

WA6MPSP1

Probability

Core + Challenge

Chance from 0 to 1

I can place chance events and chance words on a probability scale from 0 to 1.

Name: _____ Date: _____ Score: _____ / 58

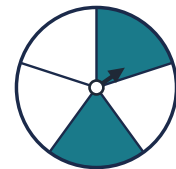
Key idea

Probability tells us how likely something is. We show it on a scale from **0** to **1**.

0 is **impossible**, **1** is **certain** and $\frac{1}{2}$ (0.5) is an **even chance**. Below $\frac{1}{2}$ is **unlikely**; above $\frac{1}{2}$ is **likely**.

Equally likely outcomes: probability = number of ways it can happen ÷ number of possible outcomes.

Example: 2 of the 5 equal parts are shaded. The probability of shaded is $\frac{2}{5} = 0.4$, so it is **unlikely**.



A

Warm up *shade, mark and write*

/ 16 marks

What is the probability that the spinner lands on a **shaded** part? Write a fraction. 1 mark each.

1



2



3

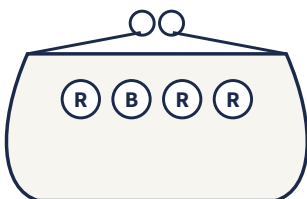


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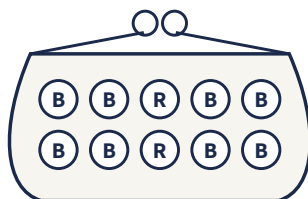


You take one counter without looking. Write the probability of taking a **red** (R) counter. 1 mark each.

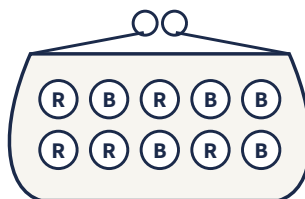
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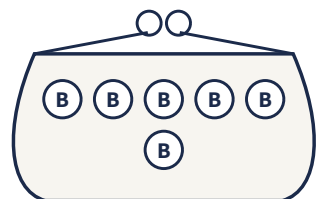
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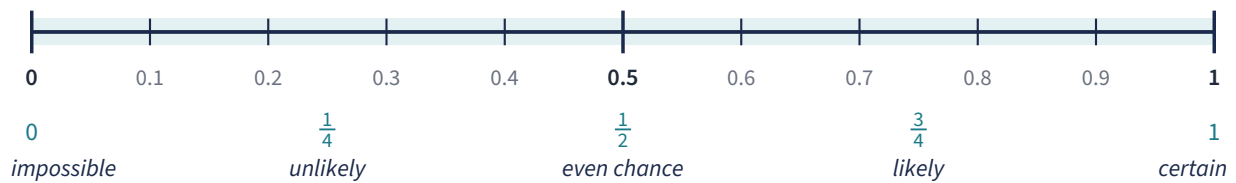


8



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Draw an arrow on the chance line for each event. Label it with its letter. 1 mark each.



- 9 A Rolling an **even** number on a normal die (1 to 6).
- 10 B Taking a green counter from a bag of 4 **green** counters.
- 11 C Spinning a **3** on a spinner with 4 equal parts numbered 1, 2, 3, 4.
- 12 D Rolling a number **bigger than 1** on a normal die.

Write **impossible**, **unlikely**, **even chance**, **likely** or **certain**. 1 mark each.

- 13 A die shows **less** than 5.
- 14 A coin lands on tails.
- 15 A day of the week ends in “day”.
- 16 A die shows a 6.

B Practise use the skill

/ 23 marks

- 1 Draw a line to match each chance word to a probability.

[2 marks]

- impossible •
- unlikely •
- even chance •
- likely •
- certain •

- 0.5
- 1
- $\frac{1}{5}$
- 0
- 0.9

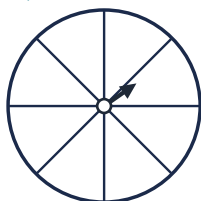
Chance from 0 to 1 · WA6MPSP1

- 2 A box holds **10** SmartRider cards: 4 student cards, 5 standard cards and 1 senior card. One card is taken without looking. Complete the table. [3 marks]

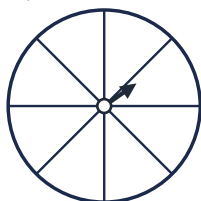
Event	Probability	Chance word
a) a student card		
b) a senior card		
c) not a senior card		

- 3 Shade each spinner so that the probability of landing on **shaded** is: a) $\frac{3}{8}$ b) 0.5 c) 0.75 [3 marks]

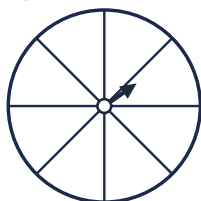
a)



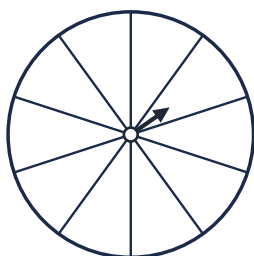
b)



c)

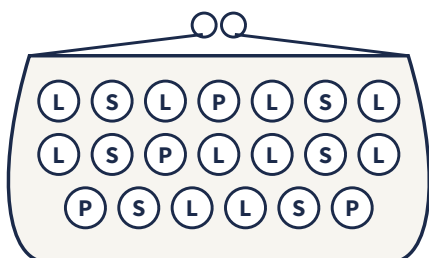


- 4 Write **R** (red), **B** (blue) or **Y** (yellow) in every part of this spinner so that: red is **likely**; yellow has a probability of **0.1**; blue is **more likely** than yellow but still **unlikely**. Then write the probability of red. [3 marks]



