW ZEALAND	1.5	1.6

SUMMARY

A summary of previous tables is shown below – it shows the average number of rucks, passes, and kicks per game and the rate for each per minute possession.

Activity Cycle Summary - Average per game and Rate per minute possession




		Rucks/Mauls		Passes		Kicks	
		Average	Rate	Average	Rate	Average	Rate
	NEW ZEALAND	77	4.2	125	6.8	28	1.5
	SOUTH AFRICA	53	3.4	83	5.4	22	2.2
	AUSTRALIA	66	3.9	125	7.4	28	1.6

RESTARTS

Of 50m restarts, 40% were kicked long – 60% were kicked short and were contestable.(2008 – 52% and 48%)

When 50m restarts were kicked short, the kicking team regained possession on 1 in 5 occasions.

Success rate and restart type varied between the 3 teams. The most effective teams in retaining short restarts are shown below.

	50m Restarts		22m Restarts		Retention rate
	Short	Long	Short	Long	Short
 NEW ZEALAND	29	12	8	6	8 of 37
 SOUTH AFRICA	13	20	6	2	5 of 19
 AUSTRALIA	26	14	4	10	10 of 28

It can be seen that there was a clear contrast between South Africa and the other 2 teams. While South Africa kicked long on the majority of occasions, the other teams kicked short twice as often as long.

LINEOUTS

The average number of lineouts per game was **24**
(2008 – 24)

The most line outs in a game was **34** – the least **15**
(2008 – 35 and 15)

	TRI NATIONS 2009
Average no per game	24
Percentage competed	56%
Possession retained	79%

Lineout trends over the last 4 years are shown in the following table:

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006
Av no per game	24	24	30	32
% competed	56%	71%	63%	71%
Possession retained	79%	80%	81%	83%

South Africa had a hugely successful lineout as can illustrated in the following table. It shows that

- ♦ their success rate was 88% compared with 78% and 74% for the other 2 countries
- ♦ they had a success rate of 38% on their opposition throw – an exceptionally high figure that contrasted with the 10% and 15% of their opponents
- ♦ their lineout was stolen only 6 times compared with Australia's 16 and New Zealand's 14
- ♦ they stole their opponents lineout 24 times. Australia and New Zealand managed just 6 each.
- ♦ This superiority was recognised by the other two teams who only challenged the South Africa lineout on 44% of occasions while Australia's was challenged on 65% of occasions and New Zealand's on 58%.
- ♦ Conversely, South Africa challenged their opponent's lineout more often – 64% of occasions compared with Australia's and New Zealand's 49% and 56% respectively





SOUTH AFRICA
AUSTRALIA
NEW ZEALAND

Success %		Lineout Steals		Not straight / Pen/FK / Knock-on	
Own Throw	On Opp Throw	Lost on Own Throw	Won on Opp Throw	Own Throw	Opp Throw
88%	38%	6	24	5	2
74%	10%	16	6	2	5
76%	15%	14	6	3	3

SCRUMS

The average number of scrums per game was **19** (2008 – 18).

The most scrums in a game was **26** – the least **15** (2008 – 26 and 12)

Average no per game
Possession retained

TRI NATIONS 2009
19
88%

The following compares scrums in 2009, 2008, 2007 and 2006

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006
Av no per game	19	18	16	19
Rate of Scrum Pens and F/Ks	1 every 4 scrums	1 every 8 scrums	1 every 6 scrums	1 every 13 scrums
Possession retained	88%	95%	91%	94%

The Scrum success on own feed and opposition feed are shown below. Again, ball retention was relatively high for all teams. With such high percentage of possession retained, it is no surprise that heels against the head were few and far between. In total there were just none in some 170 scrums. The following table shows the scrum success per country:



NEW ZEALAND
SOUTH AFRICA
AUSTRALIA

Scrum Success %		Heels against the head	
Own Feed	Opp Feed	Won	Lost
90%	12%	-	-
88%	15%	-	-
87%	8%	-	-






PENALTIES

In Tri Nations 2008, the average number of penalties and free kicks awarded in a game was **23**. This compares with 28 in 2008 and 19 in 2007.

The most awarded in a single game was **27** – the least, **20**. (2008 – 33 and 23)

The following table comprises the total penalties awarded to and conceded by each team. However, because the number of penalties can vary from match to match, a better measure is the **proportion** of penalties conceded by a team in all their matches compared with their opponents. This shows that Australia were the least penalised team in relation to their opponents.

Average Penalties For and Against per Team per Game

		Pen/FK For	Pen/FK Against
	NEW ZEALAND	63	71
	AUSTRALIA	81	67
	SOUTH AFRICA	62	68

Proportion of Penalties For and Against per Team

	% Pen/FK For	% Pen/FK Against
NEW ZEALAND	47%	53%
AUSTRALIA	54%	46%
SOUTH AFRICA	48%	52%

CATEGORIES OF OFFENCES PENALISED

The following table groups the penalties awarded into 11 categories – these are as follows. The table also shows the comparative figures since 2006:

Penalty/Free Kick Reason

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006
Ruck/tackle on ground	51%	52%	39%	47%
Offside	13%	17%	25%	24%
Scrum	19%	8%	14%	8%
Lineout	2%	2%	3%	8%
Plus 10m	-	1%	-	1%
Foul play	-	2%	4%	-
obstruction	4%	5%	2%	4%
Dangerous tackle	5%	7%	7%	2%
Maul	-	n/a	2%	3%
Unplayable f/k	-	4%		
Other	4%	2%	4%	3%
	100%	100%	100%	100%

PENALTY OPTIONS

Of all penalties and free kicks awarded, the following were the options taken by the 3 teams

	Kick to Touch	Kick for Goal	Tap	Scrum
Australia	51%	27%	21%	1%
New Zealand	30%	47%	17%	6%
South Africa	30%	58%	10%	2%
2009 OVERALL	38%	43%	16%	3%
2008 OVERALL	26%	19%	42%	13%

There were 86 penalty goal attempts this year compared to 48 in 2008.

The above shows a completely different penalty option profile compared to last year. While the tap penalty option last year amounted to 42% of all penalties and free kicks, this year that option was taken on only 16% of occasions.

CARDS – YELLOW & RED

The following paragraphs examine the circumstances and effects of the issue of red and yellow cards during Tri Nations 2009

RED CARDS

There were **no** red cards issued during Tri Nations 2009 (2008 – none)




YELLOW CARDS

There were **8** yellow cards issued during the championship (2008 – 2),

	TRI NATIONS 2009
Dangerous Tackle	3
Offside (R/M)	3
Dangerous Charging	1
Hands in Ruck	1

In 2008, 2 of the 9 matches contained a yellow card. This contrasts with this year when 4 of 9 matches contained a yellow card.

The following table shows the breakdown of yellow and red cards per team with comparatives for previous years. It shows that South Africa have conceded 10 cards in 5 years while New Zealand have conceded 4 and Australia 6 in the same period..

	TRI NATIONS 2009	TRI NATIONS 2008	TRI NATIONS 2007	TRI NATIONS 2006	TRI NATIONS 2005
 SOUTH AFRICA	2	1	5	1	1
 NEW ZEALAND	2	1	1	-	-
 AUSTRALIA	4	-	-	2	-
TOTAL	8	2	6	3	1

TELEVISION MATCH OFFICIAL (TMO)

In Tri Nations 2009, there were **5** references to the TMO.

As a result of the 5 references, **2** tries were awarded.

The shortest reference took **38 seconds** – the longest **2 mins 00 secs** - 3 out of the 5 references took less than a minute.