



STATISTICAL REVIEW AND MATCH ANALYSIS

2012 RBS 6 NATIONS

IRB GAME ANALYSIS



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COMMENTARY

Because Rugby is an ever-changing, dynamic game, it is always subject to change. The changes may be progressive, they may be subtle, some may be surprising, others may be temporary.

And so it was in the RBS 6 Nations 2012 where a pattern of changes soon became apparent.

It became clear that winning margins were becoming tighter. Towards the end of most of the matches in 2012, the final outcome could have changed as the result of just one score. This was certainly not the case 10 years ago, but was perhaps an inevitable – if not positive – consequence of the fact that fewer tries were scored than in previous years.

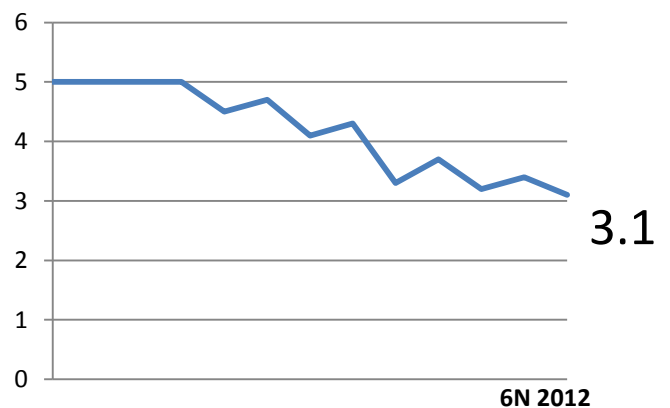
TRIES

This was the first most notable feature in 2012 – the difficulty teams had in scoring tries. At the end of the Championship, the average number of tries scored per game was 3.1 – a rate of scoring that was the lowest in the history of the 6 Nations.

This figure continued the gradual reduction in the number of tries being scored that started in the early 2000s. The table shows, inter alia, that:

- In 2012, there were 40% fewer tries scored than 10 years ago.
- In the last two years (2011 and 2012) a total of 97 tries were scored – 10 years earlier, the comparative figure was 150.
- There were 29 fewer tries scored in 6 Nations 2012 than in 6 Nations 2002.

Year	Average No. of tries per game	Total No. of tries
2000	5.0	75
2001	5.0	75
2002	5.0	75
2003	5.0	74
2004	4.5	68
2005	4.7	71
2006	4.1	61
2007	4.3	65
2008	3.3	50
2009	3.7	56
2010	3.2	48
2011	3.4	51
2012	3.1	46



A further illustration of the paucity of tries in the current Game is a brief examination of England’s record over the last decade or so:

- In 2001 and 2002, England had two successful seasons, winning eight matches out of 10. They scored **52** tries.
- In 2011 and 2012, England had similar success, again winning eight matches out of 10. This time, however, they scored just **19** tries.

This reduction was not however because England has found a particular difficulty in scoring tries. In fact, over the last two years only one other team has scored more tries – the reduction is simply a reflection of the increasing difficulty in scoring tries in the modern Game at the highest level.

It is not surprising therefore that Wales – winners of a Grand Slam – scored fewer tries than any of the other seven Grand Slam winners since 2000. This again was the continuation of a trend. An examination of the eight Grand Slams this last decade shows that the most recent four produced fewer tries than any of the previous four and, at the same time, conceded fewer tries.

Year	Grand Slam winner	Tries scored	Tries conceded
2002	FRANCE	15	7
2003	ENGLAND	18	4
2004	FRANCE	14	5
2005	WALES	17	8
	Total	64	24
2008	WALES	13	2
2009	IRELAND	12	3
2010	FRANCE	13	6
2012	WALES	10	3
	Total	48	14

SIZE OF PLAYERS

A number of reasons have been given for this paucity of tries. They include better organised defences and the introduction of specialised defence coaches. A further suggestion is that the progressive increase in the physical size and fitness of current international players has reduced the opportunities that can arise from physical mismatches between players. The average weight of players of each of the six teams in this year’s Championship, for example, was as follows:

106kg – 16st 9lbs	WALES
104kg – 16st 5lbs	SCOTLAND
103kg – 16st 3lbs	IRELAND
102kg – 16st 1lbs	FRANCE
102kg – 16st 1lbs	ITALY
101kg – 15st 13lbs	ENGLAND



Nowhere was the change in physicality in players better illustrated than in the weight of the Welsh backline. This is shown in the following table which gives the weight of the Welsh centres and the Welsh wings.

Player no	Weight – st/lbs	Weight - kgs
11	16st 6lbs	104kg
12	17st 4lbs	110kg
13	16st 3lbs	103kg
14	16st 6lbs	104kg

In previous decades, it was not unusual for international teams to have players in such positions who were around four stone or 25kgs lighter.

STATIONARY BREAKDOWNS

One area of the Game that caused increasing concern during the Championship was the time that was taken for the ball to emerge from a breakdown. Frequently, although the ball was available to be played, it remained static, while one team decided what to do before then organising its players.

The attached table illustrates this by showing, for one match, those rucks where the ball was available for more than five seconds before it was eventually played by a player in the scrum half position.

The time was measured from the moment when the ball was both stationary and available for play and the moment when the acting scrum half placed his hands on the ball.

Had the ball been played within, say, five seconds of it being available, two extra minutes of playing time would have resulted.

Although such delays are relatively recent to the Game, this issue of slow ball is currently being examined.

Time available

- 10 secs
- 16 secs
- 8 secs
- 17 secs
- 15 secs
- 15 secs
- 7 secs
- 9 secs
- 10 secs
- 23 secs
- 12 secs
- 7 secs
- 7 secs
- 10 secs
- 9 secs
- 7 secs
- 15 secs
- 11 secs
- 10 secs

SCRUM

Research shows that at the Tier 1 level there are many more collapses, scrum penalties and free kicks than at any Tier below. This was re-confirmed at RWC 2011 and can be seen in the following table which shows that Tier 1 matches contained two and a half times more collapses than Tier 2/3 matches and two and a half times as many penalties and free kicks.



