Math Wizards

Grade 3 Data Management & Probability

Name:_____

Ontario Mathematics Curriculum Grades 1 to 8, 1997
Strand: Data Management and Probability
Grade: 3

Overall Expectations:
- sort, classify, and cross-classify objects and data
- collect and organize data
- interpret displays of data, present the information, and discuss it using mathematical language
- demonstrate an understanding of probability and demonstrate the ability to apply probability in familiar day-to-day situations
- relate meaningful experiences about probability

This resource is based on Data Management & Probability Friday's. That is, every Friday a break from the current mathematical unit is taken and Data Management & Probability is studied. Therefore there are 34 activities, one for almost every Friday of the year. This method can also help make the five mathematic strands more manageable.

Data Management & Probability
Activity ONE

As a class, let's make a list of where we see data.

_____
_____
_____

Why do we communicate data in the form of graphs and charts?

_____
_____
_____

Today we will be completing a bar graph on the next page. Remember to:
- identify the four parts of the graph;
- create an appropriate title for the graph; and
- make sure all columns are properly labelled

When you have completed the graph, answer the following questions:

1) What does Merlin have most of?_____
_____

2) What does Merlin need to buy?_____
_____

3) How many pencils and erasers does Merlin have altogether?_____
_____

4) What other information does this graph tell you?

_____
_____
_____
_____
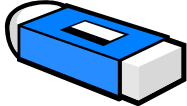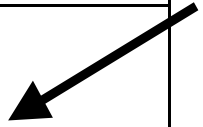
Merlin is preparing to go back to school. He needs you to help him organize his school supplies. Would you show Merlin how to graph his school supplies so he can easily see what he has of each kind?

_____

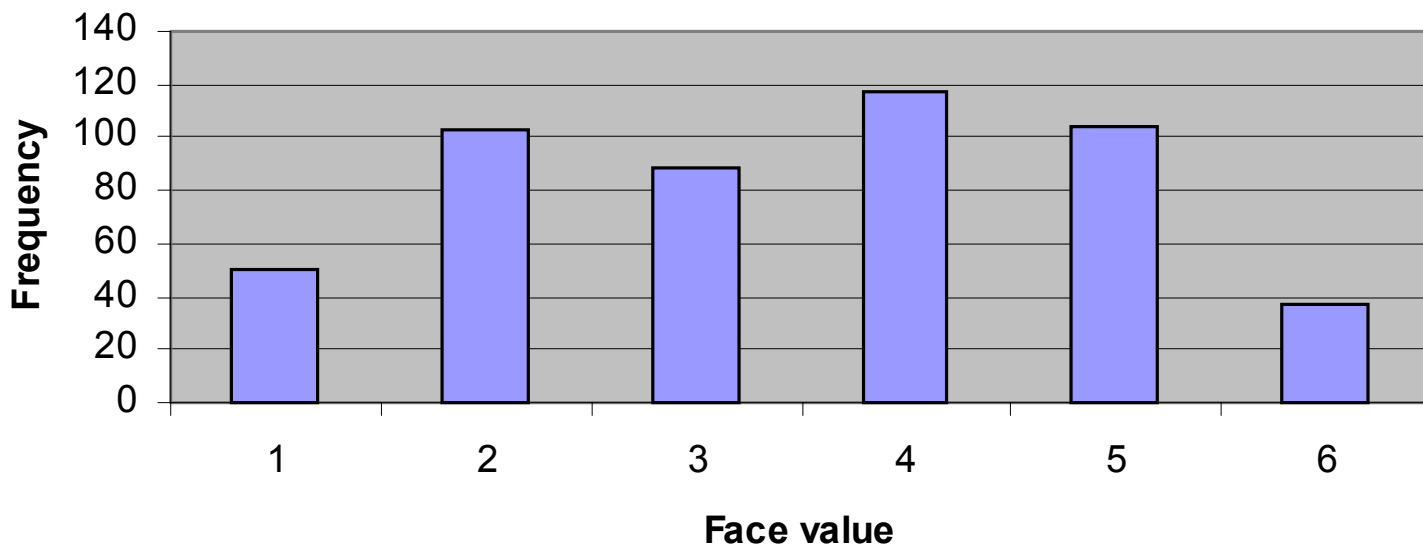|				
7				
6				
5				
4				
3				
2				
1				
	eraser	_____	scissors	_____

Data Management & Probability
Activity TWO

With a partner, look at the following three bar graphs. In the space provided describe three things that the bar graph communicates.

500 rolls of one die

What does the graph "500 rolls of one die" communicate?

