Year 8 Maths Group Investigation

Rebuilding a State of Origin Team

Scenario:

The State of Origin is a major part of the NRL calendar and one of the most watched Australian sporting events every year with over 4 million viewers! The teams are made up of the best NRL players from NSW and QLD. Each year these two teams go head to head in a tough three game series.

Pride is at stake as both teams carry the expectations and hopes of an entire state into each series. This brutal exchange has been played since 1980 and remains an honoured tradition for all selected players.

Each year both state teams go through some changes, striving to find that winning edge over their rival. In every new series each year there are retirements, injuries, team commitments, player performance and coaching staff changes that impact on team that is selected to represent the respective state teams.

This is where you come in! Traditionally, selectors have picked players that have done the job for their state in the past, using loyalty as a major factor in player selection. This theory can be unreliable and problematic. Statistics provide an accurate measure for selection of players and selectors are now looking more closely at this area of the game.

Selectors are looking for players they may have missed. Can you help selectors make more informed selection decisions?

Task Outline:

Based on your extensive knowledge within mathematics, select the best possible players for one of the positional areas within the State of Origin team. Use the data and statistics from the last entire season from either QLD or NSW. Compare each of these players with the Game 3 State of Origin squad. Your opinions and preferences of players and teams must be pushed aside as your knowledge of statistics becomes the determiner of all selections in each position. Which state team will you rebuild?

Year 8 Maths Group Investigation

Rebuilding a State of Origin Team

Investigation Question:

Can you create the statistically strongest Playmakers, Forwards or Backline pack to form the next State of Origin team?

Task:

Use data and statistics to rebuild the last New South Wales or Queensland State of Origin Playmakers, Forwards or Backline pack. Your task is to create the statistically strongest pack from all eligible players for their respective states.

Playmakers	Forwards	Backline
• Half back • Five-eighth • Dummy half/Hooker	• Front Row/Prop • Front Row/Prop • Second Row • Second Row • Lock	• Winger 1 • Winger 2 • Centre • Centre • Fullback

- Players must be selected based on statistics that are important to their position they play in.
- You need to include **comparative graphs from excel**, **images and text** in your response.
- Player selection and justification: Coaches form strong opinions on certain players based on past service for their state. Evaluate their existing position in their team and let the data decide whether they deserve to keep their spot in the team or be replaced by a statistically stronger player from their state.
- Compare last year's team side with the potential new players vying for selection. Use comparative data to support your selection choices.

Tasks include:

- Task 1: Statistical Sampling
- Task 2: Player Comparison task
- Task 3: Team Selection and Justification task
- Task 4: Statistical comparison between the last origin team and your selected team
- Task 5: Mean Median, Mode and Range – Optional Task
- Task 6: Effect of Outliers on Player Statistics – Optional Task
- Student evaluation task

Task 1:

Statistical Sampling

Comparing and ranking player statistics can be a really confusing as there are over 500 players in the NRL and that is not even taking into account the rookies that have entered the competition this year.

Using a census for calculating mean, medians and the mode of data could be very time consuming. Statistical sampling on the other hand allows us to use partial amounts of the entire player population to identify trends in the data. Using only 20 data sets instead of 500 can really save us some time.

Part A:

Your task is to design and implement a method to retrieve a **statistical sample** of players in one position of your chosen positional area: Playmakers, Forwards or Backline. Utilising this statistical sample, calculate the **mean** of the most important statistic so players can be easily identified as high performers**.** The sample needs to be 20 players.

The **'Important statistic'** column of **appendix 2** for each player position will identify what data will need to have statistical sampling applied to it. Once the mean is identified for each position it will be far easier to identify which players sit above the average and could be potential 'State of Origin' players.