RWC 2011 40 matches	Collapses per 100 scrums	Resets per 100 scrums	Pens/fkicks per 100 scrums
Tier 1 v Tier 1	50	31	41
Tier 2 v Tier 2	19	9	17

Analysis of scrums in this year's competition confirmed that any improvement over last year's 6 Nations and RWC 2011 was no more than marginal and that the core problems remained

	Collapses per 100 scrums	Resets per 100 scrums	Pens/fkicks per 100 scrums
RWC 2011	50	31	41
2012 6 Nations	49	33	39
2011 6 Nations	53	30	44

Several matches served to emphasise the problems;

- The England v Wales match produced six scrums, four collapses, four resets and two penalties. The ball came back into play just four times.
- The Ireland v Scotland game had 20 scrums, eight collapses, seven resets and seven penalties and free kicks – and took up over 21 minutes of available playing time.
- There were 10 scrums in the Wales v France game – seven resulted in a penalty or free kick.

Current scrums are also having an effect on the shape of the Game. With fewer scrums, more penalties and free kicks, scrum possession has now become a less significant part of the Game. In this year's Championship, for example, Wales had possession from the scrum on only 14 occasions in total. In four matches they obtained possession on three occasions and in the fifth match they obtained possession twice.

This is in sharp contrast to Wales' Grand Slam in 2005 when the ball came back from the scrum 47 times.

An examination of 6 Nations 2005 shows, therefore, quite a different picture:

In 6 Nations 2005, there were **24** collapses per 100 scrums

In 6 Nations 2012, there were **49** collapses per 100 scrums

In 6 Nations 2005, there were **15** penalties/free kicks per 100 scrums

In 6 Nations 2012, there were **39** penalties/free kicks per 100 scrums







In addition, the scrums in 2005 took an average of 29 seconds to come back into play. In 2012 this figure had increased to 56 seconds – with some matches comprising scrums that averaged well over a minute.

GAME ELEMENTS AND TEAM SUMMARY






























The remainder of this report provides a summary of major constituent game elements and a detailed statistical summary of the Championship and each team. It shows for example that:

- Over half of the matches had a points margin of less than 10
- **England** had the highest kick success rate (83%); Italy the lowest (53%)
- Backs scored over six times as many tries as forwards
- **Ireland** scored the most tries (13) - **Scotland** and **Italy**, the least (4)
- **Ireland** was the only team to score most of its points from tries
- **Wales** scored 25 tries in the last three years – only two were scored by forwards
- **Wales** had the best defence, conceding only three tries
- Thirteen tries came from lineouts, 12 came from turnovers.
- Only four tries came from scrum possession
- **England** was the only team to neither score nor concede a try from the lineout
- One in three tries originated from inside the scoring team's half
- 63% of tries contained three or fewer rucks and mauls
- 52% of tries contained three or fewer passes
- **Wales** obtained the most possession, **Ireland** the least
- The most passes in a game was 380 (*Wales v Scotland*), the fewest 164 (*England v Ireland*)
- **England** passed the least, **Scotland** passed the most
- **Scotland's** forwards made almost 100 more passes than **England's** forwards
- **Wales'** centres passed the ball the least
- **England** made the most kicks out of hand, **Scotland** the least
- **Wales'** No.9 made half as many kicks as any other team's No.9
- **Wales** No.10 made at least 30% more kicks than any other team's No.10
- Three quarters of all restarts were contestable
- The kicking team regained possession once in every four
- **Italy** had the most successful lineout both on their own throw-in and on their opponents'.
- **Wales** had the most successful scrum on both their own put-in and their opponents' put-in
- **France** conceded the most penalties and free kicks in a game (17) and also the least (4)
- Of penalties awarded at the breakdown, 55% went in favour of the attacking team and 45% went to the defending team
- **Scotland** received the most yellow cards (5); **France** the least (0)

2012 6 NATIONS FINAL STANDINGS & RESULTS

	P	W	D	L	F	A	PD	TF	PTS
 Wales	5	5	0	0	109	58	51	10	10
 England	5	4	0	1	98	71	27	6	8
 Ireland	5	2	1	2	121	94	27	13	5
 France	5	2	1	2	101	86	15	8	5
 Italy	5	1	0	4	53	121	-68	4	2
 Scotland	5	0	0	5	56	108	-52	4	0

P = Played W = Won D = Draw L = Lost F = Point For A = Points Against
 PD = Points difference TF = Tries For PTS = Points

	France	30 - 12	Italy	
	Scotland	6 - 13	England	
	Ireland	21 - 23	Wales	
	Italy	15 - 19	England	
	Wales	27 - 13	Scotland	
	Ireland	42 - 10	Italy	
	England	12 - 19	Wales	
	Scotland	17 - 23	France	
	France	17 - 17	Ireland	
	Wales	24 - 3	Italy	
	Ireland	32 - 14	Scotland	
	France	22 - 24	England	
	Italy	13 - 6	Scotland	
	Wales	16 - 9	France	
	England	30 - 9	Ireland	



This Report is divided into two sections.

Section 1 takes a brief look at constituent game elements in 2012 6 Nations and compares them to 6 Nations in earlier years.

Section 2 comprises a detailed statistical analysis of all matches played in the Championship, including comparatives.

2012 6 NATIONS

The core elements of the 2012 6 Nations showed little change from the 2011 6 Nations as shown in the following comparisons. There were slightly fewer passes, rucks and mauls. All other elements were very similar. These changes are considered in further detail in the more comprehensive analyses which follow in a later section.