1) _____

_____

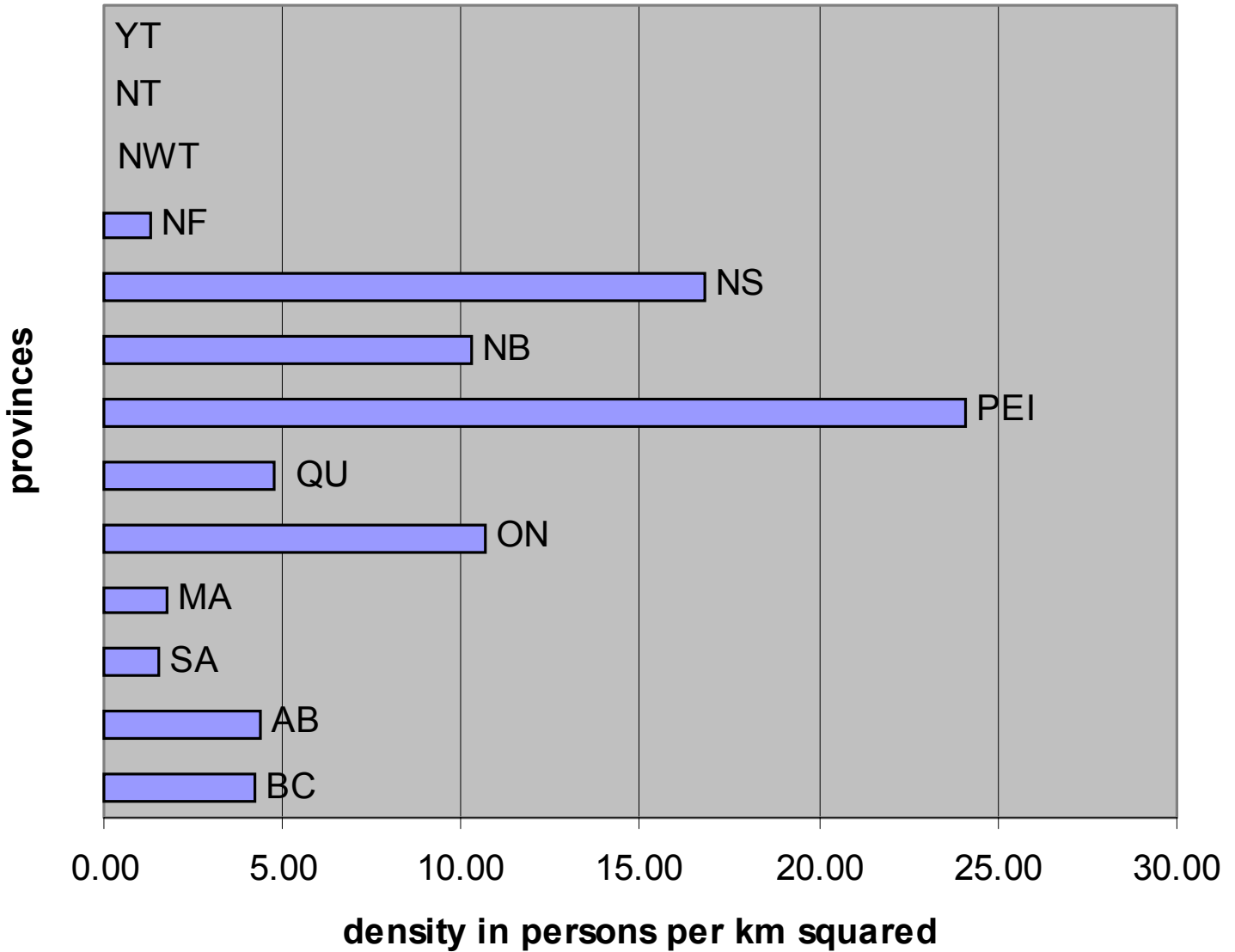2) _____

_____

3) _____

_____

Provincial population densities
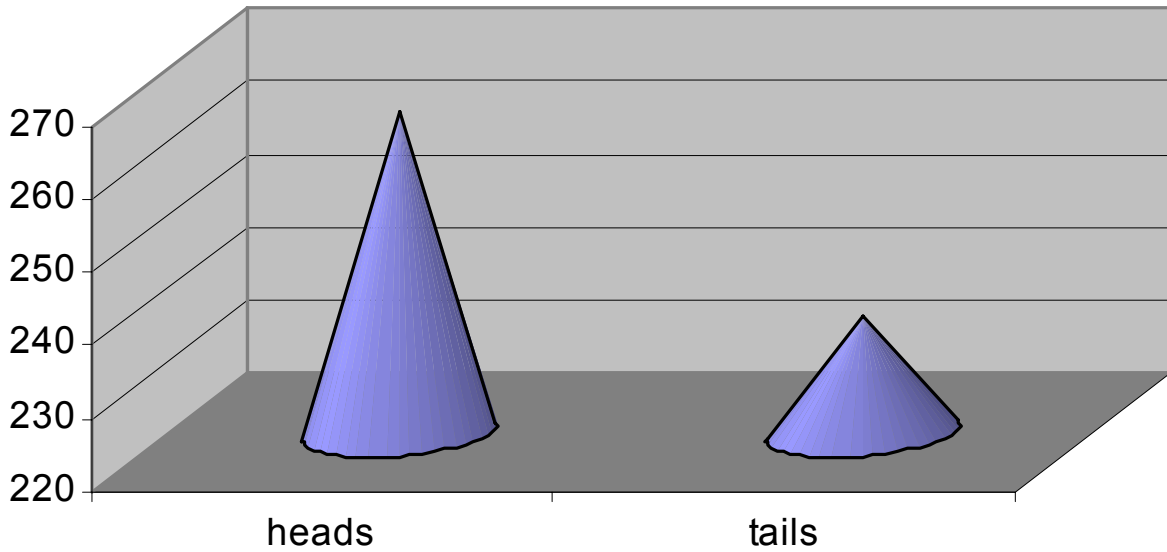
provinces

YT

NT

NWT

NF

NS

NB

PEI

QU

ON

MA

SA

AB

BC

0.00   5.00   10.00   15.00   20.00   25.00   30.00

density in persons per km squared

What does the graph "Provincial population densities" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

500 flips of one coin

What does the graph "500 flips of one coin" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

What are some similarities between the three different kinds of bar graphs?

_____

_____

_____

What are some differences between the three different kinds of bar graphs?

_____

_____

_____

Data Management & Probability
Activity THREE

Merlin was given some flower bulbs as a gift. Flower bulbs are planted in the fall, stay dormant for the winter and then bloom in the spring! But of course Merlin turned his gardening into mathematics. Let's graph Merlin's flower bulbs.

Tulips	Daffodils	Crocuses	Hyacinths
||||	卌 ||	卌 卌 |	卌

_____

Scale ِ													

What does Merlin have most of?

_____

What does Merlin have least of?

_____

How many tulips and crocuses does Merlin have altogether?

_____

What else does the graph tell you?

_____
_____
_____
_____

Data Management & Probability
Activity FOUR

Merlin loves fall leaves. He decided to collect some of the fallen leaves for a collage art project. Let's graph how many of each colour Merlin collected.

Red	Yellow	Green	Brown
4	7	3	9

_____

Scale ₎													

What colour does Merlin have the most of?

_____

What colour does Merlin have the least of?

_____

How many red and green leaves does Merlin have altogether?

_____

What else does the graph tell you?

_____
_____
_____
_____

Data Management & Probability
Activity FIVE

At the carpet, we graphed bugs. How did the scale change?

_____

_____

Why did the scale change?

_____

_____

Let's complete the bar graph on the next page. After you've finished, answer the following questions:

1) What kind of bug does Merlin have the most of?_____

_____

2) What kind of bug does Merlin have the least of?_____

_____

3) How many worms and ants does Merlin have altogether? _____
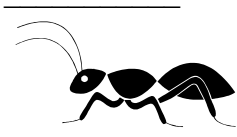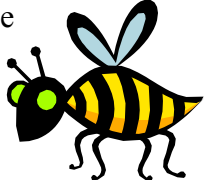
_____

Merlin has noticed a lot of bugs in his garden. He needs you to help him sort through the different kinds of bugs in his garden. Would you show Merlin how to graph the bugs so he can easily see how many he has of each kind?

→ _____

70			
60			
50			
40			
30			
20			
10			
	_____	lady bug	earthworm	bee
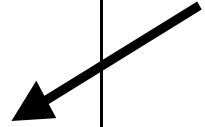
Data Management and Probability
Activity SIX

Why do we change the scale on graphs?

_____

_____

_____

Complete the bar graph on the next page. After you've finished, answer the following questions:

1) What kind of leaf does Merlin have most of?_____

_____

2) What kind of leaf does Merlin have least of?_____

_____

3) How many oak and maple leaves does Merlin have altogether? _____

_____

_____

Merlin is raking the leaves in his yard. He needs you to help him sort the leaves into different bins. Would you show Merlin how to graph his leaves so that he can easily see how many he has of each kind?

→ _____

35			
30			
25			
20			
15			
10			
5			
	oak	maple	elm	willow

Data Management & Probability
Activity SEVEN

After raking the leaves in his lawn, Merlin decided to rake Gweneth's lawn.
Merlin took a tally of each kind of leaf and he now needs your help to graph them.
Remember, you might need to use a different kind of scale!

Oak	Maple	Elm	Willow
45	60	30	25

_____

Scale ₎													

What kind of leaf does Merlin have most of?

_____

What kind of leaf does Merlin have least of?

_____

How many maple and willow leaves does Merlin have altogether?

_____

What else does the graph tell you?

_____
_____
_____
_____

Data Management & Probability
Activity EIGHT

Merlin surveyed the wizards at his school to see what ice cream flavour was their favourite. He tallied his results below, but he doesn't think he can graph it because the numbers are too big! Will you help Merlin graph his ice cream survey results.

Chocolate	Vanilla	Strawberry	Other
110	90	60	20

_____

What is the favourite ice cream flavour of the wizards surveyed?

_____

What is the least favourite ice cream flavour of the wizards surveyed?

_____

How many wizards were surveyed by Merlin?

_____

What else does the graph tell you?

_____
_____
_____
_____

Data Management & Probability
Activity NINE

Lots of dragons live in a forest next to Merlin's school. The results of the Ministry of Magical Creatures Dragon Census is displayed in the graph below.

Dragon Census

green dragons	🐉 🐉 🐉 🐉 🐉 🐉 🐉 🐉
red dragons	🐉 🐉 🐉
blue dragons	🐉
black dragons	🐉 🐉 🐉 🐉 🐉

🐉 = 10 dragons

What is the definition of census?

_____
_____

What is the scale of the graph above?

_____
_____

What does the graph "Ministry of Magical Creatures Dragon Census" communicate?

1)_____

_____

2)_____

_____

3)_____

_____

Data Management & Probability
Activity TEN

Merlin has left some magic pebbles for each of you to graph. Graph the magic pebbles using a pictograph below. Make sure all the magic pebbles are graphed and your work is checked before they disappear!

What symbol will you use for your pictograph?

What is your scale? _____

_____

Red	
Orange	
Yellow	
Green	
Blue	
Purple	
Brown	

What colour of magic pebble do you have the most of?
_____

What colour of magic pebble do you have the least of?
_____

What else does the graph tell you?
_____
_____
_____

Data Management & Probability
Activity ELEVEN

At the carpet, we created the "Shoot and Score Pictograph" (Merlin likes hockey but he can't skate!). Recently, Merlin has been studying the night sky. He has counted quite a few heavenly bodies and tallied them below. Help him create a pictograph of his night sky sightings.

Planets	Stars	Moons	Comets
100	950	200	300

What symbol will you use for your pictograph?

What is your scale? _____

_____

What has Merlin seen most in the night sky?
_____

How many planets, moons and comets has Merlin seen altogether?
_____

What else does the graph tell you?
_____
_____
_____

Data Management & Probability
Activity TWELVE

Merlin's dog, Leo, loves to dig up bones. He finds all kinds of different coloured bones! Merlin has tallied all the bones Leo has dug up. Create a pictograph of Leo's bone collection.

Purple	Green	Blue	Orange
35	20	5	15

What symbol will you use for your pictograph?

What is your scale? _____

_____

What colour of bone has Leo dug up the most?
_____

What colour of bone has Leo dug up the least?
_____

How many blue and orange bones has Leo dug up altogether?
_____

What else does the graph tell you?
_____
_____
_____

Data Management & Probability
Activity THIRTEEN

With a partner, look at the following three pie graphs. In the space provided, describe three things that the pie graphs communicate.