Example:

Position	Positional Numbers	Physical characteristics	Role in Rugby League side	Important Statistics
Fullback	1	These players are usually among the tallest on the field. Most players are under 95kg as they do a lot of running	Defensively, is the last line, standing behind the rest of his teammates and utilised for returning oppositions kicks in general play. In attack, displays a good passing ability and speed. Covers all areas of the field as support player.	• Runs • Try Assists • All Run Metres

Runs made in a game is considered the most important statistic for a fullback

Part B:

Utilising the statistical sample from Part A, calculate the median of one position. Explain why the median figure is higher or lower than the mean from Part A? **Formulate a statement.**

Part C:

Utilising the statistical sample from Part A, calculate the mode of one position. Is the mode for that position higher or lower than the mean from Part A? **Formulate a statement.**

Part D:

Select an alternative position from your rugby league side and using your method to retrieve a statistical sample as per Part A, calculate the **range** of the important statistical sample for this position. To allow for comparison, calculate the range for the statistical sample from Part A? Compare the range of this data sample to the data sample in Part A? **Explain why there are differences in the range.**

Task 2:

Player Comparison

Task:

- Use excel to compare statistical data *Example: tackle average*
- Complete a statement explaining the reason for each player selection based on statistics

Compare and rank the top 4 statistically strongest athletes for each position in your rebuilt 'State of Origin Playmaker, Forwards or Backline pack'. It is very important to ensure each player is eligible for their respective States, QLD or NSW.

Task Information:

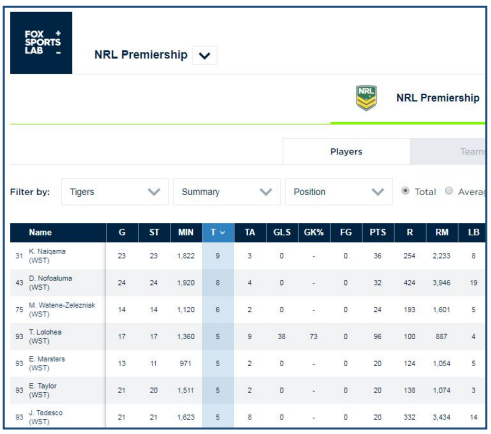
Collect statistical data based on the **'Important Statistics'** column using a variety of websites.

Utilising this data, create graphs that show comparison between two of the four statistically highest players for every position in your team.

The statistics that you measure as important will change based on the position you are comparing.

Background Information:

When comparing statistics, a **winger's important statistics** would include tries, line breaks, tackle breaks and possibly errors. Scoring tries is amongst a winger's roles in a team so that is an important statistic.



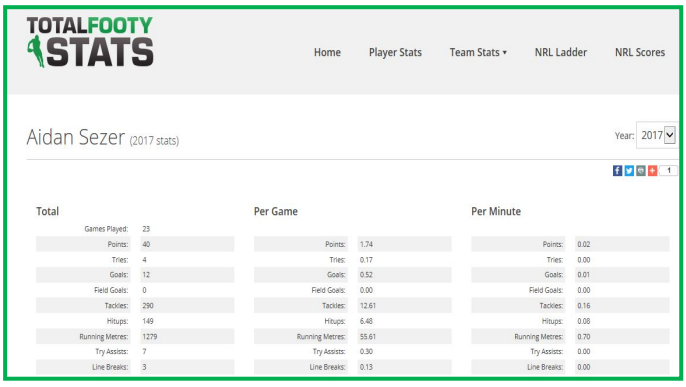
A **half back's important statistics** would include try assists, line breaks, kick metres, offloads and possibly field goals. They're role is to help the team score tries so they need high assisting data.

It is vital to understand that every player selection depends on what statistic is placed as the most important for each specific position, there is always more than one important measureable statistic.

Does a front rower's total metres statistic rate higher than their tackles statistic? This is the choice a selector must make!

This variation in statistical choice is why every team created is likely to be unique.

For a complete list of all 'Important position specific statistics' see ***appendix 2****.*



Task 2:

Player Comparison Exemplar:

Utilise the NRL's own website, Fox Sports and any other useful website to locate data collected and the 'important statistics' to compare the top 4 players in each position. Ensure at least one of the players in each position is from the last Origin series squad. **Check the eligibility table or online to ensure your chosen player is from NSW or QLD**. This table is looking at **mean** values for the last season.

The example below compares Dummy halves.

Dummy Half **(All NSW players)**	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1: **Tackles**	35.6 – 2nd	39.12 –1st	31.08- 4th	33.16 – 3rd
Statistic 2: **All Run Metres**	50.68m – 2nd	32.92m - 4th	52.48m - 1st	43.92m – 3rd
Statistic 3: **Total kicks**	207m - 1st	131m – 3rd	47- 4th	178 – 2nd

Selection Statement Exemplar:

In the Dummy Half position, Player 1 is statistically the best player and would be likely to be the player selected in the representative team. Players 2 and 3 have strong areas but are let down in at least one statistic whilst Player 4 is consistently strong across each statistic without leading any.

