

Probability – 2024 Checkpoint Primary Math**1. 2024/Paper 1_stage 5/No.22**

- Safia has nine digit cards.
 Her cards are numbered 1 to 9
 She places them randomly in a line.
 She turns over four cards to see the digits.

1 2 3 4 5 6 7 8 9
 less than 5 greater than 5

8	1	3	5				
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Safia says,

'The next number is more likely to be greater than 5 than less than 5'

Tick (✓) to show if Safia is correct.

Yes

☒

No

☐

Explain how you know.

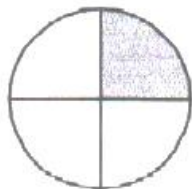
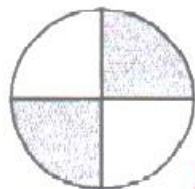
There are more numbers greater than 5 left compared to less than 5.

[1]

2. 2024/Paper 1_stage 5/No.24

Here are drawings of four spinners.

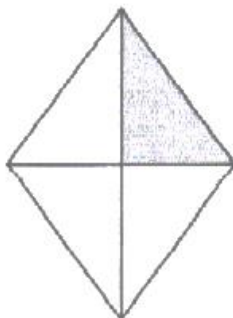
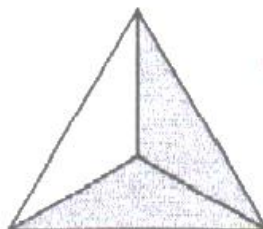
$$p(\text{shaded}) = \frac{1}{4}$$

**A****B**

$$p(\text{shaded}) = \frac{2}{4} = \frac{1}{2}$$

(even chance)

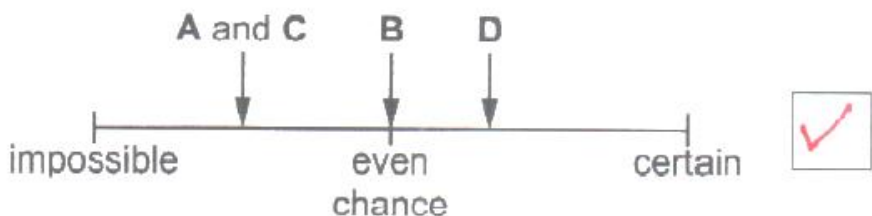
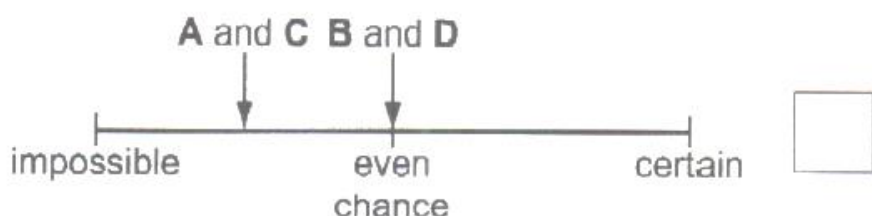
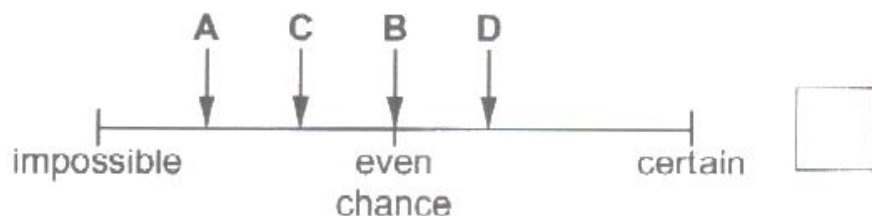
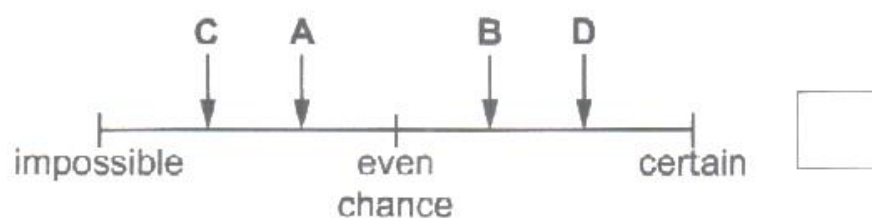
$$p(\text{shaded}) = \frac{1}{4}$$

**C****D**

$$p(\text{shaded}) = \frac{2}{3}$$

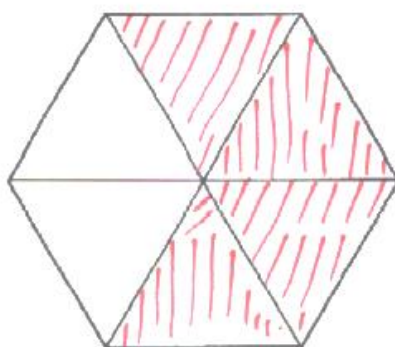
Ahmed wants to land on a shaded section when he spins a spinner.
He marks the likelihood of landing on a shaded section on a likelihood scale.

