Spin a Winner

NEW: April 2025

Year level: 1

Approximate number of lessons: 1

Learning goals

- Engage in stories or games that involve chance-based situations and:
  - decide if something will happen, won't happen, or might happen
  - identify possible and impossible outcomes (e.g., what might happen next).

Resources

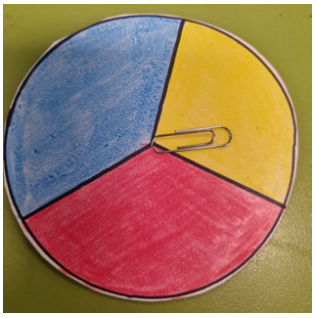
- Thin card to copy the **spinners** onto
- **Y1 Spin a winner Google Slides** that shows the three spinners
- Scissors
- Felts or materials to colour the spinners with
- Paper clips or brads/split pins
- A modelling book to record the data analysis and conclusions
- **Recording sheet** for each group of ākonga

Activity

Introduction

This lesson asks ākonga to experiment with a chance-based game and talk about what they notice. When introducing the lesson it could be helpful for ākonga to share when they have seen or used a spinner to cue them in. You may have physical games that use a spinner in class or you may have used a digital spinner in some lessons.

?PROBLEM:



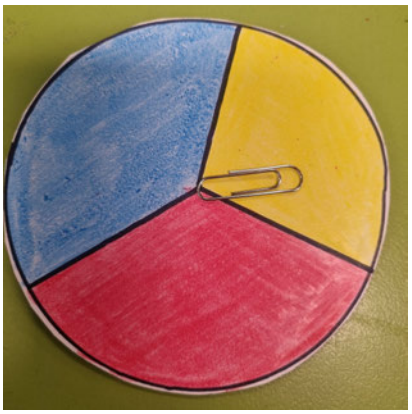
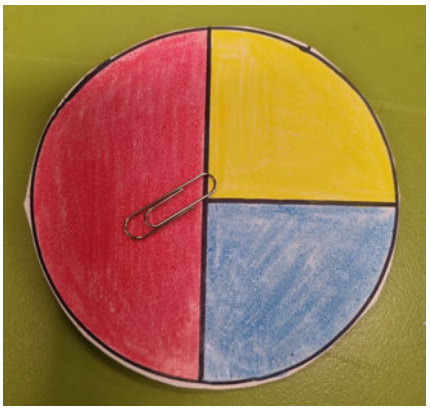
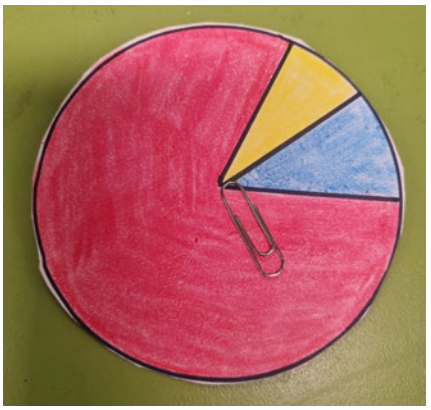
Explain that in this lesson ākonga will be exploring spinners, all of which are different. We will explore the investigative question **'What is the chance of landing on red when using this spinner?'** where the spinner will change as we go along.

Take the time to discuss that when spinning the spinner there is a chance of landing on any of the three parts of the spinner. Make sure when you create your spinners that all the spinners you make, regardless of the segment sizes, use the same three colours so comparisons can be made using the language of chance, possible, or impossible'.