If a second player was needed from this group, it is a good idea to identify what they bring to the team compared to the first selection.

Player 2 is a very strong tackler with 88 more tackles than any other player and would be beneficial to the team for this reason, they are not a running player so that needs to be considered when looking at other positions. If Player one is off the field and player 2 replaced them, you could expect that player to come on and help the team by making many tackles but they are unlikely to have a strong running game.

If Player 3 was selected, you would expect a strong running game similar to Player one. This would be that players purpose in the team as their tackling ability and kicking are below all other player choices in that position. Kicking responsibilities would have to go to another player already on the field which is not always ideal in a rugby league side.

A selector may go for Player 4 as they are consistent across all areas, and the team would not greatly suffer in any one area of the game. However, this player would be unlikely to change the tempo of the game for their team which is often what reserves are valued for.

These are the decisions selectors have to make when it comes to data and statistics. This is the reason every team has slightly different needs based on other player's skills within the team already.

Task 2:

Playmakers Player Comparison

Utilise the NRL's website, Fox Sports and any other useful website to locate data collected and any 'important statistics' to compare the top 4 players in each Rugby League position for your chosen State playmakers, forwards or backline pack. This table is looking at mean values for the last season.

One blank row has been included just in case the first 3 statistics do not reveal an obvious choice in player. Utilise the last row to place in one more statistic to provide a larger statistical picture on the players.

Half Back	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
5/8	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
Dummy Half	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				

Task 2:

Backs Player Comparison:

Utilise the NRL's website, Fox Sports and any other useful website to locate data collected and any 'important statistics' to compare the top 4 players in each Rugby League position for your chosen State team. This table is looking at mean values for the last season.

Centres *Select two*	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
Wingers *Select two*	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
Fullback	Player 1	Player 2	Player 3	Player 4
Statistic 1:				
Statistic 2:				
Statistic 3:				

Task 2:

Forwards Player Comparison

Utilise the NRL's website, Fox Sports and any other useful website to locate data collected and any 'important statistics' to compare the top 4 players in each Rugby League position for your chosen State team. This table is looking at mean values for the last season.

Lock	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
Front Row Forwards *Select two*	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				
Second Row Forwards *Select two*	**Player 1:**	**Player 2:**	**Player 3:**	**Player 4:**
Statistic 1:				
Statistic 2:				
Statistic 3:				

Task 3:

Player Data Representations

Winning in sports has always been the ultimate goal of elite teams. Decision making around player selection and recruitment traditionally relied heavily on instincts, beliefs, experience, and gut feeling. Times have changed, the rise of analytical investigation of player performance and the widespread use of GPS and live body function tracking, coaches have more insight and ability to make informed decisions than ever before. Modern elite sporting teams are always striving for an edge over their fellow teams, data and statistics are becoming an essential tool for improving their performance and the all-important win ratio.

Task: Compare last series players selected to play for their state side with the statistically strongest player eligible for that state you have identified in each position. Create a bar graph comparing last series player statistics with your new player selection in each position.

Example: On the following page a comparison has been made between last year's QLD Lock Forward, 'Josh McGuire' and potential Lock Forward selection, Jai Arrow.

Jai Arrow plays in the same position for his club team, the Gold Coast Titans, and his QLD eligibility make him a great comparison for the Lock Forward position moving into this year.

The statistics important for the Lock forwards include:

- Hit Ups
- All Run Metres
- Tackles

VS.