The Population of Ontario and Quebec

QU

ON
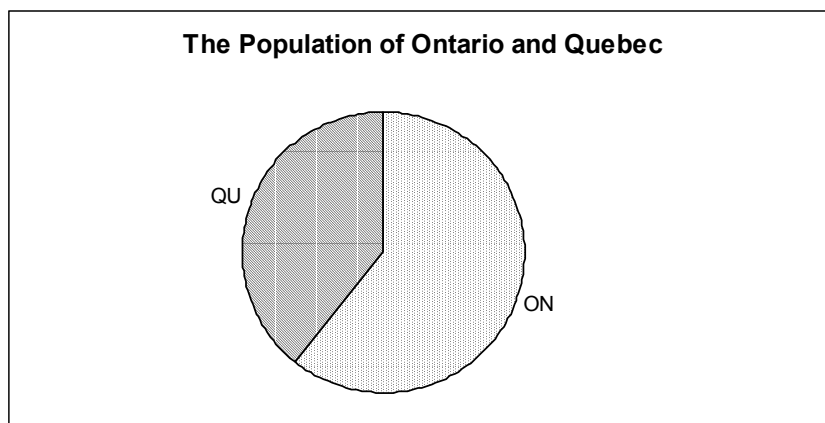
What does the graph "The population of Ontario and Quebec" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

The Populations of the Maritime Provinces

PEI

NS

NB
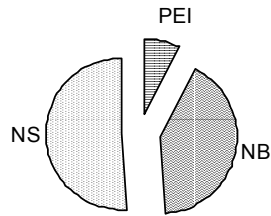
What does the graph "The Population of the Maritime Provinces" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

The Populations of Canada's Territories

YT

NWT

NT
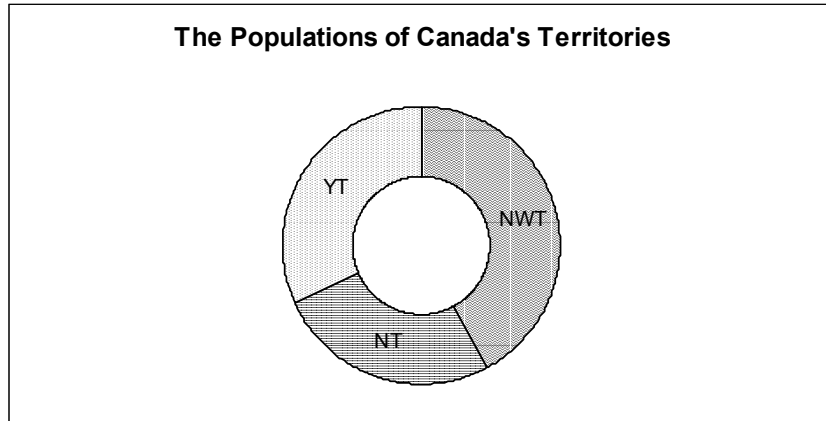
What does the graph "The Population of Canada's Territories" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

What are some similarities between the three different kinds of pie graphs?

_____
_____
_____

What are some differences between the three different kinds of pie graphs?

_____
_____
_____

Data Management & Probability
Activity FOURTEEN

Today we will be conducting class surveys. In groups of four, you will work together to create a good survey question, survey the class, create a graph and present your results to the class.

My group includes: _____

_____

Step ONE:

Our survey question is:

_____

_____

This question is important because:

_____

_____

Our choices include (up to five choices):

_____

_____

Step TWO:

Survey the class using your tally chart below. Make sure you put your choices on the top of each column.

Step THREE:

Graph your data using the chart paper below.

Step FOUR:

What three things does your survey communicate?
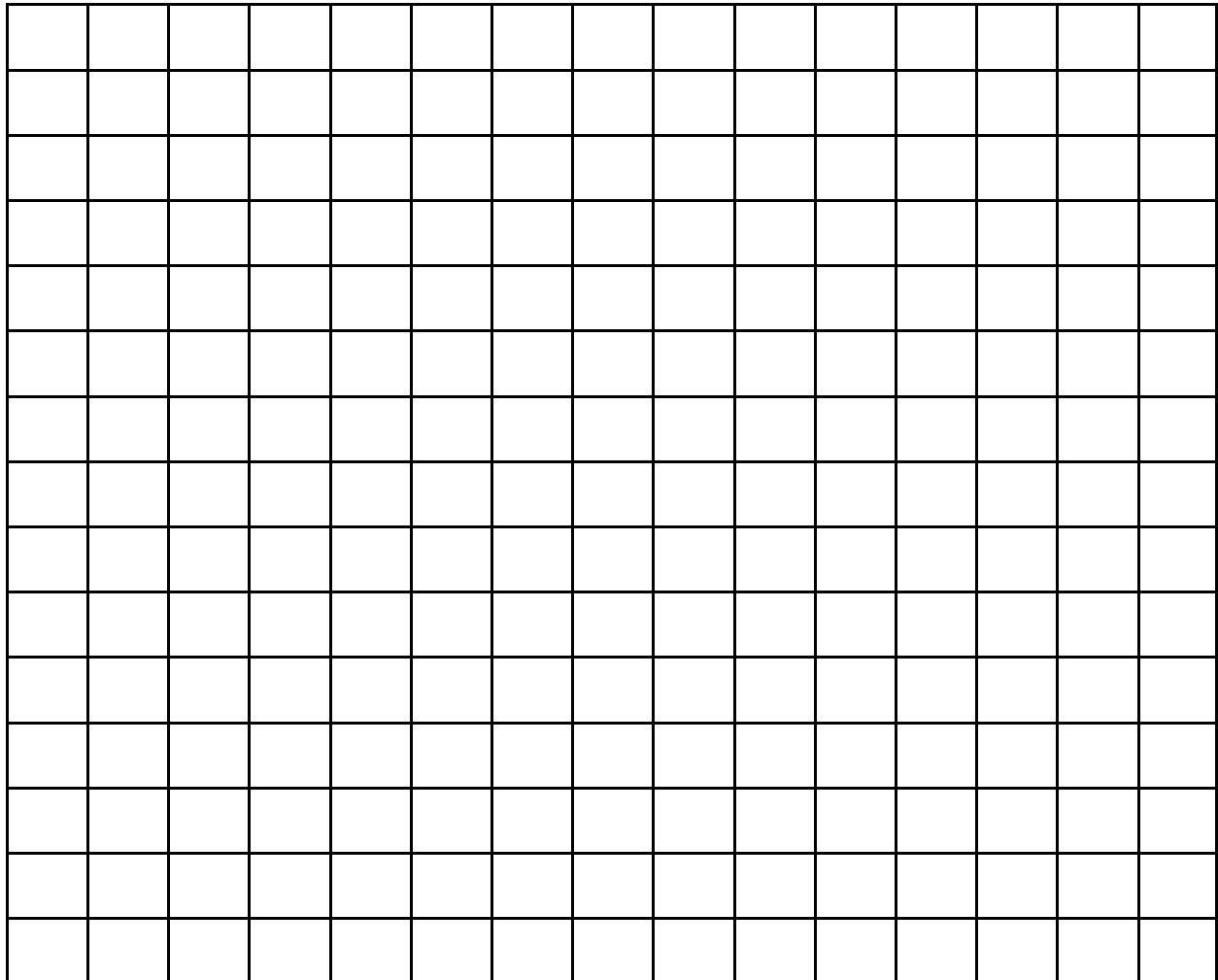1) _____
_____

2) _____
_____

3) _____
_____

Step FIVE:

Present your findings to the class. Be sure to describe the importance of your survey question and how you are going to use this data to make our classroom a better place. You will be marked using the following rubric:

Criteria	Level 1	Level 2	Level 3	Level 4
Understanding of concepts	• A question with finite answers was chosen • Transfer of data from tally chart to graph was incomplete	• A question with finite answers was chosen • Tally data was transferred to the graph	• An appropriate question with finite answers was chosen • Tally data was transferred to the graph effectively	• A question with significance to daily classroom life was posed • Tally data was transferred to the graph effectively, and helped communicate the survey results to the audience
Communication of required knowledge	• Survey results are explained, however, are incomplete	• Survey results are explained • Importance or applicability are limited	• Survey results, importance of survey and implications for the classroom were clearly explained	• The survey conducted was clearly explained • Results are enlightening and implementable

Data Management & Probability
Activity FIFTEEN

For the next two data management & probability classes we will be conducting a school survey. We will be asking two different survey questions. These questions should reflect important issues in the school and may help create some solutions.