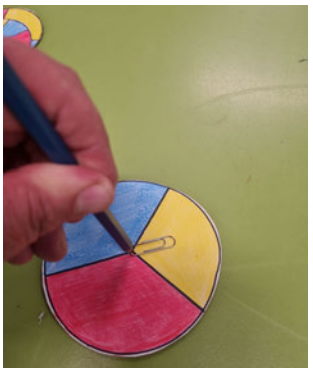
PLAN:

Share with ākonga the investigative question **'What is the chance of landing on red when using this spinner?'** that will be investigated. Encourage ākonga to discuss their personal experiences with their **Talk Partner** before talking as a whole group. Bring together ākonga suggestions for when they have used spinners. What type of spinners are they? Have ākonga describe the spinner with detail (how many wedges/pieces/sectors/sections? What is on the sectors/wedges/pieces/sections? Is there an arrow that moves or is it something else? What is the arrow for?

Discuss the need to explore the investigative question through creating spinners with different sized pieces (sectors). Each group of ākonga should create three spinners so that when data is being collected everyone gets to participate. The three spinners to create are:

Spinner 1: Introductory spinner	Spinner 2	Spinner 3
		
Teacher notes: *All three colours are equally likely.*	Teacher notes: *Red takes up half the spinner, yellow and blue take up one quarter of the spinner each.*	Teacher notes: *Red takes up over three quarters of the spinner. Blue and yellow share the remaining part, with the blue sector larger than the yellow sector.*

Blank photocopy masters for the spinners are **here** in the photocopy masters, or linked from the table. Students colour their spinners according to the instructions.



Discuss how they will make it act like a spinner, e.g., using a pen and a paper clip. The pen places the paper clip at the centre of the spinner, then the paper clip is flicked to make it spin. Where it lands is noted for the result of the spin. E.g., which colour does it land on.

Test that the arrow or paper clip moves freely on all spinners before beginning the data collection.

Decide on the recording chart for the data collection. This is an important step so that every group of ākonga are collecting the agreed data to contribute to the analysis discussion.

Agree as a class how many times they will spin the spinner. Each group should aim to do the same number of spins.

DATA:

After making the three spinners, ākonga are now ready to begin collecting data.

The group is going to spin each spinner three times. Record which colour the arrow landed on by putting a tick in the colour box. Repeat this process for each of the spinners.

You could support ākonga further by only giving them the chart for recording the one spinner on it and after collecting data for that spinner returning to the whariki and moving to the next spinner with a new recording chart. Recording charts for individual spinners are **here**.

Spinner 1	**Red**	**Yellow**	**Blue**
Tick for which colour your arrow landed on			

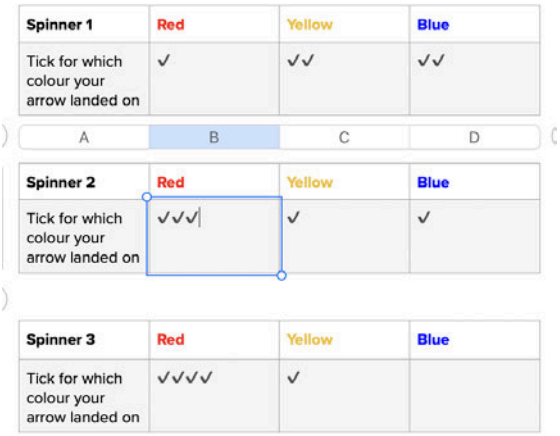
Spinner 2	**Red**	**Yellow**	**Blue**
Tick for which colour your arrow landed on			

Spinner 3	**Red**	**Yellow**	**Blue**
Tick for which colour your arrow landed on			

Or you may prefer to have all data on the **one recording chart**. If you do this you will need to support ākonga to record along the correct row.

Recording chart for Spin a winner			
Which spinner	**Red**	**Yellow**	**Blue**
Spinner 1			
Spinner 2			
Spinner 3			

For example your recording chart may look like this at the end of recording.