Averages per match

	2012 6 Nations	<i>2011 6 Nations</i>	<i>2010 6 Nations</i>	<i>2009 6 Nations</i>	<i>2008 6 Nations</i>	<i>2007 6 Nations</i>
Points	36	<i>39</i>	<i>40</i>	<i>40</i>	<i>40</i>	<i>46</i>
Tries	3.1	<i>3.4</i>	<i>3.2</i>	<i>3.7</i>	<i>3.3</i>	<i>4.3</i>
Penalty Goals	5.1	<i>5.4</i>	<i>5.5</i>	<i>4.9</i>	<i>5.5</i>	<i>5.7</i>
Drop Goals	0.2	<i>0.3</i>	<i>0.7</i>	<i>0.6</i>	<i>0.3</i>	<i>0.3</i>
Ball In Play	48%	<i>49%</i>	<i>48%</i>	<i>49%</i>	<i>50%</i>	<i>46%</i>
Passes	268	<i>297</i>	<i>251</i>	<i>273</i>	<i>259</i>	<i>261</i>
Ruck/Mauls	181	<i>194</i>	<i>158</i>	<i>174</i>	<i>179</i>	<i>167</i>
Kicks	46	<i>46</i>	<i>62</i>	<i>65</i>	<i>57</i>	<i>53</i>
Lineouts	23	<i>24</i>	<i>25</i>	<i>26</i>	<i>28</i>	<i>31</i>
Scrum	14	<i>12</i>	<i>15</i>	<i>15</i>	<i>16</i>	<i>17</i>
Penalties	21	<i>21</i>	<i>22</i>	<i>23</i>	<i>18</i>	<i>21</i>



SECTION 2 – STATISTICAL ANALYSIS & MATCH SUMMARY

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 6 Nations Championship:

	2012 6 Nations	2011 6 Nations	2010 6 Nations	2009 6 Nations
% of points from TRIES	43%	43%	40%	47%
% of points from PENALTY GOALS	43%	41%	42%	37%
% of points from CONVERSIONS	12%	13%	12%	11%
% of points from DROP GOALS	2%	3%	6%	5%
TRIES SCORED BY BACKS	85%	73%	75%	77%
TRIES SCORED BY FORWARDS	13%	25%	25%	23%
PENALTY TRIES	2%	2%	-	-
MATCHES with point margin of 19 or less	12 of 15	14 of 15	12 of 15	11 of 15
CONVERSION SUCCESS RATE	74%	75%	75%	61%
PENALTY GOAL SUCCESS RATE	72%	75%	74%	71%
DROP GOAL SUCCESS RATE	15%	36%	47%	47%
matches won by TEAM SCORING MOST TRIES	12 of 15	8 of 15	11 of 15	12 of 15
matches won by TEAM SCORING LEAST TRIES	1 of 15	2 of 15	2 of 15	1 of 15
% of TRIES FROM LINEOUT POSSESSION	33%	39%	23%	39%
% of TRIES FROM SCRUM POSSESSION	11%	14%	27%	14%
% of TRIES FROM PENALTY/FREE KICKS	15%	10%	6%	2%
% of TRIES FROM TURNOVER/ERROR	26%	16%	13%	18%
% of TRIES FROM OPPONENTS KICKS	9%	18%	29%	25%
% of TRIES FROM RESTARTS	6%	3%	2%	2%
BALL IN PLAY TIME	48% or 38m 12s	49% or 39m 10s	48% or 38m 12s	49% or 39m 32s
% of all PASSES MADE BY BACKS	34%	36%	40%	36%
% of all PASSES MADE BY SCRUM HALF	49%	49%	45%	46%
% of all PASSES MADE BY FORWARDS	17%	15%	15%	18%
% of LINEOUT POSSESSION RETAINED	83%	84%	81%	83%
% of SCRUM POSSESSION RETAINED	85%	81%	84%	90%
% of RUCK/MAUL POSSESSION RETAINED	93%	95%	95%	93%
YELLOW AND RED CARDS	13 and none	10 and none	10 and none	11 and none
REFERENCES TO TMO	12	8	6	17

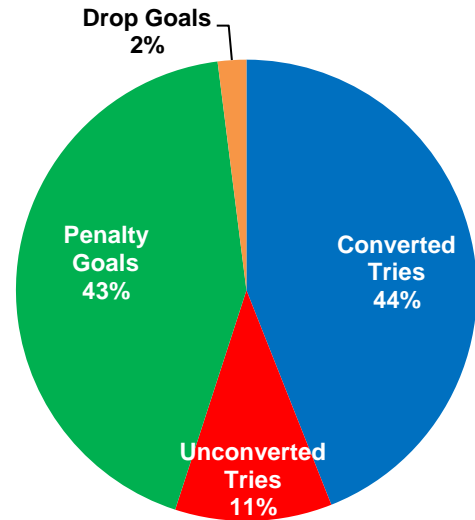
1.0 SCORING

There were 538 points scored in the 15 matches, giving an average of 36 points per game. (6N 2011 – 589, average per game – 39)

	Total	Points	% of points from tries
Converted Tries	34	238	2012 6N 43%
Unconverted Tries	12	60	2011 6N 43%
Penalty Goals	77	231	2010 6N 40%
Drop Goals	3	9	2009 6N 47%
			2008 6N 42%

The points were made up as follows:

- 43% came from TRIES
- 43% came from PENALTY GOALS
- 12% came from CONVERSIONS
- 2% came from DROP GOALS



Scoring Details in 6 Nations

	Av points per game	Av tries per game	Conversion success rate	Av pen goals per game	Try: penalty ratio	Av drop per game
2012 6N	36	3.1	74%	5.1	1 to 1.7	0.2
2011 6N	39	3.4	75%	5.4	1 to 1.6	0.3
2010 6N	40	3.2	75%	5.5	1 to 1.7	0.7
2009 6N	40	3.7	61%	4.9	1 to 1.3	0.6
2008 6N	40	3.3	84%	5.5	1 to 1.7	0.4

1.1 SCORING PROFILES of the modern Game

The following table shows the comparative average-per-game figures for the 5 and 6 Nations Championships played in 1962, 1972, 1982, 1992, 2002 – and compares them with 6 Nations 2012

	Converted Tries	Unconverted Tries	Tries	Penalty Goals	Drop Goals	Conversion Success
6N 2012	2.3	0.8	3.1	5.1	0.2	74%
6N 2002	3.8	1.2	5.0	5.9	0.2	76%
5N 1992	2.3	1.1	3.4	4.4	0.4	68%
5N 1982	1.5	1.1	2.6	5.4	0.8	58%
5N 1972	1.6	1.2	2.8	3.2	0.3	57%
5N 1962	0.8	0.7	1.5	1.2	0.3	53%