Task 3: Player Data

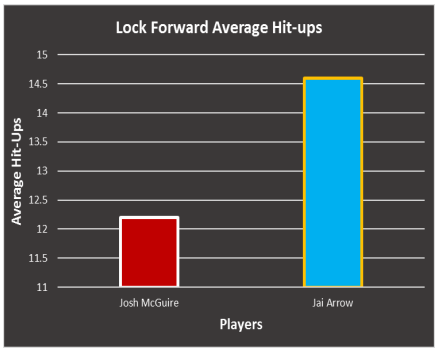
Representations- Exemplar

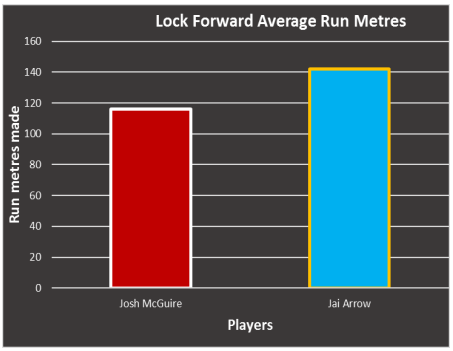
The data for each statistic from these players has been inputted into an Excel program. Graph creation functions have then allowed the data to be displayed in suitable bar graphs. This visual representation assists in displaying player's strengths and weaknesses for selection consideration.

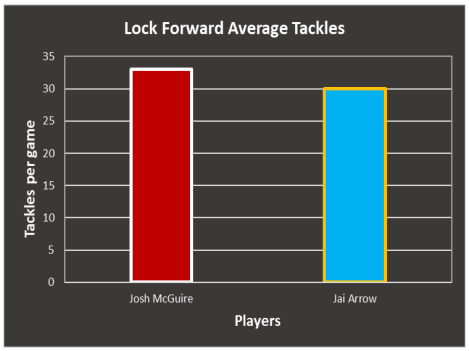
Data Set:

Players	**Josh McGuire:** **2019 Lock Forward** **Queensland State of Origin**	**Jai Arrow:** **Gold Coast Titans**
Average Hit Ups	12.2	14.6
Average Run Metres	116m	142m
Average Tackles	33	30

Graphs:







Justification:

From the data it is clear to see that Jai Arrow has better statistics in these areas and as such warrant's selection consideration for the position of Lock in the next QLD Maroons squad. On average, he is making 2.4 more hit-ups than Josh McGuire. This is backed then also followed by an average of 26 more run metres in each game as well. Both players have high average tackle counts but Josh is slightly better at 33 tackles per game compared to Jai's 30. More data may provide a bigger picture of these two players strengths and weaknesses. These statistics show that it is important to consider Jai as a potential replacement for the Lock Forward position for the Queensland State of Origin selectors in future QLD sides.

Task 4:

Rebuilt Team Selection

Using the statistics gathered from previous tasks, select the player that is statistically the better selection between the last series of State of origin squad and your selection. Ensure your 'Statistical justification' discusses the strengths in data and any possible weaknesses.

Backline State Team: _____

Position	Player	Justification
Fullback		
Winger		
Winger		
Centre		

Task 4:

Rebuilt Team Selection

Using the statistics gathered from previous tasks, select the player that statistically is the better selection between the existing State of origin squad and your selection. Ensure your 'Statistical justification' discusses the strengths in data and any possible weaknesses.

Playmakers State Team: _____

Position	Player	Justification
5/8		
Half Back		
Dummy Half		

Task 4:

Rebuilt Team Selection

Using the statistics gathered from previous tasks, select the player that statistically is the better selection between the existing State of origin squad and your selection. Ensure your 'Statistical justification' discusses the strengths in data and any possible weaknesses.

Forwards State Team: _____

Position	Player	Statistical Justification
Second Row Forward		
Second Row Forward		
Lock Forward		
Front Row Forward		
Front Row Forward		

Task 5:

The Effect of Outliers on Player Statistics

Player performance and welfare are very important to teams and coaching staff. The extreme physical demands of these games can affect player performances are below average when they join their club team the following round.

Round	Team	TK
1	Broncos	34
2	Broncos	45
3	Broncos	41
4	Broncos	38
5	Broncos	39
6	Broncos	27
7	Broncos	45
8	Broncos	29
9	Broncos	43
10	Broncos	35
11	Broncos	36
13	Broncos	30
14	Broncos	28
16	Broncos	26
17	Broncos	6
20	Broncos	13
21	Broncos	32
22	Broncos	37
23	Broncos	23
24	Broncos	46
25	Broncos	27
Averages		32.38

Information gathered from Total Footy Stats.com

The outliers for Josh McGuire are found in rounds 17 and 20. Without these two figures removed, his average during the season for tackles made in a game would increase to 34.79.

