PROBABILITY

A OUTCOMES

A.1 LISTING ALL POSSIBLE OUTCOMES

MCQ 1: Look at this die: . If you roll it, what are all the possible outcomes?

- \Box 1, 2, 3, 4, 5
- \Box 1, 2, 3, 4, 5, 6, 7
- \Box 1, 2, 3, 4, 5, 6

MCQ 2: Imagine a bag with balls: 2 red, 1 blue, and 3 green. If you pick one ball without looking, what are all the possible colors you could get?

Bag

- \square Red, Blue, Green
- \square 2 Red, 1 Blue, 3 Green
- $\Box\,$ Red, Red, Blue, Green, Green, Green



MCQ 3: Look at this spinner: the possible letters it could land on?

 \Box A, B

 \Box A, C

 \Box A, B, C

MCQ 4: If you pick a letter from the word "PAPA," what are all the possible letters you could pick?

 \Box P, A, P, A

 \Box P, A, P

 \Box P, A



MCQ 5: Look at this spinner: the possible numbers it could land on?

- $\Box \ 3, 5, 7, 7 \\ \Box \ 3, 5, 5, 7$
- $\Box 3, 5, 7$

MCQ 6: A couple is expecting a baby. They don't know if it will be a boy or a girl. What are all the possible outcomes for the baby's gender?

 \Box Boy

 \Box Girl, Boy

 \Box Girl

MCQ 7: If you pick a letter from the word "APPLE," what are all the possible letters you could pick?

P, A, L, E
P, P, A, L, E
A, P, L
A, L, E, P, P

MCQ 8: If you pick a letter randomly from the word "BANANA," what are all the possible letters you could pick?

 \Box B, N, A

- \Box B, A, N, A, N, A
- \Box A, B, N, A, B, N
- **B** EVENTS

B.1 IDENTIFYING OUTCOMES FOR DIE-ROLLING EVENTS

MCQ 9: If you roll a die, what are the outcomes for the event "getting a 3"?

 $\Box 1, 3, 5 \\ \Box 2, 3, 4 \\ \Box 1, 2, 3$

 \Box 3

MCQ 10: If you roll a die, what are the outcomes for the event "getting a 5 or 6"?

- $\Box 5, 6$
- \Box 4, 5, 6
- \Box 1, 2, 3
- \Box 3, 4, 5

MCQ 11: If you roll a die, what are the outcomes for the event "not getting a 6"?

 \Box 2, 3, 4

 \Box 1, 2, 3, 4, 5, 6

 \Box 1, 2, 3, 4, 5

 \Box 1, 3, 5

MCQ 12:	If you roll a die, what are the outcomes for the even	t
"getting a i	umber greater than or equal to 4"?	

\Box 1, 2, 3	\Box 1, 3, 5,
\Box 4, 5, 6	$\Box 0$
\Box 3, 4, 5	$\Box 2, 4, 6,$
\Box 2, 3, 4	$\Box 1, 2, 3,$

MCQ 13: If you roll a die, what are the outcomes for the event "even number"?

 \Box 1, 3, 5

 \Box 2, 4, 6

 \Box 1, 2, 3, 4, 5, 6

 \Box 2, 3, 4, 5

CASINO **B.2** IDENTIFYING **OUTCOMES** IN Δ SPINNER

MCQ 14: If you spin the spinner below, what are the outcomes for the event "getting a 2"?



- $\Box 2$
- \Box 1, 2, 3

 \Box 2, 4, 6

 \Box 0, 1, 2





 \Box 1, 2, 3, 4

- \Box 0, 1, 2, 3, 5, 6, 7, 8
- \Box 2, 4, 6, 8
- \Box 4, 5, 6

MCQ 16: If you spin the spinner below, what are the outcomes for the event "red"?



1, 3	, 5,	7
0		
2, 4	, 6,	8
1.2	. 3.	4





0, 1	1, :	3
2, 4	1, (6, 8
1, 2	2, 3	3, 4
1, 3	3, 8	5, 7

WORDS С USING то DESCRIBE PROBABILITY

C.1 FINDING THE PROBABILITY IN A DRAWING **EXPERIMENT**

MCQ 18: What is the chance of picking a red candy from a bag with 4 red candies and 4 blue candies?



Choose one answer:

- \Box Impossible
- \Box Less Likely
- \Box Even Chance
- \Box Most Likely
- \Box Certain

MCQ 19: What is the chance of picking a blue candy from a bag with 4 red candies and 4 blue candies?





Choose one answer:

 \Box Impossible

- \Box Less Likely
- $\Box\,$ Even Chance
- \Box Most Likely
- \Box Certain

MCQ 20: What is the chance of picking a blue candy from a bag with 9 red candies and 1 blue candy?