1.2 WINNING MARGINS

The winning margins in each of the 15 matches fell into the following ranges:

Points Difference in 2012 6 Nations

Points Difference	No of matches	Cumulative	2011 6 Nations
draw	1		-
1 – 5	3	4 with 5 points or less	4
6 – 10	5	9 with 10 points or less	5
11 – 20	3	12 with 20 points or less	5
21 – 30	2	14 with 30 points or less	-
31 – 40	1	15 with 40 points or less	-
41 - 50	-	with 50 points or less	1

Not surprisingly, points scored and conceded varied throughout the various teams – the average points per team are shown below:

Points for/against per Team

	Points For		Points Against	
	TOTAL	AVERAGE	TOTAL	AVERAGE
England	98	20	71	14
France	101	20	86	17
Wales	109	22	58	11
Ireland	121	24	94	19
Scotland	56	11	108	22
Italy	53	11	121	24

1.3 PENALTY GOALS

There were 77 penalty goals kicked in 2012 – *four less than in 2011*.

	Penalty Goals kicked		Tries Scored	Penalty Goals Scored	Ratio Tries : PGs
2012 6N	77	Ireland	13	12	1 to 0.9
2011 6N	81	Wales	10	15	1 to 1.5
2010 6N	83	Italy	4	7	1 to 1.8
2009 6N	74	France	8	16	1 to 2.0
2008 6N	86	England	7	17	1 to 2.4
		Scotland	4	10	1 to 2.5

1.4 IMPACT OF THE PENALTY GOAL ON MATCH RESULTS

It still remains true that tries win matches. In the 2012 6 Nations, the winning team scored the most tries in 12 of the 15 matches or 80% of matches. In 2011 the figure was 53%, in 2010 and 2009 it was 73% and 80% respectively.

Only one team scored fewer tries than their opponents and won the match (*England's win v Italy*). In the remaining two matches, one was drawn and in the other tries were equal.

2.0 TRY SCORING

The total number of tries, penalty goals and drop goals scored by each country in 2012 was as follows:

		Total Scores					Scoring %	
		Tries	Penalty Goals	Drop Goals			% of points from Tries	% of points from Kicks
	Ireland	13	12	0		Ireland	54%	46%
	Wales	10	15	0		Wales	46%	54%
	France	8	16	1		France	40%	60%
	England	7	17	0		Italy	38%	62%
	Scotland	4	10	0		Scotland	36%	64%
	Italy	4	7	2		England	36%	64%

2.1 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 show how successful each team was in converting possession into tries.

	Ireland
	Wales
	France
	England
	Italy
	Scotland

Total Tries Scored	2012 6 Nations	2011 6 Nations
13	Try scored every 6min 15s	Try scored every 8min 54secs
10	11min 06s	15min 59secs
8	11min 41s	9min 35secs
7	12min 31s	8min 09secs
4	22min 16s	16min 46secs
4	27min 37s	16min 46secs

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.

2.2 RATE OF TRY CONCEDED

Following the above exercise, the converse was looked at, i.e. how effective was each team in restricting tries in relation to the possession that their opponents obtained. The following paragraph measures this by illustrating how successful each team was in preventing their



Wales



England



France



Ireland



Scotland



Italy

Total Tries Conceded	2012 6 Nations	2011 6 Nations
3	Try conceded every 31min 24s	Try conceded every <i>13min 35secs</i>
4	26min 05s	<i>18min 05secs</i>
8	12min 19s	<i>11min 08secs</i>
8	11min 53s	<i>25min 31secs</i>
11	7min 55s	<i>9min 06secs</i>
12	7min 49s	<i>6min 30secs</i>

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.

2.3 PLAYERS AND TRIES

Of the 46 tries scored in the 15 matches:

- Backs** scored 39 tries = **85%** (2011 = 73%)
- Forwards** scored 6 tries = **13%** (2011 = 25%)
- Penalty Tries** scored 1 try = **2%** (2011 = 2%)



Of the 26 tries scored by **Wales** in the last three years only two have been scored by a forward. The breakdown between the six competing teams is shown below:

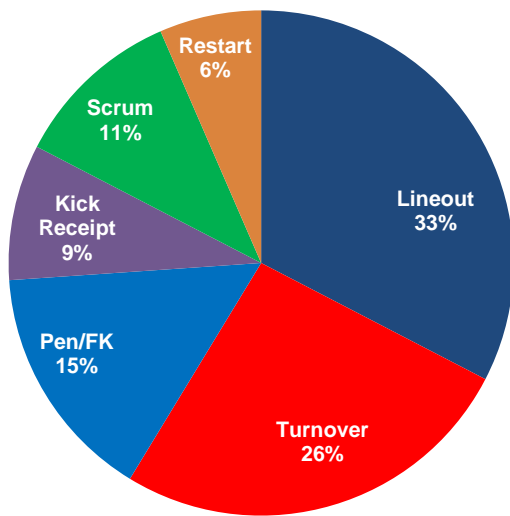
	Tries by Backs 2012 6N	Tries by Forwards 2012 6N	Penalty Tries 2012 6N	Tries by Backs 2011 6N	Tries by Forwards 2011 6N	Penalty Tries 2012 6N
England	5	1	1	10	3	0
Ireland	10	3	0	8	2	0
France	8	0	0	6	3	1
Wales	10	0	0	5	1	0
Italy	3	1	0	4	2	0
Scotland	3	1	0	4	2	0
Total	39	7	0	37	14	0

3.0 TRIES

3.1 SOURCE OF TRIES

There were 46 tries scored in the 2012 6 Nations – five fewer than 2011.

The teams scoring the tries obtained possession of the ball prior to the scoring of the try from a variety of sources. This is shown in the following chart and table:



	2012 6 Nations	2011 6 Nations
Lineout – Own	13	16
Turnover/Handling Error	12	8
Penalty/Free Kick	7	5
Opponents Kick	4	9
Scrum –Own	4	6
Lineout – Opp	2	4
Restart – Opp	2	2
Restart – Own	1	-
Scrum – Opp	1	1
Total	46	51

Analysis 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. In 2012, lineout possession was closely followed by turnovers/errors.

