

Maths

# Probability



## For Middle Primary

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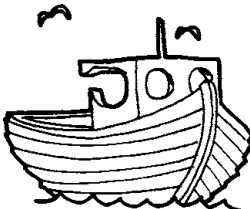


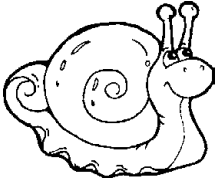
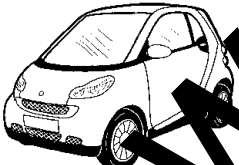
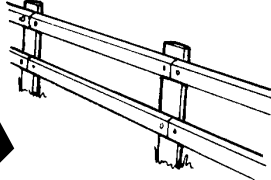
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# Probability

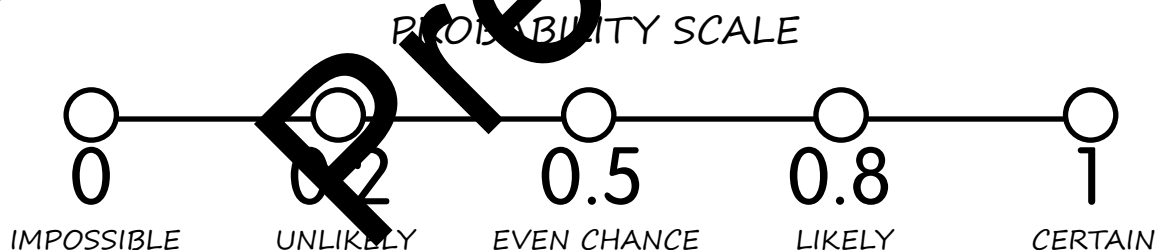
1

Probability measures how likely it is that something will happen. How likely or unlikely is it that you will see the following things today?

 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely
 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely	 <input type="checkbox"/> likely <input type="checkbox"/> unlikely

2

We can use a scale to describe probability.



Use five different colours to shade the likeliness of you doing the things listed below this week. Use the Probability Scale above.

riding a horse	playing a team game	running a marathon
reading a text	visiting a friend	going to church
eating prawns	cuddling a pet	having a spelling test
flying to Brazil	getting a haircut	getting a pat on the back
setting the table	wearing a yellow wig	buying a telescope

# My Probability Investigation

You are going to carry out a probability investigation using a standard deck of 52 playing cards. Inside a pack of cards there are: 13 clubs; 13 diamonds; 13 spades; 13 hearts. In each suit there is a: 2, 3, 4, 5, 6, 7, 8, 9, 10, jack, queen, king and ace.

## Predict!

- From a pack of 52 playing cards, what is the probability of you picking out the queen of clubs?

My prediction: \_\_\_\_\_

- After picking out 20 cards, how many times will you have picked out a card with a heart or diamond on it?

My prediction: \_\_\_\_\_

## Test Your Predictions!

- Now carry out your investigation. Pick out cards from a 52 deck. Record your results in the table below.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.

- How many times did you pick:

the queen of clubs?

the five of clubs?

a spade?

a jack?

the two of diamonds?

the six of hearts?

the ace of clubs?

the three of hearts?

a king?

a queen?

the four of diamonds?

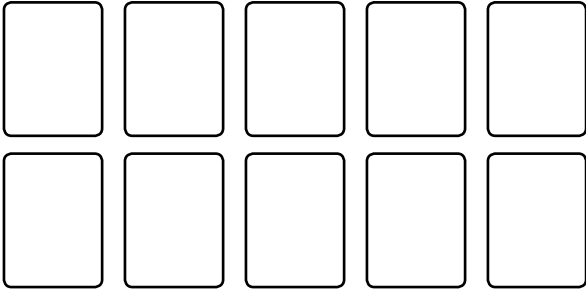
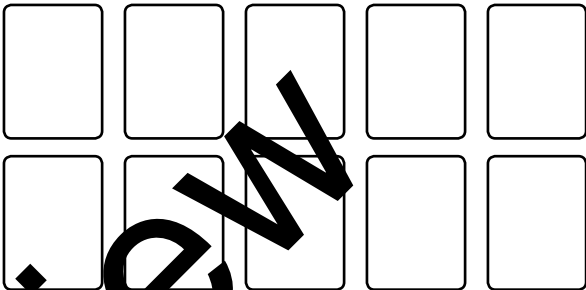
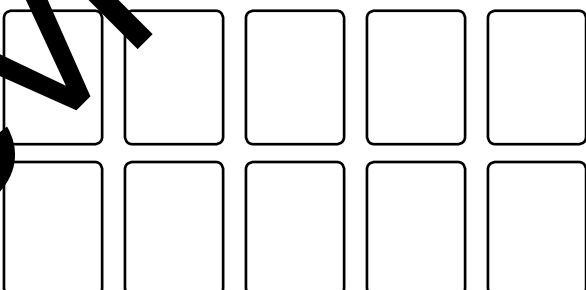
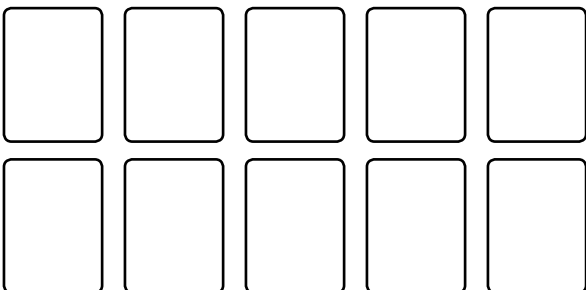
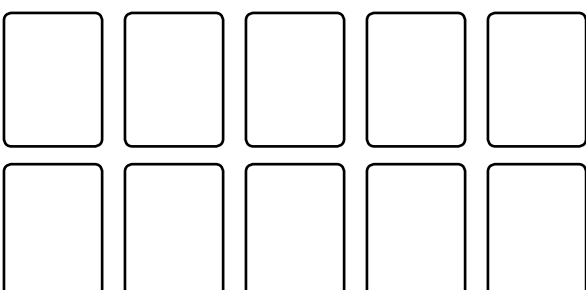
the seven of hearts?