Choose one answer:

- \Box Impossible
- \Box Less Likely
- $\Box\,$ Even Chance
- \Box Most Likely
- \Box Certain

MCQ 21: What is the chance of picking a red candy from a bag with 9 red candies and 1 blue candy?



Choose one answer:

 \Box Impossible

- \Box Less Likely
- $\Box\,$ Even Chance
- \Box Most Likely
- \Box Certain

C.2 FINDING THE PROBABILITY IN A DICE EXPERIMENT

MCQ 22: What is the chance of getting a 3 when you roll a die?



Choose one answer:

- \Box Impossible
- \Box Less Likely
- $\Box\,$ Even Chance
- \Box Most Likely
- \Box Certain

MCQ 23: What is the chance of **not** getting a 3 when you roll a die?

/-	•	/
•	•	•
•	•	

Choose one answer:

- \Box Impossible
- $\Box\,$ Less Likely
- $\Box\,$ Even Chance
- \Box Most Likely
- \Box Certain

MCQ 24: What is the chance of getting an even number (2, 4, or 6) when you roll a die?



Choose one answer:

- \Box Impossible
- \Box Less Likely
- $\Box\,$ Even Chance
- $\hfill\square$ Most Likely
- \Box Certain

MCQ 25: What is the chance of getting a 7 when you roll a die?





Choose one answer:

- \Box Impossible
- \Box Less Likely
- \Box Even Chance
- $\hfill\square$ Most Likely
- $\Box\,$ Certain

D USING NUMBERS TO QUANTIFY PROBABILITY

D.1 DESCRIBING PROBABILITIES WITH WORDS

MCQ 26: The probability of winning a game is $\frac{1}{10}$. Find the word to describe this probability.

 \Box Impossible

- \Box Less Likely
- \Box Even Chance
- \Box Most Likely
- \Box Certain

MCQ 27: The probability of winning a game is $\frac{4}{5}$. Find the word to describe this probability.

 \Box Impossible

 \Box Less Likely

- \Box Even Chance
- \Box Most Likely
- \Box Certain

MCQ 28: The probability of winning a game is $\frac{1}{2}$. Find the word to describe this probability.

- \Box Impossible
- \Box Less Likely
- \Box Even Chance
- \square Most Likely
- \Box Certain

MCQ 29: The probability of winning a game is 0. Find the word to describe this probability.

- \Box Impossible
- \Box Less Likely
- \Box Even Chance
- \Box Most Likely
- \Box Certain

MCQ 30: The probability of winning a game is 1. Find the word to describe this probability.

- \Box Impossible
- \Box Less Likely
- \Box Even Chance
- \Box Most Likely
- \Box Certain

D.2 MAKING DECISIONS USING PROBABILITIES

MCQ 31: Louis advises you to play because the probability of winning this game is $\frac{3}{4}$. Do you follow his advice?

 \Box Yes

 \Box No

MCQ 32: Louis advises you to play because the probability of winning this game is $\frac{1}{4}$. Do you follow his advice?

 \Box Yes

 \square No

MCQ 33: The probability of succeeding a penalty is $\frac{1}{2}$ for Louis and $\frac{3}{4}$ for Hugo. Which player do you choose to take the penalty?

- \Box Louis
- □ Hugo

MCQ 34: The probability of succeeding a penalty is $\frac{1}{4}$ for Louis and $\frac{3}{5}$ for Hugo. Which player do you choose to take the penalty?

- \Box Louis
- 🗆 Hugo

E CALCULATING PROBABILITIES

E.1 CALCULATING PROBABILITIES

Ex 35: A ball is selected at random from a bag containing a total of 2 red balls and 3 blue balls.

Calculate the probability that the selected ball is a red ball.



Ex 36: A ball is selected at random from a bag containing a total of 2 red balls and 3 blue balls.

Calculate the probability that the selected ball is a blue ball.

 $P(\text{"choosing a blue ball"}) = \square$

Ex 37: A fruit is selected at random from a basket containing a total of 3 apples, 2 oranges, and 5 bananas.

Calculate the probability that the selected fruit is an apple.





Ex 38: In our class, there are 10 students including you. What is the probability the teacher selects you when the teacher chooses a student at random?



E.2 CALCULATING PROBABILITIES ON A CASINO SPINNER

Ex 39: You spin the casino spinner shown below. Calculate the probability of the event "getting a 2".



Ex 40: You spin the casino spinner shown below. Calculate the probability of the event "not getting a 4".







Ex 42: You spin the casino spinner shown below. Calculate the probability of the event "getting an odd number".



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