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

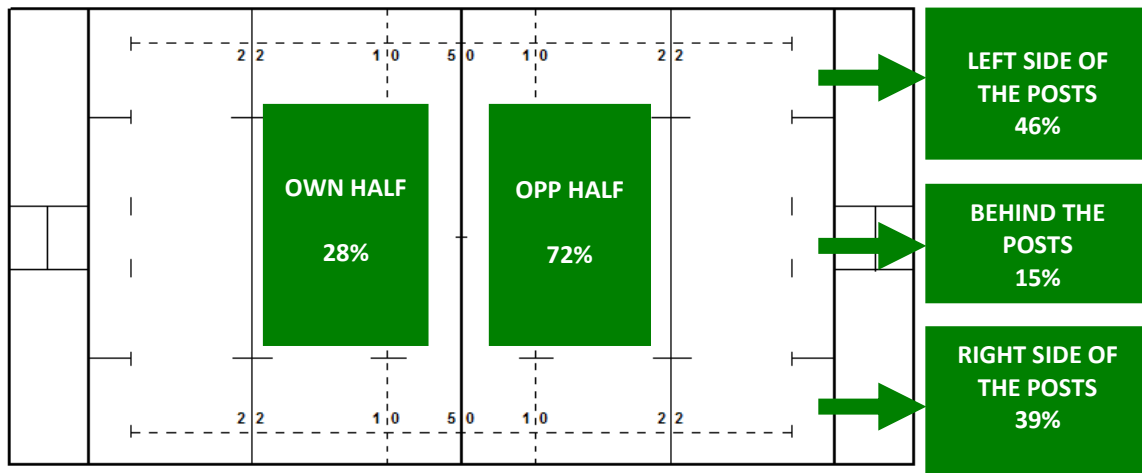
	Lineout	Scrum	Pen/FK	Opp Kick	Turnover	Restart	Total Scored
Ireland	6	1	2	1	3	0	13
Wales	4	1	2	0	3	0	10
France	2	2	1	1	2	0	8
England	0	1	1	4	1	0	7
Scotland	1	0	1	0	2	0	4
Italy	2	0	0	0	1	1	4

The next table shows the source from which their opponent’s tries came:

	Lineout	Scrum	Pen/Fk	Opp Kick	Turnover	Restart	Total Conceded
Wales	2	0	1	0	0	0	3
England	0	1	0	0	2	1	4
Ireland	4	1	2	1	0	0	8
France	0	0	0	2	6	0	8
Scotland	6	2	1	1	1	0	11
Italy	3	1	3	1	3	1	12

3.2 ORIGIN OF TRIES / TRY LOCATIONS






Tries originate from various parts of the pitch. In 2012, almost one in three tries originated from within the scoring teams own half. This was a noticeable change from last year when the ratio was nearer to one in five. Of all the tries scored, 28% originated in the try scoring team’s own half and 72% in the opposition half (39% originated within opp 22m), with 46% of tries were scored on the left hand side the posts (6N 2011 – 45%).



The following table shows the origin of tries scored per team:

	Own Half	Halfway to 10m	10m to 22m	22m to Goal line	Total Scored
Ireland	4	0	3	6	13
Wales	2	2	3	3	10
France	4	1	0	3	8
England	1	2	0	4	7
Scotland	1	1	1	1	4
Italy	1	1	1	1	4

The following table provides the converse to the above, i.e. it shows – for each team – the origin of all tries conceded.

	Opp Half	Halfway to 10m	10m to 22m	22m to Goal line	Total Conceded
 Wales	1	0	0	2	3
 England	2	0	1	1	4
 Ireland	2	0	2	4	8
 France	2	3	3	0	8
 Scotland	1	2	2	6	11
 Italy	5	2	0	5	12

3.3 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.

a) NUMBER OF RUCKS / MAULS IN BUILD UP TO TRIES

The first table below shows the number of rucks and mauls (second phase) that preceded each of the 46 tries scored in the 2012 6 Nations.

The table shows that 64% of tries were preceded by three or fewer second phases (2011 – 70%)

	Number	%	Cumulative %	6 Nations 2011
0	16	35%	35%	15
1 - 3	13	28%	63%	21
4 - 6	6	13%	76%	5
7 - 9	8	17%	93%	6
10+	3	7%	100%	4
Total	46	100%		51

b) NUMBER OF PASSES IN BUILD UP TO TRIES

The next table shows the number of passes that preceded each of the 46 tries scored in the 2012 6 Nations.







The table shows that 52% of tries were preceded by three or fewer passes (2011 – 45%). This was not a figure that was seen consistently throughout all teams. In *Scotland's* case, all four of their tries contained more than three.

	Number	%	Cumulative %	6 Nations 2011
0 pass	7	15%	15%	7
1 - 3	17	37%	52%	16
4 - 6	6	13%	65%	12
7 - 9	8	18%	83%	4
10+	8	17%	100%	12
Total	46	100%		51

3.4 TIMING OF SCORES - TRIES

43% of tries were scored in the first half (2011 – 41%)
 57% of tries were scored in the second half (2011 – 59%)

Ireland and Italy were the only teams to score most of their tries in the first half. The following table shows the number of tries scored and conceded per team per half.







		Tries scored 1 st half	Tries scored 2 nd half	Tries conceded 1 st half	Tries conceded 2 nd half
	Ireland	8	5	3	5
	Wales	2	8	1	2
	France	3	5	6	2
	England	2	5	2	2
	Scotland	2	2	4	7
	Italy	3	1	4	8

3.5 TIMING OF SCORES - PENALTY GOALS

There is a noticeable difference between the time when tries are scored and the time when penalties are kicked. Penalty goals showed a different profile:

55% of penalties were kicked in the first half
 45% of penalties were kicked in the second half.