Answer: _____

- 5 At the school fete, a lucky dip bag holds **20** prizes: 10 lollies (L), 6 stickers (S) and 4 pencils (P). Ava takes one without looking. a) Write the probability of a **lolly** as a fraction and a decimal. b) Do the same for a **pencil**. c) Mark L and P on the chance line. [3 marks]



- a) _____
b) _____



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- 6 Mark these probabilities on the chance line. Then write them in order from **least** [2 marks]
likely to **most** likely. 0.3, $\frac{3}{4}$, 50%, $\frac{1}{10}$, 0.65



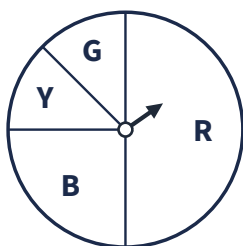
Order (least to most): _____

- 7 A normal die numbered 1 to 6 is rolled. Write each probability as a fraction. Then [3 marks]
mark it on the chance line with its letter. **A** rolling a 4 **B** rolling an odd number
C rolling a number less than 7

A: _____ **B:** _____ **C:** _____

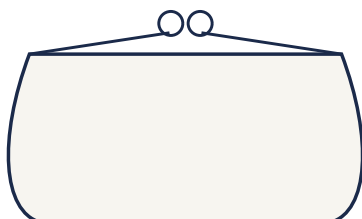


- 8 This spinner is **not** split into equal parts. **a)** Write the probability of landing on [2 marks]
each colour. **b)** Which colour is most likely? **c)** Which two colours are equally
likely?



Answer: _____

- 9 Draw counters in the empty bag so that: there are **10** counters; taking a blue (B) [2 marks]
counter has a probability of $\frac{2}{5}$; taking a red counter is **impossible**; all the other
counters are green (G). What is the probability of green?



Answer: _____

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C

Think it through *explain your thinking*

/ 10 marks

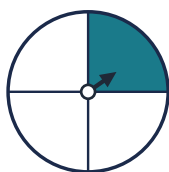
- 1 **True or false?** “I tossed a coin and got four tails in a row. So the next toss is **more likely** to be heads.” Explain. [2 marks]

- 2 **Always, sometimes or never true?** “If there are only two possible outcomes, each one has an even chance.” Give examples. [2 marks]

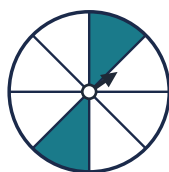
Circle one: **Always** / **Sometimes** / **Never**

- 3 Which spinner is the **odd one out**? Explain using probabilities. [2 marks]

A



B



C

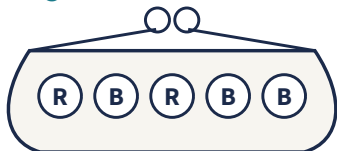


D

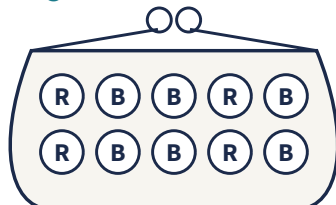


- 4 Bag A has 2 red and 3 blue counters. Bag B has 4 red and 6 blue counters. Mia says, “Bag B gives a **better** chance of red because it has more red counters.” What is the **same** and what is **different** about the bags? Is Mia right? [2 marks]

Bag A

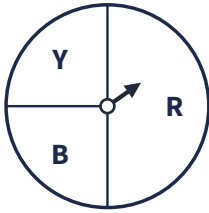


Bag B



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- 5 Sam says, “This spinner has **3** colours, so the chance of landing on red is $\frac{1}{3}$.” Do you agree with Sam? Explain. [2 marks]

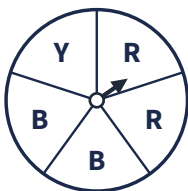


D Challenge *stretch yourself*

/ 9 marks

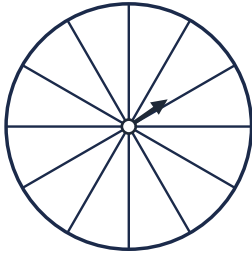
- 1 A bag holds **12** counters. Each counter is red or blue. Taking a red counter is **likely**, but its probability is **less than** $\frac{3}{4}$. **a)** Find **all** the possible numbers of red counters. **b)** Write the probability of red for each, in simplest form. **c)** Suppose the bag has **8** red counters. Liam adds 4 more red counters. Is red still less than $\frac{3}{4}$? Show how you know. [3 marks]

- 2 Leo's spinner has 5 equal parts: R, R, B, B, Y. He says, “There are 3 colours, so each colour has a probability of $\frac{1}{3}$.” **a)** Explain why Leo is wrong. Write the correct probability of each colour. **b)** Mark R, B and Y on the chance line. **c)** Change the letter in **one** part so that red is the **most** likely colour and blue and yellow are **equally** likely. [3 marks]



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- 3 a) Write **R**, **B**, **G** or **Y** in each part so that: red is **twice** as likely as blue; blue and green are **equally** likely; yellow has a probability of $\frac{1}{3}$. **b)** Explain why this **cannot** be done if yellow must have a probability of $\frac{1}{4}$. [3 marks]



Answer: _____

How did I go?Warm up ____ / 16 Practise ____ / 23 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 58**Want help with Year 6 maths? Our tutors make it click. **Book a free trial class at edulift.com.au**