Step ONE:

As a class, let's decide what our school survey questions are:
1)_____
_____

2)_____
_____

These questions are important because:
_____
_____
_____
_____

Our choices include (up to four choices):
For question 1:_____
_____

For question 2:_____
_____

Step TWO:

To survey the school, we will divide the classrooms up amongst the groups. Each group will be responsible for recording the data from their assigned classrooms for each question.
My group includes: _____
_____

When you enter the classroom, make sure you show the teacher the note on the following page, so that they can help you conduct the survey.

Dear Teacher,
We are surveying the school about three important questions. We will read the question and the four available choices. We will then repeat each choice, one at a time, giving the students a chance to respond by raising their hands. We appreciate your help.

Question 1: _____
_____

Tally Chart

Choices ·				
class one: _____				
class two: _____				
class three: _____				

Question 2: _____
_____

Tally Chart

Choices ·				
class one: _____				
class two: _____				
class three: _____				

Step THREE:

Graph the data from the classes you surveyed using the chart paper below.
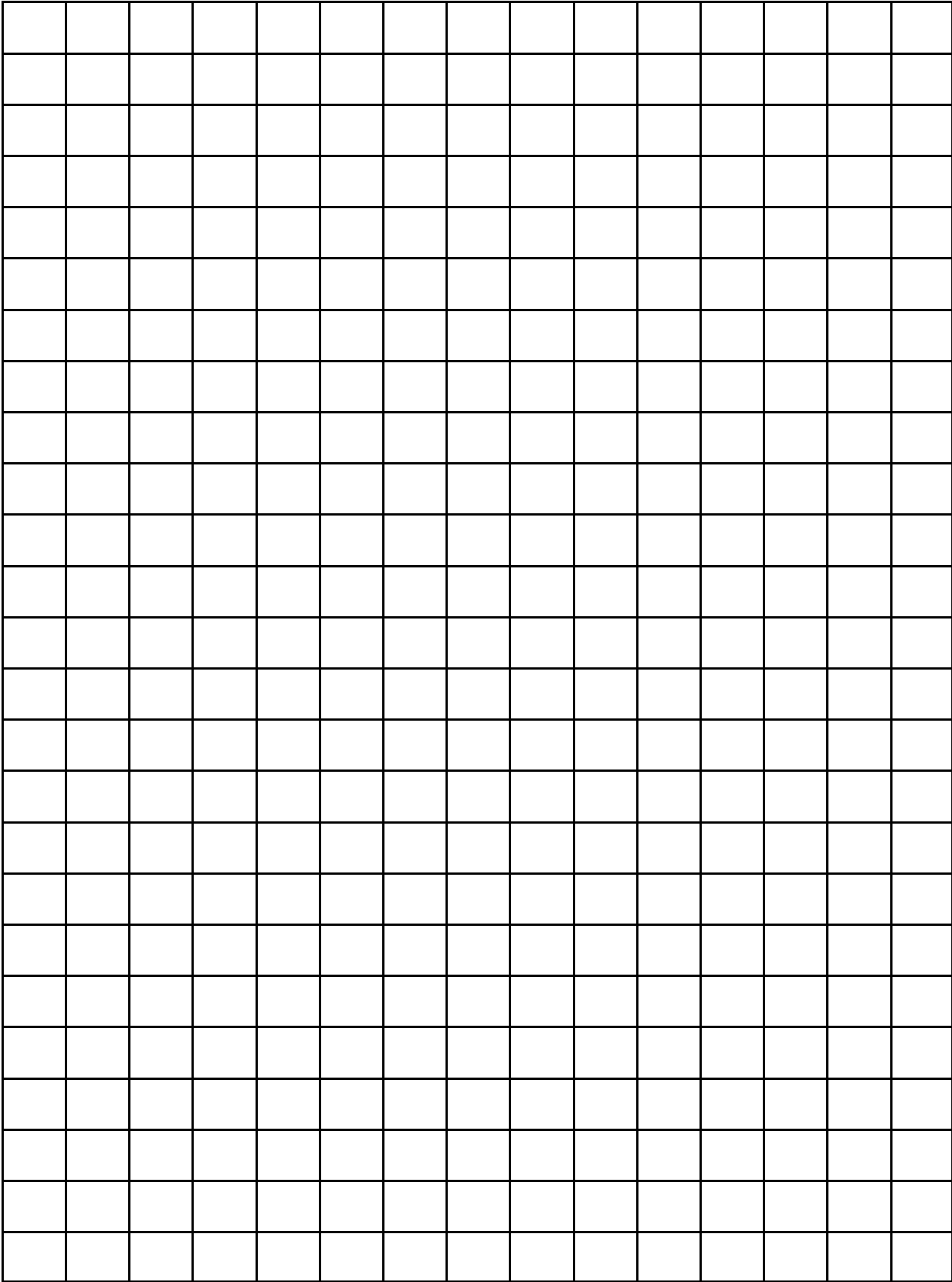
Step FOUR:

What three things does your survey communicate?
1) _____
_____

2) _____
_____

3) _____
_____

Step FIVE:

Once you've finished analysing the data you collected from your assigned classrooms, enter the data into the spread sheet program.

Step SIX:

Open the spread sheet file with the school survey data. Make a computer graph of both questions and print them off.

What two conveniences did the spread sheet offer you in analysing your data?
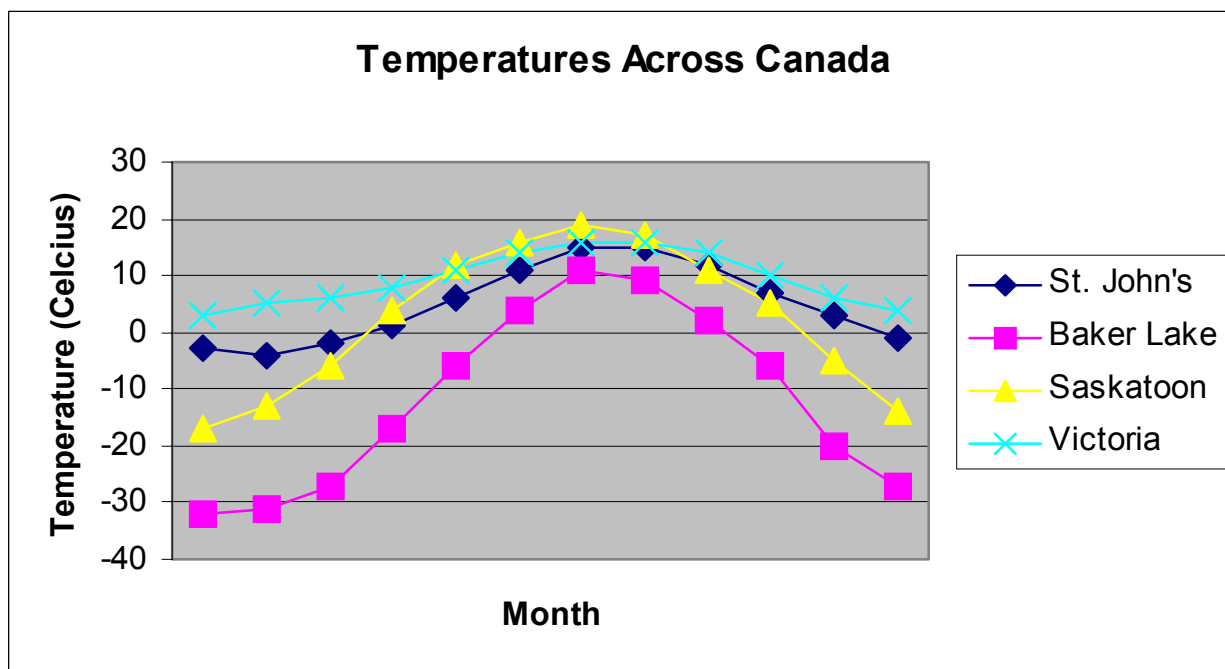1) _____
_____

2) _____
_____

Data Management & Probability
Activity SIXTEEN

Line graphs are another kind of graph. They are usually used for recording temperature, the ups and downs of the stock market, or the speed of a car. Line graphs are used when you want to record information from one source over a period of time.

With a partner, look at the following line graph. It is a graph of the average monthly temperature in four different cities across Canada. In the space provided, describe three things that the line graph communicates.