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

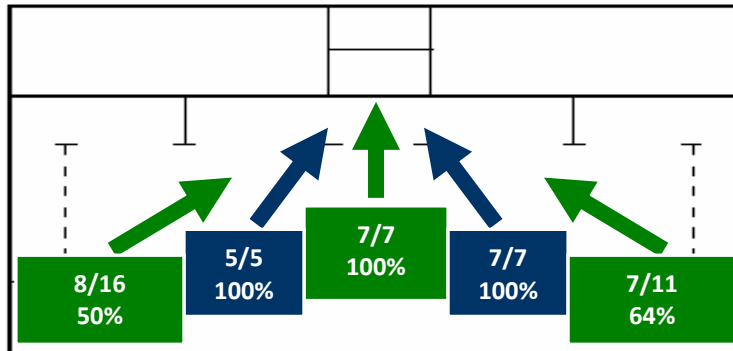
		PGs kicked 1 st half	PGs kicked 2 nd half	PGs conceded 1 st half	PGs conceded 2 nd half
	England	9	8	9	6
	France	8	8	4	5
	Wales	7	8	7	6
	Italy	4	3	8	7
	Scotland	8	2	5	4
	Ireland	6	6	9	7

4.0 KICKS AT GOAL

It has been noted many times in earlier reports that the success rates of kicks at goal have improved noticeably since the Game went professional. In the decades since 1946, conversion rates reflected a running average of 52/53%. These figures are now exceeded comfortably in all major rugby competitions. This level of success was maintained this year when 74% was achieved.

	Kicking success
Conversions	74%
Penalty goals	72%
Drop goals	15%

Overall conversion success rates were as follows:



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

	Penalty Success	Conversion Success	Overall Success %	Drop goal Success
England	81%	86%	82%	0 of 2
Ireland	80%	77%	79%	0 of 3
Scotland	77%	75%	76%	0 of 0
Wales	71%	70%	71%	0 of 2
France	73%	63%	70%	1 of 7
Italy	47%	75%	53%	2 of 6



5.0 BALL IN PLAY & POSSESSION

In percentage terms, 2012 6 Nations matches produced an average ball in play time of **38 min 12 secs – or 48%** (2011 = 49% or 39 mins 10 secs).

Six of the 15 matches had ball in play of 50% or more.

The highest ball in play in any match was **58% or 46 mins 02 secs (Wales v Scotland)** – the lowest was **39% or 31 mins 22 secs (England v Ireland)**.

The following table shows the ball in play times for each match and how much possession was obtained by each team in the 15 matches. There are some noticeable differences.

MATCH	BALL IN PLAY	WAL 	ENG 	FRA 	IRE 	SCO 	ITA
France v Italy	48%			17m 12s			20m 48s
Scotland v England	53%		13m 39s			28m 53s	
Ireland v Wales	51%	23m 47s			17m 10s		
Italy v England	49%		20m 37s				18m 39s
Wales v Scotland	58%	18m 00s				28m 02s	
Ireland v Italy	44%				20m 59s		14m 25s
England v Wales	53%	21m 47s	20m 37s				
Scotland v France	52%			18m 28s		23m 28s	
France v Ireland	45%			21m 54s	14m 05s		
Wales v Italy	45%	22m 01s					14m 06s
Ireland v Scotland	41%				15m 40s	16m 54s	
England v France	45%		14m 42s	21m 41s			
Italy v Scotland	43%					13m 10s	21m 07s
Wales v France	50%	25m 28s		14m 16s			
England v Ireland	39%		18m 01s		13m 21s		
		111m 03s	87m 36s	93m 31s	81m 15s	110m 27s	89m 05s

The following table shows the average possession time obtained by each of the six teams.

As a formula for winning, having the most possession is no guarantee of success. In 2012, the winning team had the most possession in only eight matches of the 15 – the same as last year.



Wales
Scotland
France
Italy
England
Ireland

2012 6 Nations	2011 6 Nations
22 min 12 secs	19 min 10 secs
22 min 05 secs	20 min 07 secs
18 min 42 secs	19 min 10 secs
17 min 49 secs	20 min 07 secs
17 min 31 secs	21 min 11 secs
16 min 15 secs	17 min 47 secs

6.0 ACTIVITY CYCLES

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

The following paragraphs show the number of rucks/mauls, passes and kicks made in the 2012 6 Nations compared with the 2011 6 Nations.

	2012 6 Nations	2011 6 Nations
Rucks/Mauls	181	194
Passes	268	297
Kicks	48	46

6.1 PASSING

Matches, on average, contained **268** passes (2011 - 297)

The most in any match was **380 (Wales v Scotland)**, the fewest was **164 (England v Ireland)**. The most by any team in a match was **233**, the fewest **61**.

The attached table shows the average passes per match per team.



	2012 6 Nations	2011 6 Nations
Scotland	175	164
Wales	154	127
France	126	142
Italy	125	148
Ireland	112	143
England	111	167

Again, there were noticeable differences between the six teams with **Scotland** making almost 60% more passes than **England**. Such differences are often accounted for however by one team having more possession than the other. When an adjustment is made to take account of this, then the above table can change. This next table shows the average number of passes per minute's possession, i.e. the rate of passing.

Rate of Passing per Team – i.e. passes per minute's possession

	2012 6 Nations	2011 6 Nations
Scotland	7.9	8.1
Italy	7.0	7.3
Wales	6.9	6.6
Ireland	6.9	8.0
France	6.7	7.4
England	6.3	7.9



Under this method of calculation, it shows that while **Scotland** made some 60% more passes than **England**, their passing rate was only 25% higher.

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 match as shown above together with the most in a match and the fewest in a match:

	Average 6N 2012	Average 6N 2011	Most 6N 2012	Most 6N 2011	Least 6N 2012	Least 6N 2011
England	111	167	156	231	61	128
France	126	142	174	158	80	113
Ireland	112	143	159	182	75	110
Wales	154	127	153	174	92	93
Scotland	175	164	233	187	85	115
Italy	125	148	176	177	115	120

6.2 PLAYER PASSING

When the almost 4,000 passes made in the 2012 6 Nations were allocated into three groups (passes made by forwards, passes made by scrum half and passes made by backs), the results were as shown in the attached table:

	2012 6 Nations	2011 6 Nations
Passing % by forwards	17%	15%
Passing % by scrum half	49%	49%
Passing % by backs	34%	36%
	100%	100%

What the attached table shows are the passes made by the three groups of players. It simply shows how active they were in passing the ball.