These rounds correlate exactly with Josh's returns from State of Origin games 2 and 3. His club would find this information very important as it can allow them to manage player selection. Josh McGuire may play less minutes or even skip a round to manage his exhaustion.

Task: Identify any obvious outliers from your selected State of Origin side for two players.

Once identified, re-calculate the new mean of the tackle counts for the season without outliers. Formulate a statement of where in the season outliers within player statistics have affected performance and data. Ensure links are made to Origin games played within your statement.

Origin Fixtures:

Game One: Round 13, Game 2: Round 16, Game 3: Round 19

Appendix 1: Rugby League Game Description

Rugby League is an international game played by men and women in more than 70 nations. The National Rugby League competition is made up of 16 teams based here in Australia and New Zealand. There are various representative games based both here and internationally every year.

One of the highlights of the season is the State of Origin Series which is a match between Queensland and New South Wales. Players from each team are selected based on their outstanding performances for their NRL club. It remains one of the highest rating events on Australian television due largely to the passion and skill of each team.

Rugby League is a full contact sport played by two teams of thirteen players on a rectangular grass field. The objective in rugby league is to carry or kick the ball towards the opposing team's goal line where 4 points are scored by grounding the ball; this is called a try. After scoring a try, the team is allowed the chance to try at goal with a conversion – a kick for a further 2 points. The opposing team will attempt to stop the attacking side gaining points by preventing their progress up the field by tackling the player carrying the ball.

Each team of 17 players will attempt to score more points through tries, goals and field goals (also known as drop goals) than the opposition within the 80 minutes of play.

Tackling is a key component of rugby league play. Only the player holding the football may be tackled. A tackle is completed when that player's progress is halted, or he or she is put to ground. An attacking team gets a maximum of six tackles to progress up the field before possession is changed over.

Ball control is also important in rugby league, as a fumble of the ball on the ground forces a handover, unless the ball is fumbled backwards. The ball can also be turned over by going over the sideline.

A player with the ball ensure that when they pass the ball it travels backwards. Team mates then attempt catch it without fumbling it and then it is their turn to attempt to gain field position. Passing the ball allows team to avoid being tackled with the ball and halting their forward momentum.

To ensure that both teams follow the rules, a referee follows the play and ensures the rules are enforced. A penalty results in the opposition receiving the ball in better field position or alternatively they can kick for goal in an attempt to earn 2 points.

The winner of this game is the team that has the most points at the end of the 80 minutes.

Appendix 2:

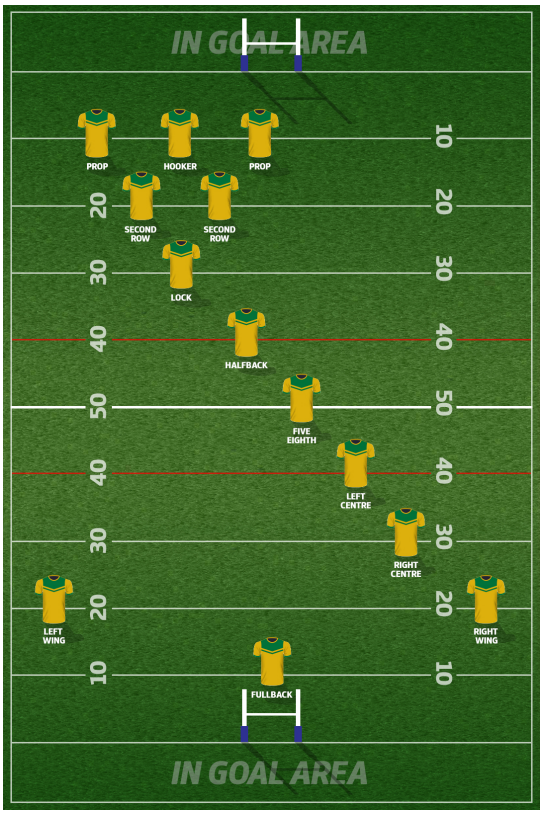
Positional Explanation

When selecting players for a rugby league team it is important to understand the importance of all positions and what each player is responsible for.