Spinner 1	Red	Yellow	Blue
Tick for which colour your arrow landed on	✓	✓✓	✓✓

	A	B	C	D

Spinner 2	Red	Yellow	Blue
Tick for which colour your arrow landed on	✓✓✓	✓	✓

Spinner 3	Red	Yellow	Blue
Tick for which colour your arrow landed on	✓✓✓✓	✓	

ANALYSIS:

To help answer the investigative question the data collected needs to be summarised. The kaiako can call on each group to say how many ticks for each colour for each spinner and record this on the whiteboard, shared screen or in a modelling book so that all ākonga can see the collated results from the class data collection. The kaiako could use tally marks and write the numeral at the end to model a useful way of counting data.

The kaiako asks 'What do you notice about the numbers for how many times you landed on each colour on spinner 1? When ākonga have answered this question, repeat the same question for spinners 2 and 3.

Ask 'How do you explain the difference between the number of spins for the red wedges on the three different spinners? What do you notice about the red parts? What does this mean for the chance of landing on red? Is it possible to land on yellow or blue on spinner 3? Is it a good chance?

Discuss why it is important to have spinners that have equal parts when playing a game that uses chance if you are wanting the game to be **fair**.

CONCLUSION:

Answer your investigative question **'What is the chance of landing on red when using this spinner?'.** Is it a good chance or a small chance? Might it happen? In Year 2 ākonga use the language of likely and unlikely so if it makes sense then you may model the use of this language as a kaiako think aloud for those Year 1 students who have grasped the Year 1 concepts already.

After this lesson ākonga may be motivated and interested to explore spinners further with different segment sizes. You could provide a provocation using this as the basis, including open ended materials to create various spinners to test their predictions about segment size and outcome.

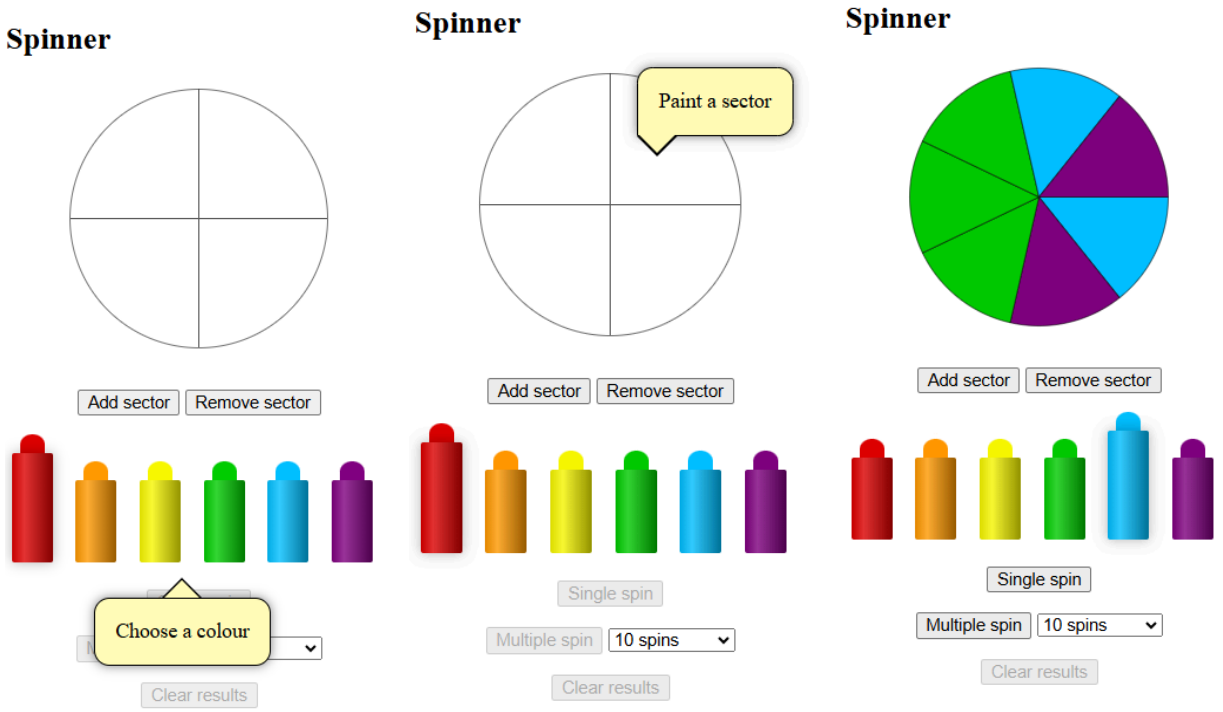
Notes for teachers

There are many **virtual spinners** available online, however, it was difficult to find a site that allowed the segments to be unequal.