	Passes Forwards	Passes Scrum half	Passes Backs
Scotland	170	396	311
France	124	283	222
Wales	113	404	254
Italy	97	321	206
Ireland	86	292	184
England	71	283	201

The next table takes this further. It shows the proportion of a team's passes made by each group. Where certain teams 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:

	% by Forwards	% by Scrum Half	% by Backs
France	20%	45%	35%
Scotland	19%	45%	36%
Italy	16%	51%	33%
Wales	15%	52%	33%
Ireland	15%	52%	33%
England	13%	51%	36%

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 country's 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 one to five – i.e. one pass for every five possessions. Again, the table shows major differences between the countries. **England's** forwards were the least likely to pass the ball, **Scotland's** the most likely.

	2012 6 Nations	2011 6 Nations
Scotland	1 in 2.9	1 in 3.0
France	1 in 3.2	1 in 3.6
Wales	1 in 3.8	1 in 4.4
Italy	1 in 3.8	1 in 5.0
Ireland	1 in 4.0	1 in 4.3
England	1 in 4.4	1 in 3.2

This difference between the forwards of each country is even more graphically illustrated when the forwards are broken down into the three groups – (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 six times, it means they passed it on 30% of occasions. Both **Scotland's** second row and back row were the most likely units to pass the ball.

% of times ball passed by Front Row

	2012 6 Nations	2011 6 Nations
Wales	38%	21%
France	29%	22%
England	22%	21%
Scotland	21%	20%
Ireland	17%	24%
Italy	16%	13%

% of times ball passed by 2nd row

	2012 6 Nations	2011 6 Nations
Scotland	31%	40%
France	21%	21%
Italy	21%	15%
Ireland	18%	26%
Wales	14%	24%
England	11%	28%







% of times ball passed by Back Row

	2012 6 Nations	2011 6 Nations
Scotland	42%	38%
France	38%	34%
Ireland	34%	21%
Italy	31%	28%
England	28%	37%
Wales	27%	23%

Number of times ball passed by Centres

Additional analysis of passes made by backs show noticeable differences between the passes made by the numbers 12 and 13 of each country. The following table illustrates these differences:

In each of the last two years, **Wales** centres have passed the ball the least.

	2012 6 Nations	2011 6 Nations
 Scotland	67	39
 Ireland	51	69
 France	51	77
 England	50	59
 Italy	47	43
 Wales	40	27

6.3 PASSING MOVEMENTS

Passes are grouped into passing movements – i.e. one pass movement, two pass movements and so on. The data shows that some 84% 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 six countries fell within 79% and 88%.









6.4 RUCKS/MAULS (2ND PHASE)

The average number per match was **181**. (2011 – 193)







The most in any match was **239**, the fewest was **125**.
The most by any team in a match was **154**, the least, **53**.

The table indicates the total number of rucks/mauls created by each team in the competition expressed as average per match.

	2012 6 Nations	2011 6 Nations
 Wales	109	95
 Scotland	108	97
 Italy	86	108
 France	85	90
 Ireland	81	88
 England	74	103

R
Rate of Rucks/Mauls per Team

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 minute's possession obtained by a team and shows, for example, that Ireland's rate of rucking exceeded that of the other teams.

	2012 6 Nations	2011 6 Nations
 Ireland	5.0	4.9
 Wales	4.9	5.0
 Scotland	4.9	4.8
 Italy	4.8	5.4
 France	4.5	4.7
 England	4.4	4.8

6.5 BREAKDOWN RETENTION

At the breakdown, the team taking in the ball retained possession by either winning the ball or being awarded a penalty on 93% of occasions. The percentage success rate for each team was very similar and is shown in the attached table:



Ireland
Scotland
Italy
France
Wales
England

	2012 6 Nations	2011 6 Nations
Ireland	95%	98%
Scotland	94%	95%
Italy	93%	95%
France	93%	95%
Wales	92%	95%
England	92%	94%

6.6 KICKING

The average number per match was **46** (2011 – 46)

The most open play kicks in a match was **70**, the fewest **27**. The most by a team was **37**, the least **12**.

Average & Rate of Kicking per Team

The average number of kicks per team per match and the rate of kicks per team per minute's possession are shown in the table:



England
Wales
France
Italy
Ireland
Scotland

	2012 6 Nations Average	2011 6 Nations Average	2012 6 Nations Rate	2011 6 Nations Rate
England	28	20	1.6	1.1
Wales	26	27	1.2	1.4
France	24	20	1.3	0.9
Italy	24	16	1.4	0.9
Ireland	22	26	1.4	1.4
Scotland	19	26	0.8	1.3

6.7 PLAYER KICKING

About **75%** of all kicks are made by just three players – numbers 9, 10 and 15. There can be major differences however between the way that teams utilise their kickers. The following table shows the division of kicks between the three players in each of the six teams:



Wales
Italy
France
Scotland
England
Ireland

	Kicks Scrum half	Kicks Fly Half	Kicks Full Back
Wales	14%	66%	20%
Italy	28%	53%	19%
France	31%	51%	18%
Scotland	36%	45%	19%
England	34%	44%	22%
Ireland	35%	44%	21%

6.8 ACTIVITY CYCLES - SUMMARY

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

Average per match and Rate per minute possession

		Rucks/Mauls		Passes		Kicks	
		Average	Rate	Average	Rate	Average	Rate
	Wales	109	4.9	154	6.9	26	1.2
	England	74	4.4	111	6.3	28	1.6
	France	85	4.5	126	6.7	24	1.3
	Ireland	81	5.0	112	6.9	22	1.4
	Italy	86	4.8	125	7.0	24	1.4
	Scotland	108	4.9	175	7.9	19	0.8

7.0 RESTARTS

Of 50m restarts, **28%** were not contestable kicks, **72%** were contestable kicks. This continued the trend of 2011 where the figures suggest that teams are deciding to try and regain possession at restarts more than in previous years.

When 50m restarts were contested, the kicking team regained possession on one in four occasions. Last year it was nearer to one in six.