Temperatures Across Canada

Y-axis: Temperature (Celcius), ranging from -40 to 30
X-axis: Month

Legend:
- St. John's
- Baker Lake
- Saskatoon
- Victoria

What does the graph "Temperatures Across Canada" communicate?

1) _____

_____

2) _____

_____

3) _____

_____

Data Management & Probability
Activity SEVENTEEN

Merlin has left you a cup of buttons. He would like your help sorting them. Sort your magical buttons and then draw and write about what you did.

Draw your sort:

Describe your sort in words:

_____
_____
_____
_____

What rule did you use?

_____
_____

Merlin has a Problem!

Merlin has a problem. He is brewing a new spell and he needs three numbers. When he opens the package of numbers he finds four. Help Merlin pick which number doesn't belong and doesn't go in the spell.

1993	1991
1919	9191

Circle the number that doesn't belong.

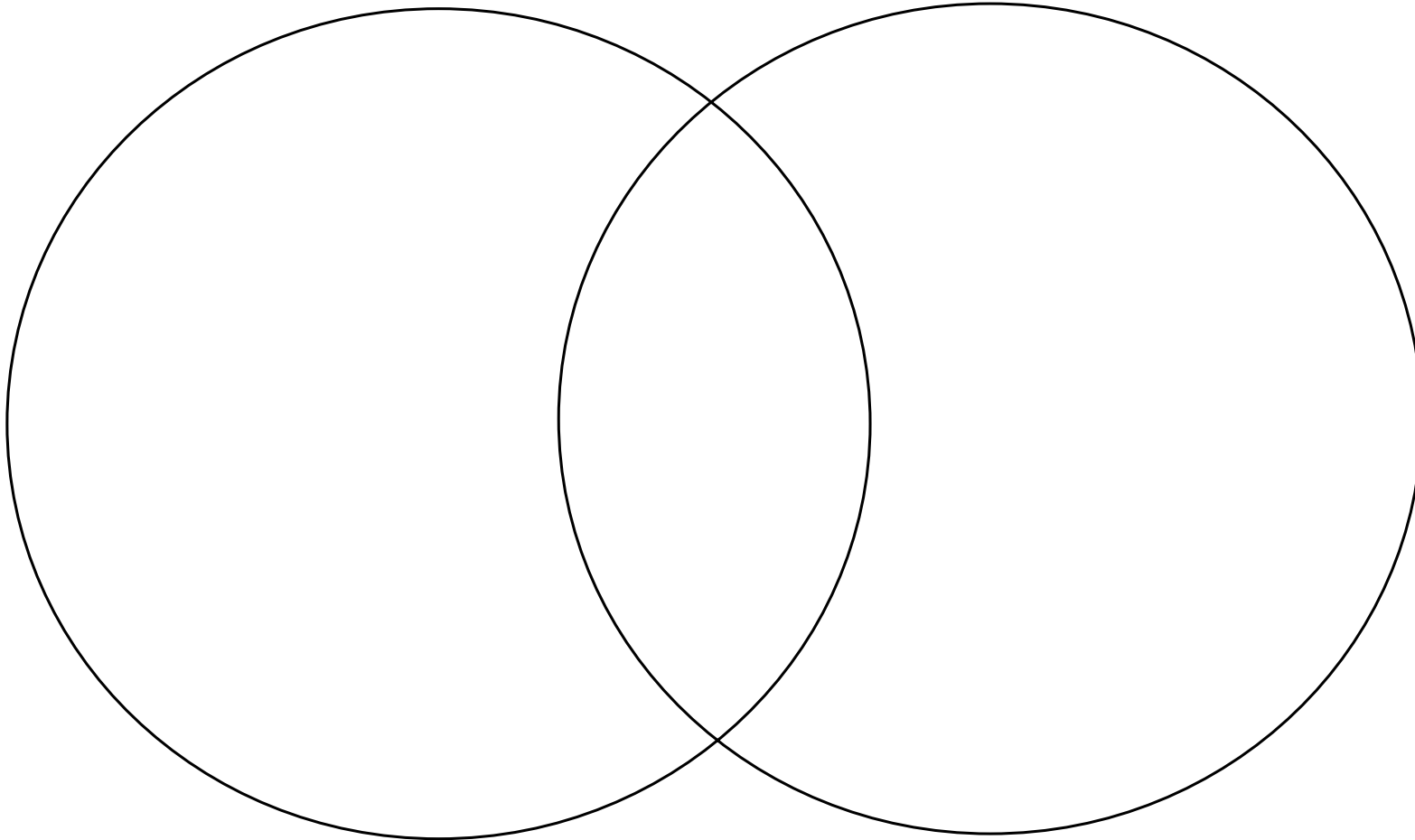Explain why it doesn't belong in the spell.

_____
_____
_____
_____
_____
_____
_____
_____

Data Management & Probability
Activity EIGHTEEN

Help Merlin sort his buttons into a DOUBLE Venn diagram.

Data Management & Probability
Activity NINETEEN

Help Merlin sort the plants and food into a DOUBLE Venn diagram.
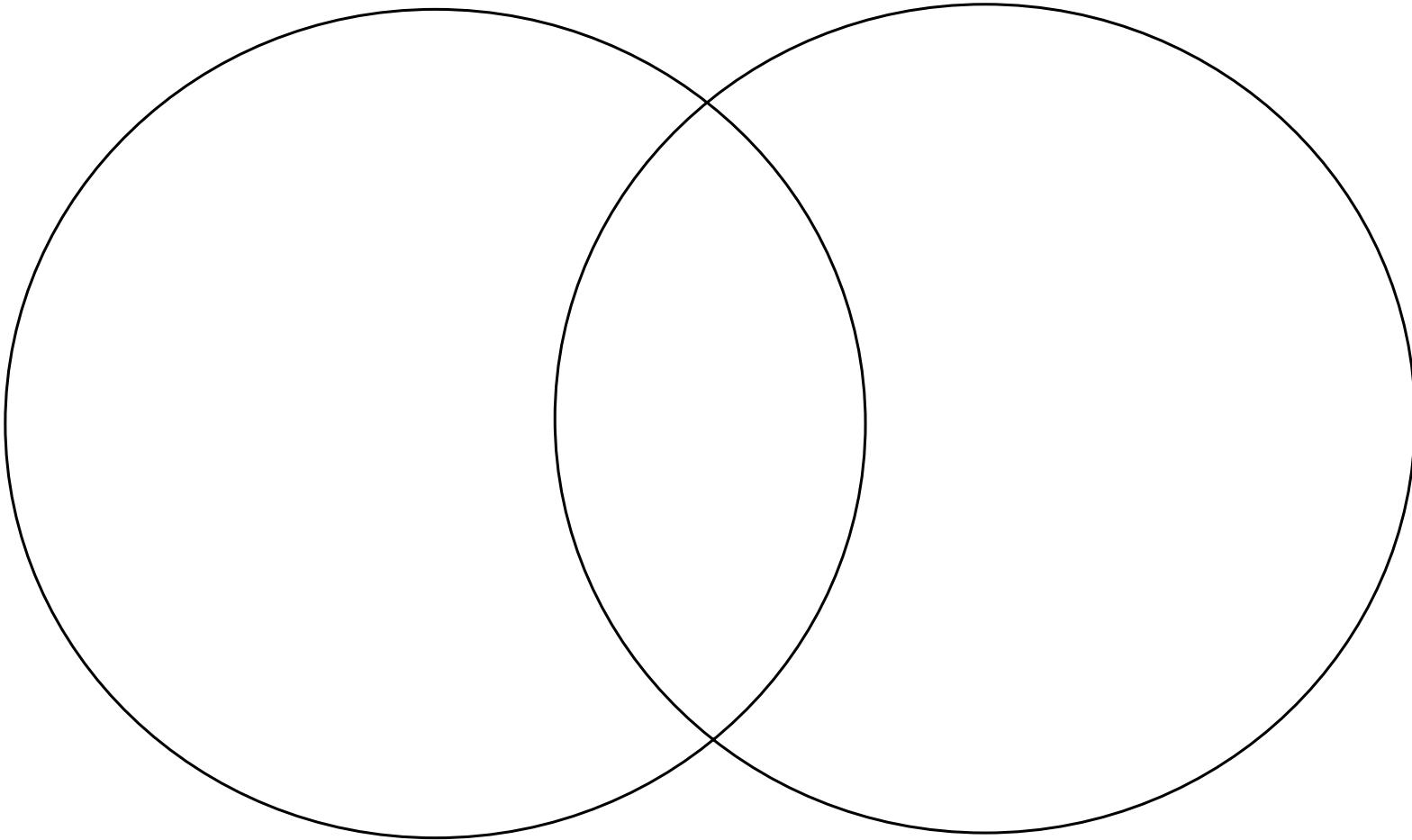
Merlin has a Problem!