(a) Tick (✓) the scale that shows the correct likelihood marked for each spinner.



[1]

(b) Here is a new spinner.



$$\frac{2}{3} = \frac{4}{6}$$

Ahmed says,

'Spinner D and this spinner are equally likely to spin a shaded section.'

Shade the new spinner to make his statement correct.

Shade 4 sections of the new spinner.

[1]

3. 2024/Paper 1_stage 5/No.30

Eva has five bags.

Each bag contains only black and white beads.



Eva picks one bead at random from a bag.

Write the letter of the bag where she is **most likely** to pick a black bead.

$$P(\text{black from A}) = \frac{1}{2}$$

..... **B** [1]

$$P(\text{black from B}) = \frac{2}{3}$$

$$P(\text{black from C}) = \frac{1}{3}$$

$$P(\text{black from D}) = \frac{2}{4} = \frac{1}{2}$$

$$P(\text{black from E}) = \frac{3}{5}$$

Greatest probability = $\frac{2}{3}$

So she is most likely to pick from bag B.

4. 2024/Paper 2_stage 5/No.29

Safia and Lily each have the same number of sweets.

Some of the sweets have soft centres and some of the sweets have hard centres.



Safia has 27 sweets with hard centres.

Calculate the number of sweets with hard centres that Lily has.

$$\text{Safia : Number of Sweets with Soft Centres} = \frac{27}{3} = 9$$

$$\text{Total number} = 27 + 9 = 36$$

$$\text{Lily : Total number of sweets} = 36$$

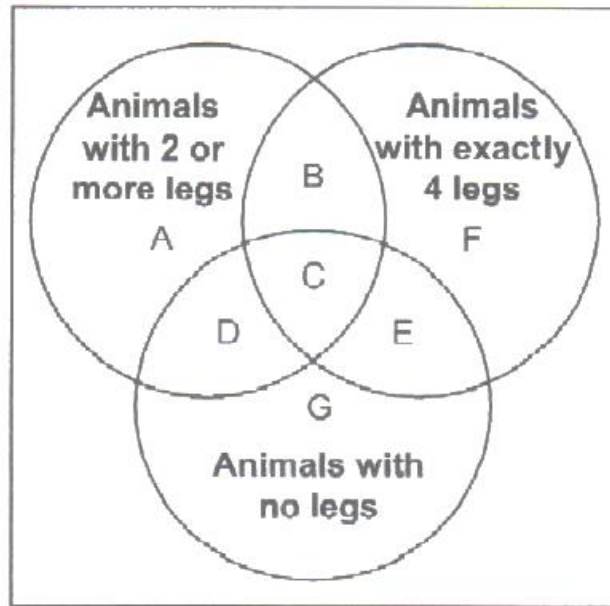
$$\begin{aligned} \text{Number of Sweets} &= \frac{1}{3} \text{ of } 36 \\ \text{with soft centres} & \end{aligned}$$

$$\begin{aligned} &= \frac{1}{3} \times 36 \dots\dots\dots 24 [2] \\ &= 12 \end{aligned}$$

$$\begin{aligned} \text{Number of Sweets} &= 36 - 12 \\ \text{with hard centres} &= 24 \end{aligned}$$

5. 2024/Paper 2_stage 5/No.30

Here is a Venn diagram.



Write the letters of **all** the sections of the Venn diagram that must be empty.

No elements

C, D, E and F

[1]

6. 2024/Paper 2_stage 5/No.31

Hassan has 8 counters.

He picks a counter at random.

He is equally likely to pick a 1 or 2

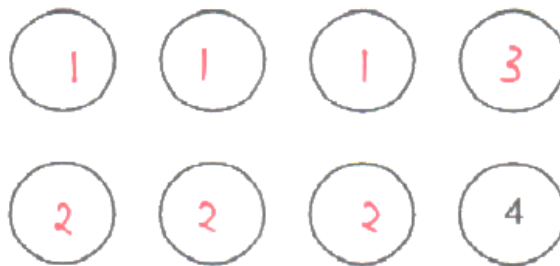
There is an even chance of picking an odd number.

The chance of picking a 4 is less likely than the chance of picking a 1 or a 2

$$P(1) = P(2) \\ P(\text{odd number}) = \frac{1}{2} = \frac{4}{8}$$

Write one number on each counter to make the statements correct.

One has been done for you.



4 counters have odd numbers and 4 counters have even numbers.

[1]