Success rate and restart type varied between the six teams. The most effective team in regaining own contestable restarts and receiving opposition contestable restarts was **Italy**. Only two teams favoured kicking long – **Wales** and **England** – which resulted in only 43% of their restarts being contestable. The table shows the success per team on own and opposition restarts and the type of restart kicked by each team.

		Own Restarts				Opp Restarts				Own Restarts	
		Success				Success				Contestable	Not Contestable
	Italy	10	of 23		Italy	14	of 17		Ireland	86%	14%
	Ireland	8	of 31		England	19	of 24		Scotland	84%	16%
	Scotland	7	of 27		Wales	23	of 28		Italy	70%	30%
	France	4	of 20		Ireland	15	of 20		France	67%	33%
	England	1	of 13		Scotland	8	of 12		England	43%	57%
	Wales	0	of 12		France	17	of 25		Wales	43%	57%

8.0 LINEOUTS

The average number of lineouts per match was 23 (2011– 24)

The most lineouts in a match was 30 – the least 17

	2012 6N	2011 6N	2010 6N	2009 6N	2008 6N	2007 6N
Avg per match	23	24	25	26	28	31
% Competed	60%	58%	61%	65%	60%	59%
Possession retained	83%	84%	81%	83%	83%	85%

Italy were the most successful on both their own throw and opposition throw, winning twice as many steals as their opponents.

Own Lineouts				Opp Lineouts			
	Success	Opp Steals	Not straight Knock-on / Pen / FK		Success	Own Steals	Not straight Knock-on / Pen / FK
Italy	85%	8	1	Italy	24%	14	1
England	84%	6	3	Scotland	21%	9	3
Wales	83%	11	1	France	18%	8	3
Scotland	83%	7	3	Ireland	14%	7	1
France	81%	10	0	England	14%	6	2
Ireland	78%	6	3	Wales	11%	4	1

9.0 SCRUMS

The average number of scrums per match was 14 (2011 – 12). This amounts to an average of seven scrums per team per match.

The most scrums in a match was 22 – the least six.

	2012 6N	2011 6N	2010 6N	2009 6N	2008 6N	2007 6N
Avg per match	14	12	15	15	16	17
Penalties/Free Kicks	5.0	5.3	6.0	4.6	3.1	3.5
Possession retained	85%	81%	84%	90%	92%	92%

Scrum success on own feed and opposition feed are shown below. **Wales** was the most successful on both own put-ins and opposition put-ins.

		Own Scrums				Opp Scrums	
		Success	Opp Tightheads			Success	Own Tightheads
	Wales	96%	0		Wales	24%	0
	France	90%	0		France	23%	2
	Scotland	89%	1		England	15%	3
	England	87%	3		Ireland	13%	1
	Ireland	78%	1		Scotland	13%	0
	Italy	70%	2		Italy	9%	1

In total there were seven tightheads in 204 scrums (2011 – 7 in 186 scrums).

10.0 PENALTIES & FREE KICKS

In the 2012 6 Nations, the average number of penalties and free kicks awarded in a match was **21**. (2011 – 21)

There was a wide spread between the matches. The most awarded in a single match was **27**, the least **15**. The most conceded by a team in a match was **17 (France)**, the least **four (France)**

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, for example, that in **France's** case, they were awarded almost 30% more penalties than their opponents.

		Pen/FK For	Pen/FK Against	% Pen/FK For	% Pen/FK Against
	France	53	42	56%	44%
	Wales	61	55	53%	47%
	Scotland	58	56	51%	49%
	England	52	50	51%	49%
	Italy	53	57	48%	52%
	Ireland	42	59	42%	58%

10.1 CATEGORIES OF OFFENCES PENALISED

The following table groups the penalties awarded into nine categories:

% of Offences Penalised	
	%
Ruck/Tackle	51%
Scrum	25%
Offside	10%
Dangerous Tackle	4%
Other	3%
Obstruction	5%
Lineout	1%
Maul	1%
Foul Play	<1

Of penalties awarded at the ruck, 55% were in favour of the team in possession, 45% were in favour of the defending team.

10.2 NORTHERN AND SOUTHERN HEMISPHERE REFEREES

Of the 15 matches, 11 were refereed by northern hemisphere referees and four by southern hemisphere referees. The following table shows the average number of penalties and free kicks awarded by the two groups.

	Northern Hemisphere	Southern Hemisphere
Av no of penalties/free kicks	20	26

11.0 CARDS

The following paragraphs examine the circumstances and effects of the issue of red and yellow cards during the 2012 6 Nations

There were **no** red cards issued during the 2012 6 Nations (2011 – none)

There were **13** yellow cards issued during the Championship. (2011 – 10). They were issued against the following teams:



Scotland



Wales



Italy



Ireland



England



France

No. of Cards	Reasons
5	Obstruction x 2, Ruck x 2, Offside x 1
4	Dangerous Tackle x 2, Ruck x 2
2	Maul Collapse x 1, Ruck x 1
1	Dangerous Tackle x 1
1	Deliberate Knock-on x 1
0	-



Of the 15 matches, there were eight which contained at least one yellow card as shown in the following table, meaning seven (or 47%) of all matches did not contain a single yellow card.

The most yellow cards in one match was three – (*Italy v Scotland, Wales v Scotland*)

Match	Referee	No of cards
Italy v Scotland	Rolland	3
Wales v Scotland	Poite	3
Ireland v Wales	Barnes	2
England v France	Rolland	1
Ireland v Scotland	Pollock	1
Wales v Italy	Clancy	1
England v Wales	Walsh	1
France v Italy	Owens	1

During the 13 sin bin periods, the team with 15 players received no points benefit on nine occasions. On only one occasion did the points scored in the sin bin period by the team with 15 players account for the final points margin between the two teams.

12.0 TMO

In the 2012 6 Nations, there were 12 references to the TMO (*2011 – 8*)

As a result of the 12 references, seven tries were awarded (*2011 – 6 awarded*)

The average length was 1 min 21 secs, with the shortest reference taking 40 secs and the longest taking 2 mins 50 secs.