Forwards are considered a team's go forward and are responsible for working the ball forward and getting through the bulk of defence. Forward positions include the dummy half, front row forwards (prop), second row forwards, lock forwards and often take up most of the 4 reserve spots on the bench.

The backs are considered a rugby league team's speedsters and try scorers. Positions of the backs include the fullback, wingers and centres.

If forwards are the engine room and the backs are the speedsters, then the halves are the play makers, in play kickers and leaders on the field. Their task is to steer the team around the park and set up the other players so they can perform their roles.



Positions required:

- *Wingers – two required*
- *Centres – two required*
- *Halfback and 5/8 – one of each required*
- *Dummy Half – one required*
- *Full back –one required*
- *Lock – forward – one required*
- *Second rowers – forward – two required*
- *Prop forwards – two required*
- *Reserves bench should include 3 extra forwards and one player who can play in many positions including the backs – four required in total*

Appendix 2:

Positional Explanations

Position	Positional Numbers	Physical characteristics	Role in Rugby League side	Important Statistics
Fullback	1	These players are usually among the tallest on the field. Most players are under 95kg as they do a lot of running	Defensively they are the last line of defence. Utilised for returning oppositions kicks in general play. In attack, displays a good passing ability and speed. Covers all areas of the field as support player.	• Runs • Try Assists • All Run Metres
Wingers	2,5	These players are usually among the tallest on the field. Weights vary in this position.	On the field, the wingers are the players closest to either sideline. They assist the fullback with kick return, possess speed and an ability to finish attacking plays with speed and agility.	• Run Metres • Tackle Breaks • Tries
Centres	3,4	These players are very strong and are solid in build. Players in this position are tall or average in height.	Centres have good footwork, are relatively quick and as they are positioned inside the wingers can offload passes to finish off attacking plays.	• Runs • Dummy Half Runs • All Run Metres
Half back	7	These players are a solid in build. Players in this position are amongst the shortest on the field.	Half backs are responsible for the overall organisation and creativity element of the team. They have good ball skills, passing ability and footwork.	• Runs • Kicks • Kick Metres
5/8	6	These players are athletic in build. Players in this position are varied in height but are usually taller than the half back.	They complement the half backs organisation and creativity but offer another option with a slightly higher expectation to run the ball as opposed to passing.	• Runs • Kick metres • Try assists

Appendix 2:

Positional Explanations

Position	Positional Numbers	Physical characteristics	Role in Rugby League side	Important Statistics
Dummy Half	9	These players are strong and solid in build. Players in this position are amongst the shortest on the field.	Another organiser in the team, predominantly instructs the forward pack. Plays large minutes. Defensively required to make many tackles within the middle of the field.	• Tackles • Missed Tackles • Dummy Half Runs
Lock Forward	13	These players are mobile and solid. They are varied in height. Most athletic forward.	Locks are solid defenders and partner the hooker and props in defending the middle third of the field. They usually possess the skill to offload, bust tackles and make metres for the team. Usually more mobile than most forwards.	• Tackles • Offloads • All Run Metres
2nd Row Forward	11,12	These players are tall. Heavier than most players.	Second rows are positioned four in from either sideline. They are good at running lines and isolating the smaller edge defenders. They get through many tackles in a game. Play many minutes each game.	• All Run Metres • Tackles • Tackle Breaks
Front Row Forward (Prop)	8,10	Heights can vary but generally tall. Are the heaviest on field.	Situated in the middle third of the field, props are required to carry the ball on several occasions with a lot of them being from their own end of the field. Defending in the middle, they need to make many tackles throughout the match.	• Hit Ups • All Run Metres • Tackles

Appendix 3

State of Origin Sides 2019

Queensland Game 3:

1. Cameron Munster
2. Corey Oates
3. Moses Mbye
4. Will Chambers
5. Dane Gagai
6. Corey Norman
7. Daly Cherry-Evans (c)
8. Joe Ofahengaue
9. Ben Hunt
10. Josh Papalii
11. Felise Kaufusi
12. Ethan Lowe
13. Josh McGuire

Interchange

14. Michael Morgan
15. Christian Welch
16. Tim Glasby
17. David Fifita

NSW Game 3:

1. James Tedesco
2. Blake Ferguson
3. Tom Trbojevic
4. Jack Wighton
5. Josh Addo-Carr
6. James Maloney
7. Mitchell Pearce
8. Daniel Saifiti
9. Damien Cook
10. David Klemmer
11. Boyd Cordner (c)
12. Tyson Frizell
13. Jake Trbojevic

Interchange

14. Dale Finucane
15. Paul Vaughan
16. Cameron Murray
17. Wade Graham

Note: Both Teams made player changes in games in games 1, 2 and 3. Your task will use the team from Game 3.