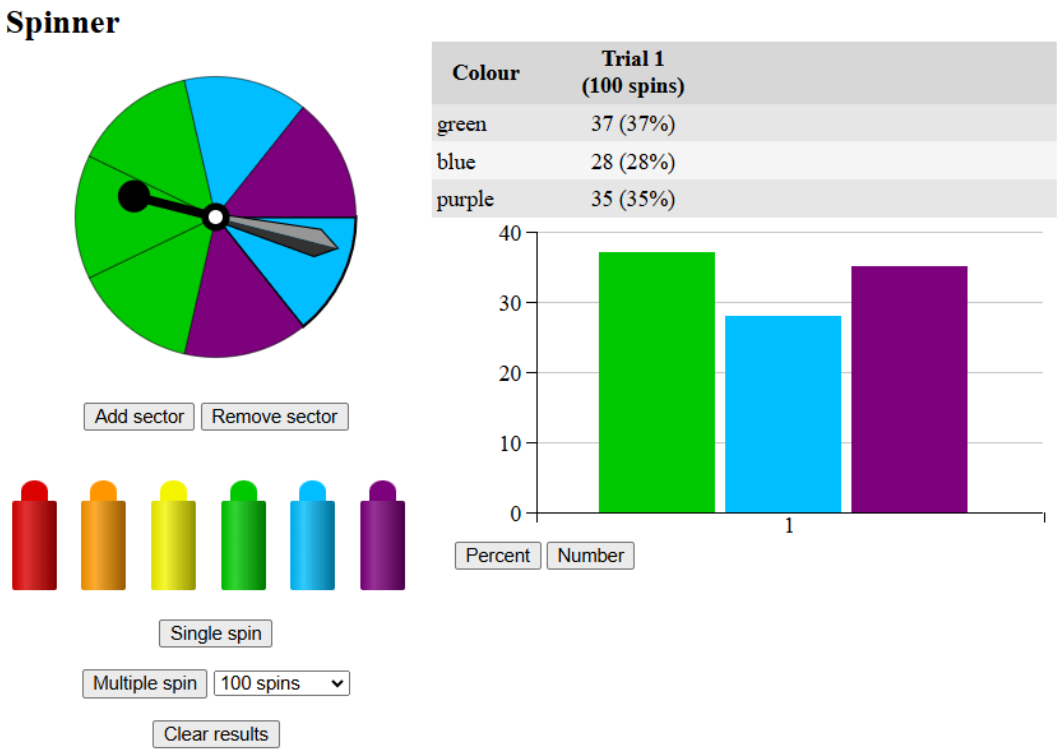
If you wished to take this lesson outside you could draw large circles outside with chalk and create a spinner on the concrete.

The **spinner tool**, formally on NZMaths is now available on CensusAtSchool. This can be used to make the unequal sectors spinner. It uses up to 10 sectors, students could colour them unequally, maybe not exactly like spinner 3, but similar, e.g., see spinner to the right.

https://new.censusatschool.org.nz/nz-maths-spinner/



Choose colours, add or remove sectors, paint the sectors, then do a single spin or multiple spins.



Use **Talk Moves** to guide your ākonga in discussing their ideas, making sense of what others are saying and coming to shared understandings.

We use the PPDAC cycle in probability as well as statistics.