- Did your predictions match the results in your table? What did you find out?

\_\_\_\_\_

# Chances

You have a mixture of blue, green, yellow and red cards in a bag. Complete the tasks below.

<p><b>1</b> Shade in the cards so that it is <b>highly likely</b> that you will pick a yellow card out of a bag. Use at least three different colours.</p>	
<p><b>2</b> Shade in the cards so that it is <b>likely</b> that you will pick a green card out of a bag. You must show all four colours.</p>	
<p><b>3</b> Shade in the cards so that it is <b>unlikely</b> that you will pick a blue card out of a bag. You must show all four colours.</p>	
<p><b>4</b> Shade in the cards so that it is <b>highly unlikely</b> that you will pick a red card out of a bag. You must show all four colours.</p>	
<p><b>5</b> Shade in the cards so that you have an <b>even chance</b> of picking a yellow card out of a bag. You must show all four colours.</p>	

# Chances Are...(Cards)

Look at the events in these images, then cut out the cards.



Catching the flu.



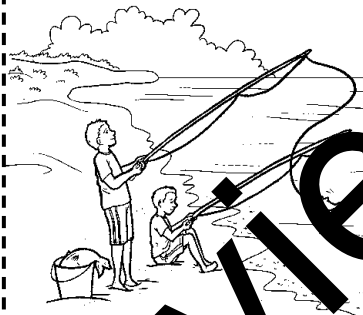
Meeting the Queen.



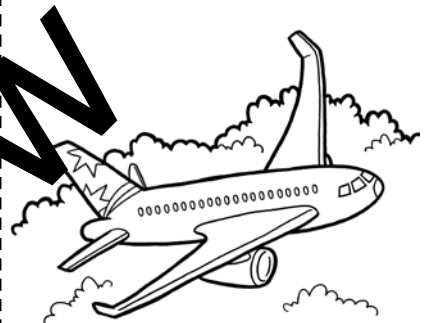
Eating a sandwich.



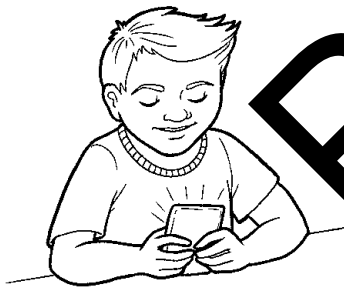
Spending time with the family.



Going fishing.



Travelling on a plane.



Playing on my iPad.



Going shopping with mum.



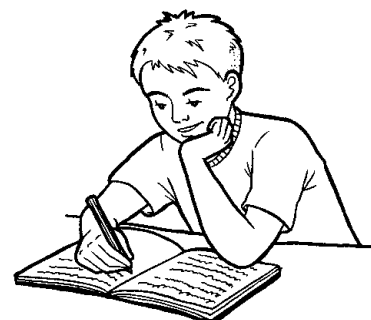
Cuddling a wombat.



Taking a bath.



Being told to be quiet by the teacher.



Doing my homework.

## Chances Are...(Ordering Task)

Order the cards from page 55 starting with the most likely event and ending with the least likely event. Compare your choices with a peer and be ready to justify your decisions. Then glue the cards in the grid below.

1.	2.	3.
4.	5.	6.
7.		9.
10.	11.	12.

## Answers

### Page 3

1. Students' responses 2. Students' responses

### Page 4

1) 1 chance in 52 (unlikely) 2) even chance 5) Students may notice that the likelihood of picking out a specific card is highly unlikely compared to a complete suit.

### Page 5

1. Eight shaded yellow cards. 2. Seven shaded green cards. 3. Four or less shaded blue cards. 4. Three or less shaded red cards. 5. Five shaded yellow cards.

### Page 6-7

Answers will vary according to students' experiences. Events such as "Meeting the Queen" and "Travelling on a plane" will fall on the least likely continuum, whereas "Eating a sandwich" and "Taking a bath" will fall into the most likely category.

Preview