QUEENSLAND ELIGIBLE PLAYERS

Players in this list may be listed twice as they can play multiple positions. In your final selection they can only be selected once. Players retired from representative football or injured can be selected if you wish.

Position	Eligible Players
Full Back	Darius Boyd, Brendan Elliot, Dane Gagai, Ben Hampton, Greg Inglis, Cameron Munster, Kalyn Ponga, Phillip Sami
Wing	Cory Oates, Kirisome Auva'a, Javid Bowen, Kurt Capewell, Dale Copley, Brendan Elliot, Kyle Feldt, Hymel Hunt, Brenko Lee, Edrick Lee, Nene Macdonald, Kurt Mann, Jonus Pearson, Kalyn Ponga, Phillip Sami
Centre	Kirisome Auva'a, Javid Bowen, Kurt Capewell, Will Chambers, Dale Copley, Brendan Elliot, Dane Gagai, Ben Hampton, Hymel Hunt, Brenko Lee, Ricky Leutele, Kurt Mann, Tautau Moga, Justin O'Neill, Phillip Sami
Half Back	Daly Cherry-Evans, Brodie Croft, Cooper Cronk, Ben Hunt, Ryley Jacks, Kurt Mann, Moses Mbye, Michael Morgan, Corey Norman, Ashley Taylor
Five-Eight	Anthony Milford, Brodie Croft, Kane Elgey, Ben Hampton, Ben Hunt, Ryley Jacks, Kurt Mann, Anthony Milford, Michael Morgan, Cameron Munster, Corey Norman
Dummy-Half	Andrew McCullough, Jake Friend, Jake Granville, Ben Hampton, Ben Hunt, Karl Lawton, Moses Mbye, Andrew McCullough, James Segeyaro, Jake Turpin, Cameron Smith
Front Row Forward	Josh Papalii, Scott Bolton, Jayson Bukuya, Tim Glasby, Coen Hess, Keegan Hipgrave, Corey Jensen, Viliame Kikau, Dylan Napa, Lloyd Perrett, Matthew Scott, Korbin Sims, Jarrod Wallace, Christian Welch, Joe Ofahengaue,
Second Row Forward	Matt Gillet, David Fifita, Jayd'n Sua, Korbin Sims, Luke Bateman, Jayson Bukuya, Kurt Capewell, Gavin Cooper, Matt Gillett, Aidan Guerra, Coen Hess, Felise Kaufusi, Ethan Lowe, Dunamis Lui, Josh Papalii, Chris McQueen
Lock Forward	Josh McGuire, Dunamis Lui, Jai Arrow, Luke Bateman, Jayson Bukuya, Aidan Guerra, Coen Hess, Ethan Lowe, Josh McGuire, Leivaha Pulu, Korbin Sims

New South Wales Eligible Players

Players in this list may be listed twice as they can play multiple positions. In your final selection they can only be selected once. Players retired from representative football or injured can be selected if you wish.