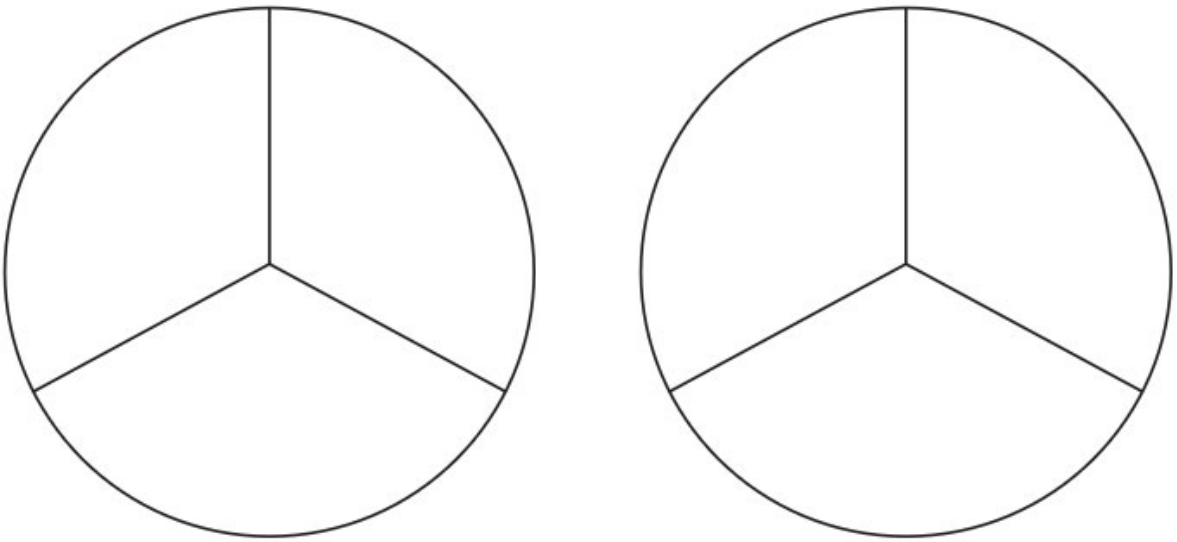
Data Detective Poster - CensusAtSchool New Zealand