Merlin has a problem. He is brewing a new spell and he needs three shapes. When he opens the package of shapes he finds four. Help Merlin pick which shape doesn't belong and doesn't go in the spell.
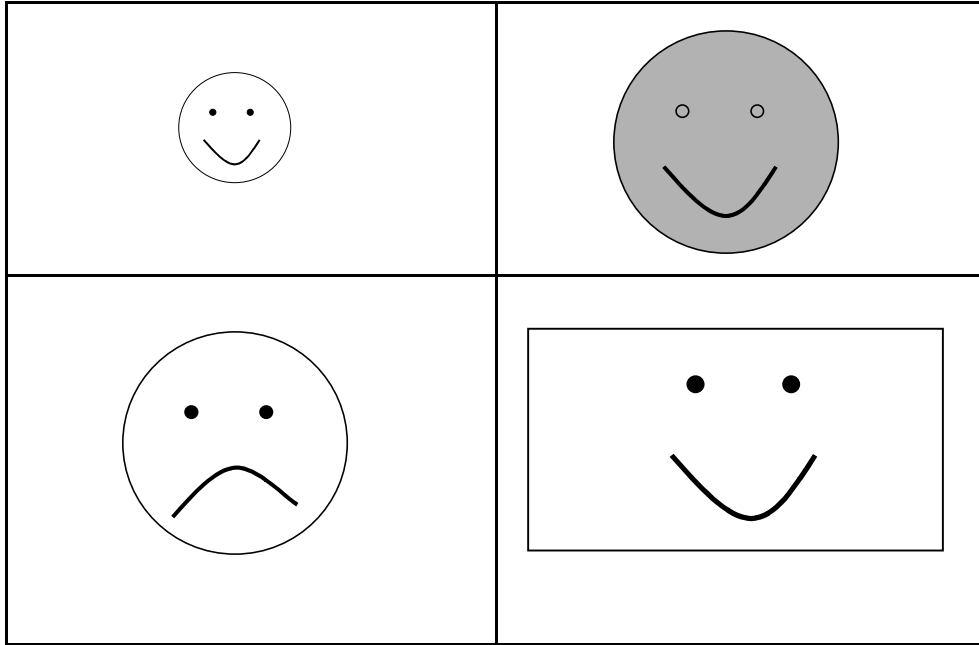
Circle the shape that doesn't belong.

Explain why it doesn't belong

_____
_____
_____
_____
_____
_____
_____
_____

Data Management & Probability
Activity TWENTY

Help Merlin sort the two-dimensional shapes into a DOUBLE Venn diagram.

Data Management & Probability
Activity TWENTY-ONE

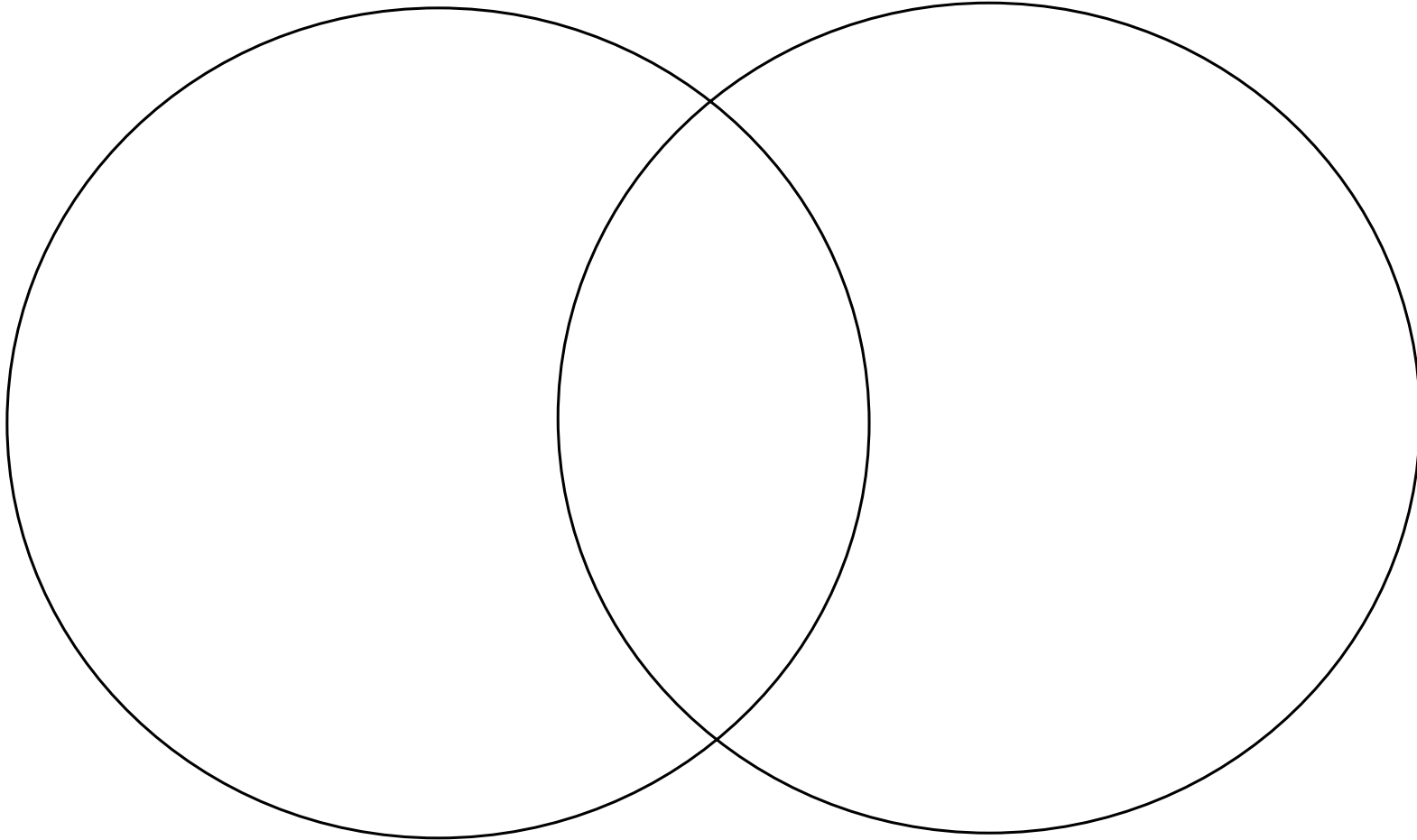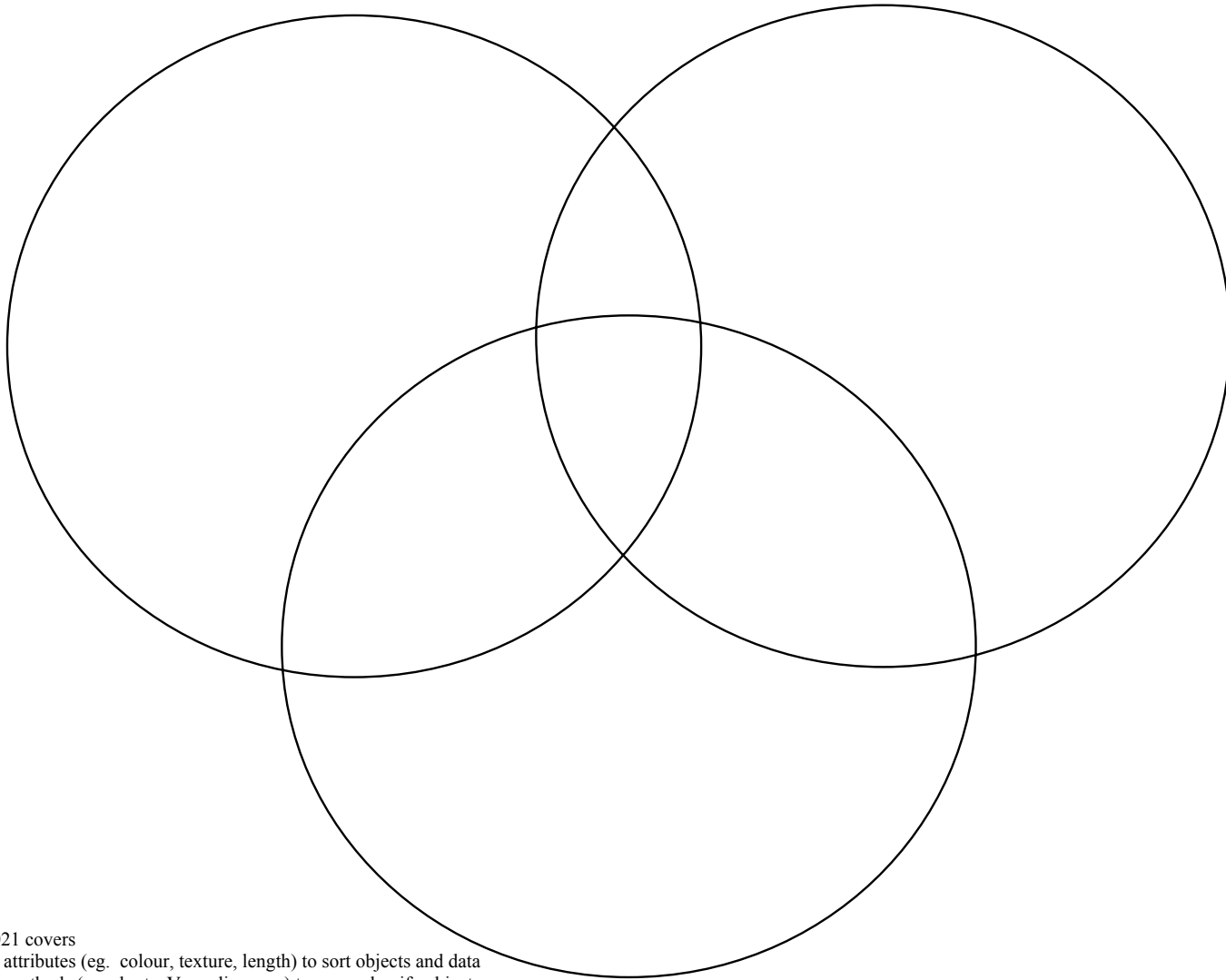Help Merlin sort the snowmen into a TRIPLE Venn diagram.