Position	Eligible Players
Full Back	Jack Bird, Damien Cook, Lachlan Coote, Matthew Dufty, Josh Dugan, Dylan Edwards, Bevan French, Michael Gordon, Clinton Gutherson, Jarryd Hayne, Will Hopoate, Alex Johnston, Brett Morris, Matt Moylan, Kevin Naiqama, Nathan Ross, Will Smith, James Tedesco, Tom Trbojevic, Cody Walker, Connor Watson, Jack Wighton
Wing	Josh Addo-Carr, Waqa Blake, Braidon Burns, Nick Cotric, Anthony Don, Josh Dugan, Dylan Edwards, Blake Ferguson, Bevan French, Campbell Graham, Aaron Gray, Kerrod Holland, Robert Jennings, Alex Johnston, Josh Mansour, Latrell Mitchell, Marcelo Montoya, Brett Morris, Kevin Naiqama, David Nofoaluma, Brad Parker, Tyronne Roberts-Davis, Tyronne Roberts-Davis, Nathan Ross, Ken Sio, Jorge Taufua, Daniel Tupou, Akuila Uate
Centre	Waqa Blake, Jarrod Croker, Josh Dugan, Blake Ferguson, Tyrell Fuimaono, Aaron Gray, Clinton Gutherson, Jarryd Hayne, Josh Jackson, Michael Jennings, Robert Jennings, Brian Kelly, Timoteo Lafai, Joseph Leilua, Sione Mata'utia, Ryan Matterson, Latrell Mitchell, Josh Morris, Kevin Naiqama, Brad Parker, Tyrone Peachey, Jesse Ramien, James Roberts, Curtis Scott, Dylan Walker, Euan Aitken, Mitchell Aubusson, Jack Bird
Half Back	John Asiata, Luke Brooks, Nathan Cleary, Matt Frawley, Trent Hodkinson, Luke Keary, Brock Lamb, Sione Mata'utia, Mitchell Moses, Mitchell Pearce, Adam Reynolds, Aidan Sezer, Chad Townsend, Cody Walker
Five-Eight	John Asiata, Blake Austin, Jack Bird, Bryce Cartwright, Jack Cogger, Mitch Cornish, Matt Frawley, Blake Green, Clinton Gutherson, Trent Hodkinson, Luke Keary, Brock Lamb, James Maloney, Mitchell Moses, Matt Moylan, Josh Reynolds, Will Smith, John Sutton, Cody Walker, Connor Watson
Dummy-Half	Jayden Brailey, Jamie Buhrer, Damien Cook, Matt Frawley, Slade Griffin, Jackson Hastings, Cameron King, Apisai Koroisau, Michael Lichaa, Jacob Liddle, Matt McIlwrick, Cameron McInnes, Nathan Peats, Kaysa Pritchard, Victor Radley, Mitch Rein, Ryan Simpkins

New South Wales Eligible Players

Position	Eligible Players
Front Row Forward	Daniel Alvaro, John Asiata, Shannon Boyd, Morgan Boyle, Reagan Campbell-Gillard, Jason Clark, Kane Evans, Shaun Fensom, Andrew Fifita, Danny Fualalo, Tim Grant, Chris Heighington, Ryan James, Josh King, Tim Mannah, Jordan McLean, Junior Paulo, Clay Priest, Matt Prior, Robbie Rochow, Daniel Saifiti, Jacob Saifiti, Tariq Sims, Jack Stockwell, Jack Stockwell, James Tamou, Aiden Tolman, Kyle Turner, Paul Vaughan, Aaron Woods
Second Row Forward	Mitchell Aubusson, Morgan Boyle, Jamie Buhrer, Bryce Cartwright, Boyd Cordner, Angus Crichton, Matthew Eisenhuth, Adam Elliot, Lachlan Fitzgibbon, Tyson Frizell, Tyrell Fuimaono, Wade Graham, Ryan Hoffman, Jacob Host, Josh Jackson, Shaun Lane, Chris Lawrence, Luke Lewis, Sione Mata'utia, Ryan Matterson, Tepai Moeroa, Cameron Murray, Tyrone Peachey, Robbie Rochow, Tariq Sims, Curtis Sironen, Joe Stimson, John Sutton, Joel Thompson, Kyle Turner, Tony Williams, Frank Winterstein, Luke Yates, Isaah Yeo
Lock Forward	Daniel Alvaro, Mitchell Barnett, Morgan Boyle, Nathan Brown, Angus Crichton, Jack de Belin, Matthew Eisenhuth, Dale Finucane, Danny Fualalo, Paul Gallen, Tim Grant, Josh King, Max King, David Klemmer, Trent Merrin, Cameron Murray, Clay Priest, Jacob Saifiti, Beau Scott, Ryan Simpkins, Tariq Sims, Jake Trbojevic, Kyle Turner, Paul Vaughan, Luke Yates

Student Evaluation Form

Name_____

My successes during this investigation were …

Things that I need to improve on next time include….

The most important things that I learned during the project were…

I feel that investigating data using sport **was/was not** beneficial to my learning because…

Using real world data and statistics helped my learning by….