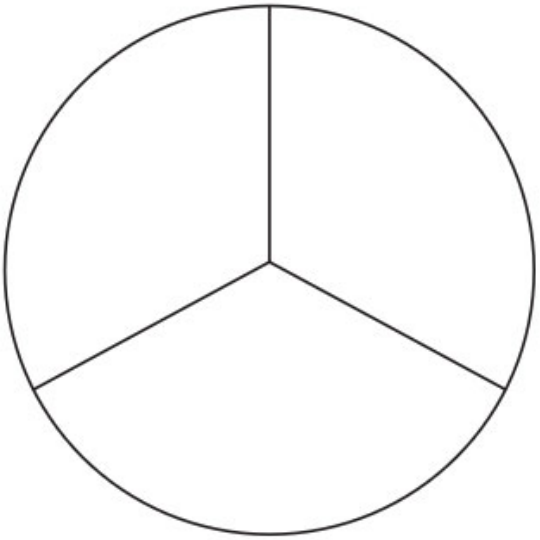
Spin a winner student materials

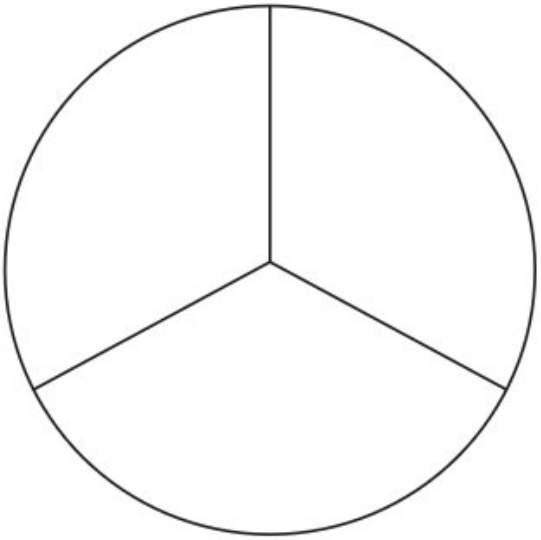
Resource list with preparation

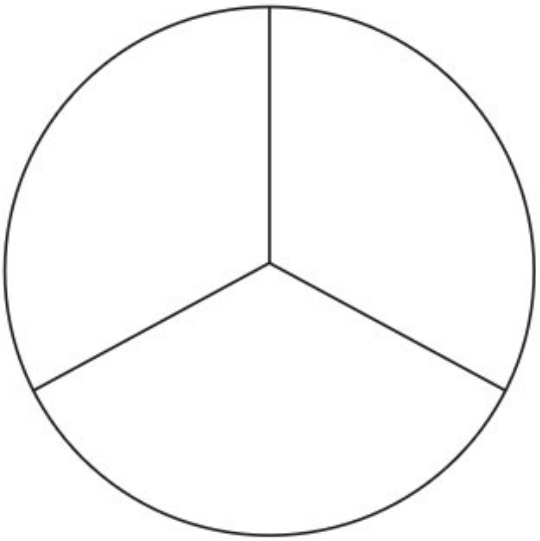
Resource	Preparation required	Approx numbers
Blank spinners **Spinner 1** **Spinner 2** **Spinner 3**	Copy onto card, enough for one of each of the spinners per small group.	Six spinners per page, print sufficient for the number of small groups to have one each, with some spares.
Recording sheet individual tables	Copy onto paper and cut into two as two sets on the page. Cut up individual tables if you decide to only hand out one table at a time.	Make enough for one per small group
Recording sheet combined tables	Copy onto paper and cut into three as three sets on the page.	Make enough for one per small group if using