Data Management & Probability
Activity TWENTY-TWO

Today we are going to start studying probability. What is the definition of probability?

_____

Coins have two sides. One side is called "heads" because it has a picture of Queen Elizabeth's head and the other side is called "tails." Different types of coins have different tail pictures. All Canadian nickels have beavers.

Merlin has given you a magic coin to conduct some probability experiments.

Probability Experiment ONE

PREDICT which side you think is luckier? Circle one.

Heads   Tails

Toss the coin TEN times. Record your results in the tally chart below.

	Tally Marks	Total
Heads		
Tails		

Which side came up the most?_____

Did you predict correctly? _____

What is the probability of tossing a HEADS?_____

Probability Experiment TWO

PREDICT which side you think is luckier? Circle one.

Heads	Tails

Toss the coin TWENTY times. Record your results in the tally chart below.

	Tally Marks	Total
Heads		
Tails		

Which side came up the most?_____

Did you predict correctly? _____

What is the probability of tossing a HEADS?_____

Probability Experiment THREE

PREDICT which side you think is luckier? Circle one.

Heads	Tails

Toss the coin THIRTY times. Record your results in the tally chart below.

	Tally Marks	Total
Heads		
Tails		

Which side came up the most?_____

Did you predict correctly? _____

What is the probability of tossing a HEADS?_____

Is there an equal chance of tossing a heads or tails each time you toss the coin?

_____

Explain:

_____
_____
_____
_____
_____

Merlin has a problem!

Gweneth ordered an ice-cream cone with one scoop of chocolate, one scoop of strawberry and one scoop of vanilla. How many different ways could Merlin place the scoops on Gweneth's cone?

Explain your answer:

Data Management & Probability
Activity TWENTY-THREE

Today, Merlin has left you magic dice. He would like you to conduct some probability experiments with the die. Record your results in the tally charts provided and be sure to answer all the questions.

Probability Experiment ONE

Roll the die TEN times. Record it in the chart below.

Die	Tally Marks	Total
1		
2		
3		
4		
5		
6		

1) Which number was rolled the most?_____

2) Which number was rolled the least?_____

3) How many 2's and 5's altogether?_____

Probability Experiment TWO

Roll the die TWENTY times. Record it in the chart below.

Die	Tally Marks	Total
1		
2		
3		
4		
5		
6		

1) Which number was rolled the most?_____

2) Which number was rolled the least?_____

3) How many 3's and 6's altogether?_____

Probability Experiment THREE

Roll the die THIRTY times. Record it in the chart below.

Die	Tally Marks	Total
1		
2		
3		
4		
5		
6		

1) Which number was rolled the most?_____

2) Which number was rolled the least?_____

3) How many 1's and 4's altogether?_____

Merlin wants to know how many of each number you rolled altogether, in all three tally charts? Fill in the chart below.

Die	1	2	3	4	5	6
Altogether						

What do you think will be your luckiest number and why?

_____
_____
_____
_____

With a witness watching, roll your die and record what you received.

You rolled a

If you predicted correctly, write your name on the board.

Do you think there is an equal chance of receiving any number on the die? _____

Explain:

_____
_____
_____
_____
_____
_____

Data Management & Probability
Activity TWENTY-FOUR

Merlin has a Problem!

Merlin just received three new shirts and three new pants as a gift! He got a red shirt, a green shirt and a yellow shirt. The three pants he got were brown, black and blue. How many different combinations of shirts and pants could Merlin make into outfits?

Explain your solution:

Leap Frog

Directions:
1) This game is for TWO players.
2) You will need 6 red lima beans and 6 blue lima bean markers.
3) You will also need a pair of dice and the game board on the next page.
4) Each person will roll one die. The person with the highest roll will pick their lima bean marker colour and place ONE lima bean on any lily pad numbered 1 to 12.
5) The other person will place ONE of their lima beans on any lily pad numbered 1 to 12. BUT you can't put a lima bean on a number that has already been chosen.
6) Keep taking turns placing a lima bean on the numbered lily pads until they have all been filled up.
7) The first person will roll BOTH die. Add the die together. If the sum is equal to a lily pad where one of your markers is placed, you may move ONE square towards the fly.
8) The next person will repeat step six. Roll BOTH die. Add the numbers together. IF the sum is equal to a lily pad where the player's marker is placed they may move ONE square towards the fly.
9) Repeat until one player has moved all their lima beans to the other side and has caught all their flies.

Is this game fair? _____

How would you change the rules?

_____
_____
_____
_____
_____
_____
_____
_____

🪰 1	🪰 2	🪰 3	🪰 4	🪰 5	🪰 6	🪰 7	🪰 8	🪰 9	🪰 10	🪰 11	🪰 12
1	2	3	4	5	6	7	8	9	10	11	12
🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸

Data Management & Probability
Activity TWENTY-FIVE

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:
_____

Colour	Tally
RED	
BLUE	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Is there an equal chance of landing on the red side or the blue side?_____

4) Put the probability of landing on the red side into a fraction._____

5) Put the probability of landing on the blue side into a fraction._____

Data Management & Probability
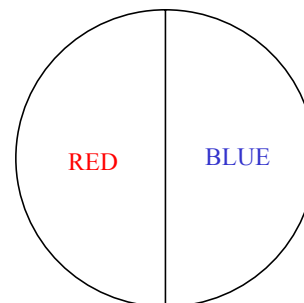# Activity TWENTY-SIX

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:
_____

Colour	Tally
RED	
BLUE	
YELLOW	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Is there an equal chance of landing on any colour?_____

4) Put the probability of landing on the red section into a fraction._____

5) Put the probability of landing on the blue section into a fraction._____

6) Put the probability of landing on the yellow section into a fraction._____
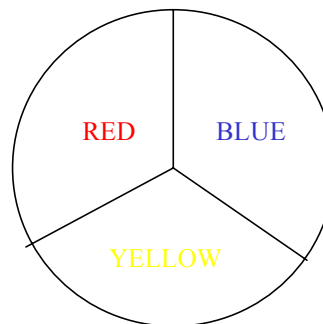
Data Management & Probability
Activity TWENTY-SEVEN

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:

_____

Colour	Tally
RED	
BLUE	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Why did you predict that colour? _____
_____