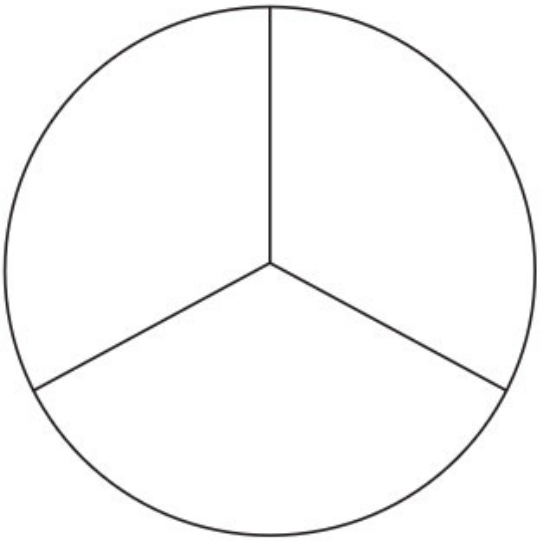
Blank spinners | Spinner 1



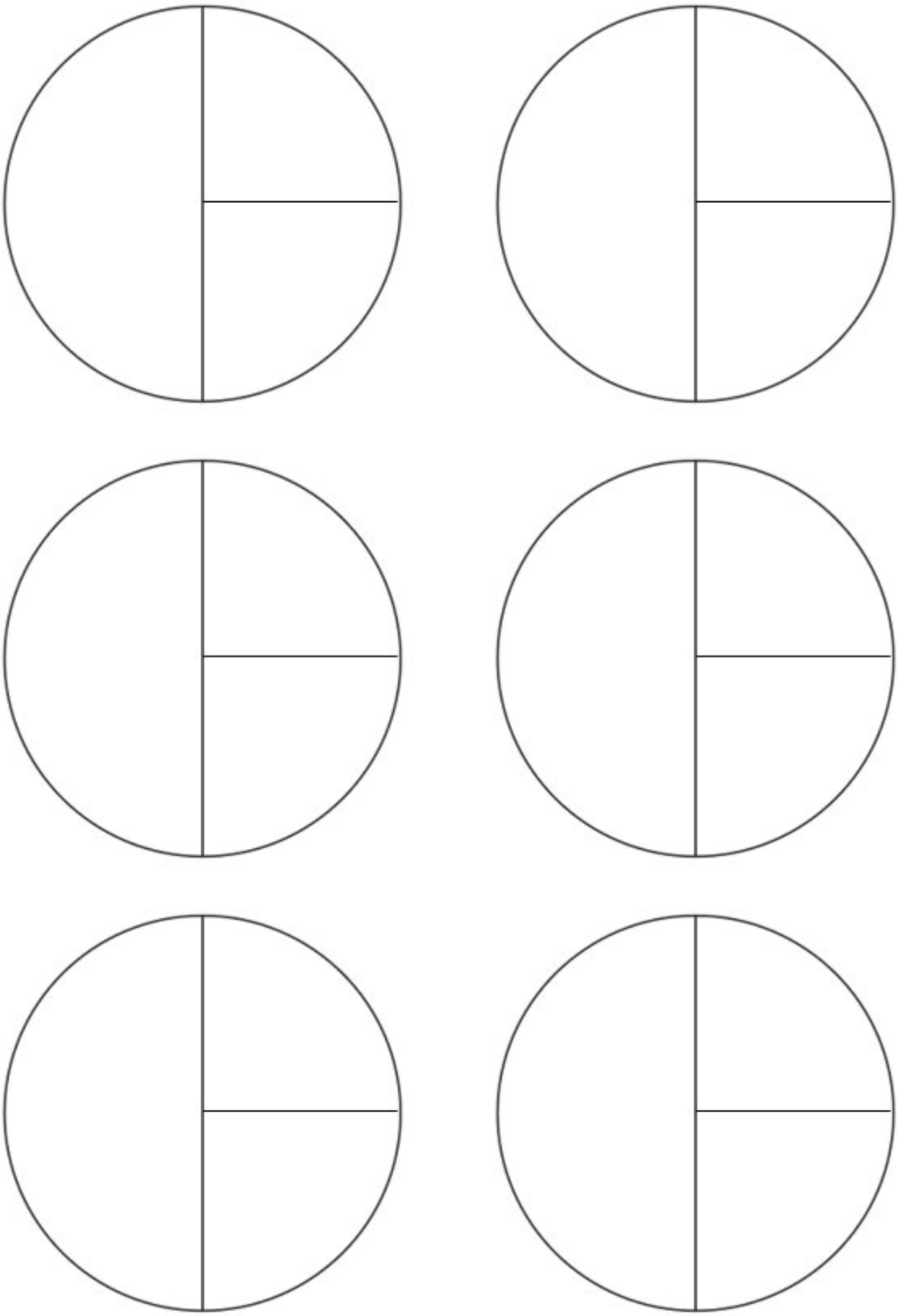




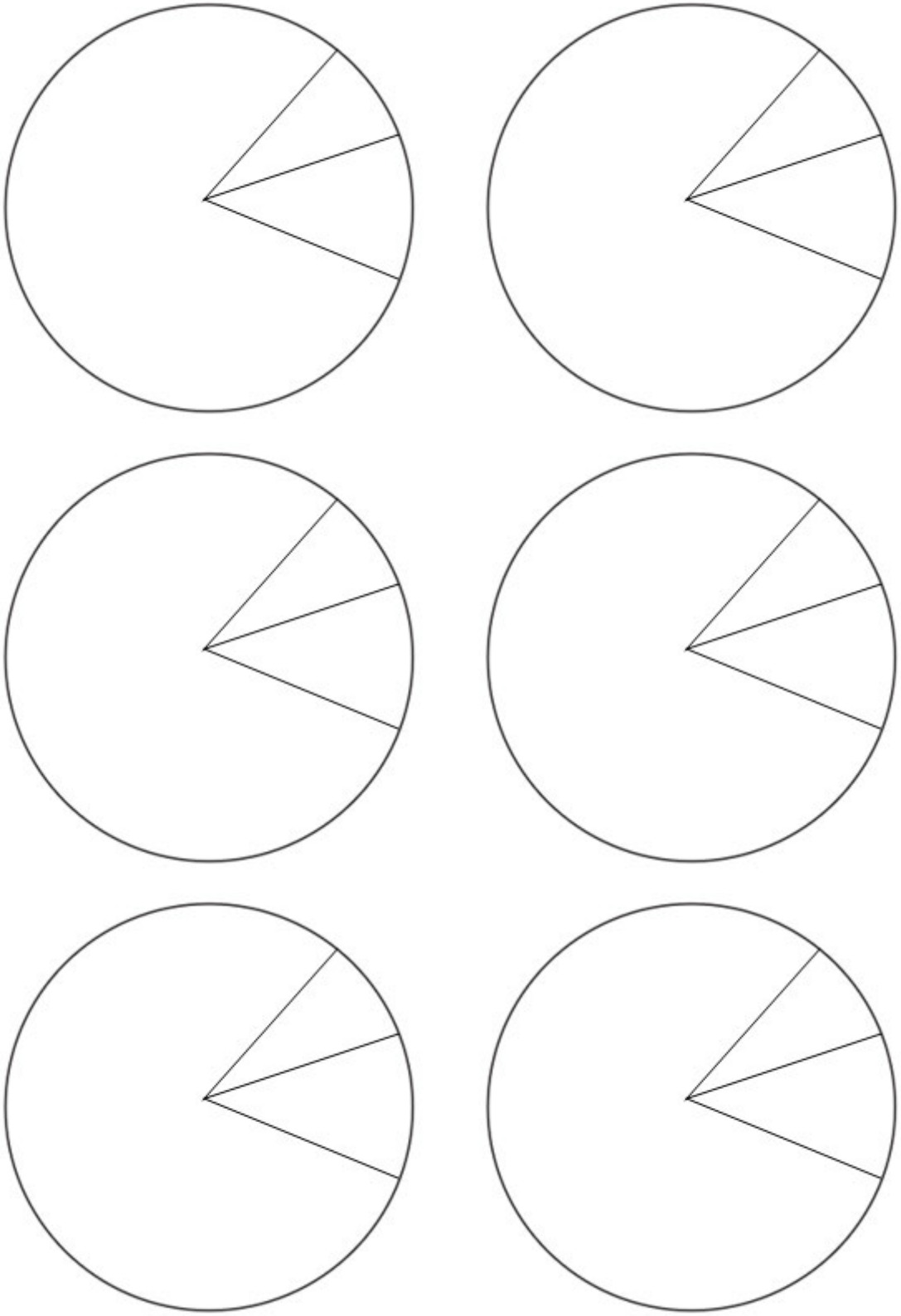




Blank spinners | Spinner 2



Blank spinners | Spinner 3



Recording sheet for spin a winner | Individual tables

Spinner 1	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Spinner 2	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Spinner 3	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Spinner 1	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Spinner 2	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Spinner 3	Red	Yellow	Blue
Tick for which colour your arrow landed on			

Recording sheet for spin a winner | Combined table

Recording chart for Spin a winner			
Which spinner	**Red**	**Yellow**	**Blue**
Spinner 1			
Spinner 2			
Spinner 3			

Recording chart for Spin a winner			
Which spinner	**Red**	**Yellow**	**Blue**
Spinner 1			
Spinner 2			
Spinner 3			

Recording chart for Spin a winner			
Which spinner	**Red**	**Yellow**	**Blue**
Spinner 1			
Spinner 2			
Spinner 3			