4) Is there an equal chance of landing on either red or blue?_____

5) Put the probability of landing on the red section into a fraction._____

6) Put the probability of landing on the blue section into a fraction._____

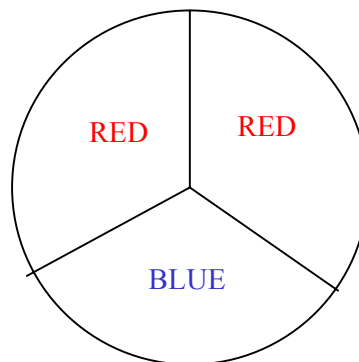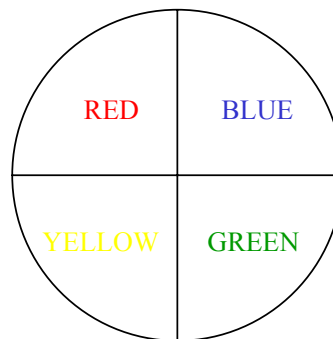# Data Management & Probability
Activity TWENTY-EIGHT

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:
_____

RED	BLUE
YELLOW	GREEN

Colour	Tally
RED	
BLUE	
YELLOW	
GREEN	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Is there an equal chance of landing on any colour?_____

3) Put the probability of landing on the red section into a fraction._____

4) Put the probability of landing on the blue section into a fraction._____

5) Put the probability of landing on the yellow section into a fraction._____

6) Put the probability of landing on the green section into a fraction._____

Grade 3 DMactivity028 covers:
D9: conduct simple probability experiments (eg. rolling a number cube, spinning a spinner) and predict the results
D11:predict the probability that an event will occur
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Data Management & Probability
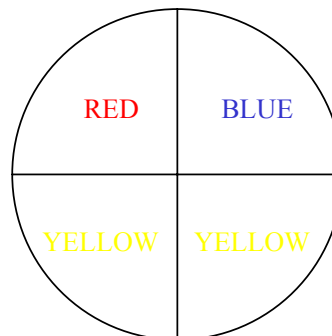## Activity TWENTY-NINE

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:

_____

RED	BLUE
YELLOW	YELLOW

Colour	Tally
RED	
BLUE	
YELLOW	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Why did you predict that colour? _____
_____

4) Is there an equal chance of landing on any colour?_____

5) Put the probability of landing on the red section into a fraction._____

6) Put the probability of landing on the blue section into a fraction._____

7) Put the probability of landing on the yellow section into a fraction._____

Data Management & Probability
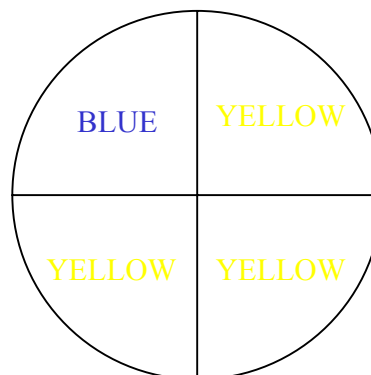## Activity THIRTY

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:

_____

BLUE	YELLOW
YELLOW	YELLOW

Colour	Tally
RED	
YELLOW	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Why did you predict that colour? _____
_____

4) Is there an equal chance of landing on either colour?_____

5) Put the probability of landing on the red section into a fraction._____

6) Put the probability of landing on the yellow section into a fraction._____

Data Management & Probability
Activity THIRTY-ONE

Merlin's Magical Jar of Insects
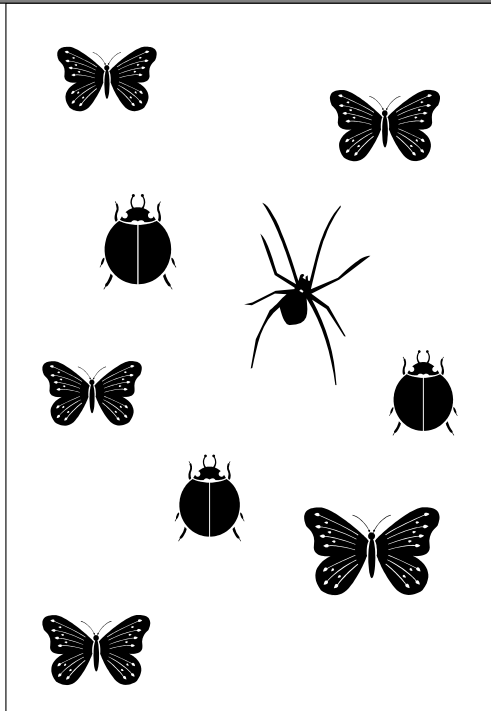
Using the words "POSSIBLE" or "IMPOSSIBLE," describe the possibility of pulling out each of the following insects from Merlin's Magical Jar of Insects.

What is the probability of pulling out a butterfly? _____

What is the probability of pulling out a ladybug?_____

What is the probability of pulling out a spider? _____
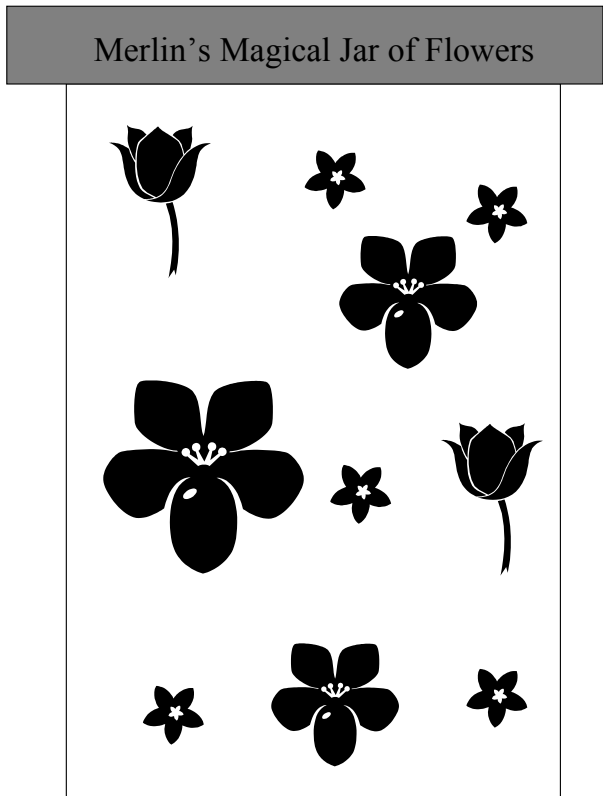
Data Management & Probability
Activity THIRTY-TWO

Merlin's Magical Jar of Flowers

Using the words "POSSIBLE" or "IMPOSSIBLE," describe the possibility of pulling out each of the following flowers from Merlin's Magical Jar of flowers.

forget-me not	lily pad	lily	flower

What is the probability of pulling out a tulip? _____

What is the probability of pulling out a lily pad?_____

What is the probability of pulling out a forget-me-not? _____

Data Management & Probability
Activity THIRTY-THREE

Merlin is up to his usual bag of tricks. In fact, he has TEN tricks in his bag. As a class, let's pull out one object at a time to see what tricks Merlin has and then place it back into the bag. Record what tricks we pulled out in the chart below:

1	2	3	4	5

From the data above, draw the TEN tricks you think Merlin has in his bag.

My Prediction of Tricks in Merlin's Bag

1	2	3	4	5
6	7	8	9	10

What makes you think this?

_____
_____
_____
_____

As a class, let's pull out all of the objects in Merlin's bag and record it in the chart below:

The Tricks in Merlin's Bag

1	2	3	4	5
6	7	8	9	10

How did your prediction compare with what was really in Merlin's bag?

_____

_____

_____

_____

What would be the most likely object to be pulled out? _____

Why?

_____

_____

What would be the least likely object to be pulled out? _____

Why?

_____

_____

Data Management & Probability
Activity THIRTY-FOUR

Merlin is up to his usual bag of tricks. In fact, he has TEN tricks in his bag. As a class, let's pull out one object at a time to see what tricks Merlin has and then place it back into the bag. Record what tricks we pulled out in the chart below:

1	2	3	4	5

From the data above, draw the TEN tricks you think Merlin has in his bag.

My Prediction of Tricks in Merlin's Bag

1	2	3	4	5
6	7	8	9	10

What makes you think this?

_____
_____
_____
_____

As a class, let's pull out all of the objects in Merlin's bag and record it in the chart below:

The Tricks in Merlin's Bag

1	2	3	4	5
6	7	8	9	10

How did your prediction compare with what was really in Merlin's bag?

_____
_____
_____
_____

What would be the most likely object to be pulled out? _____

Why?

_____
_____

What would be the least likely object to be pulled out? _____

Why?

_____
_____

Merlin has a Problem!

Gweneth has a dish of red and green jelly beans. Suppose Merlin closes his eyes and takes three jelly beans. How many different combinations of jelly bean colours (in any order) could he take?

Explain your answer: