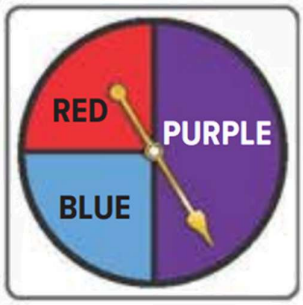
أوراق عمل مراجعة الوحدة السابعة Probability منهج ريفيل

المزيد من الملفات بحسب الصف العاشر المتقدم والمادة رياضيات في الفصل الثاني	
1	أسئلة وزارية شاملة من المحيط والزوايا إلى المعادلات والمساحات
2	مذكرة هندسة الدوائر ومفاهيمها الرئيسية
3	مراجعة شاملة لوحدة الدائرة
4	تمارين موضوعية الدوائر الحنفى
5	مراجعة شاملة لمفاهيم هندسة الدائرة مع الحلول

Topic: Sample Spaces 1

Worksheet

Question 1: What is the sample space of the spinner.



A. {red, purple}

B. {purple, blue, purple}

C. {red, blue}

D. {red, purple, blue}

Question 2: A fair die is tossed, what is the sample space for the event of rolling a prime number.

A. {2, 3, 5}

B. {1, 3, 5}

C. {2, 4, 6}

D. {1, 2, 3, 4, 5, 6}

Question 3: Kembe has a black hat and a red hat. He chooses one hat for each day, Saturday and Sunday. Represent the sample space for this experiment.

A. {RR, BB}

B. {BB, BR, RB}

C. {RR, RB, BR, BB}

D. {BB, RR, BR}

Topic: Sample Spaces 2

Worksheet

Question 1: A geometry teacher always breaks her class up into the red, yellow, and blue groups for class projects. Represent the sample space for the next two class projects by making an organised list.

A. {RR, RY, RB}

B. {RR, YY, BB}

C. {RR, RY, RB, YR, YY, YB, BR, BY, BB}

D. {RY, RB, YR, YB, BR, BY}

Question 2: Classify this sample space: An object is thrown into the air and its height is recorded in centimetres.

A. Finite discrete.

B. Finite continuous.

C. Infinite discrete.

D. Infinite continuous.

Question 3: Classify this sample space: A spinner with red green and blue is spun until red is obtained.

A. Finite discrete.

B. Finite continuous.

C. Infinite discrete.

D. Infinite continuous.

Topic: Sample Spaces 3

Worksheet

Question 1: What are the total possibility of creating a unique cone ice cream from **two** difference cone choices, **three** different ice cream flavours and **five** different toppings.

A. 6

B. 10

C. 15

D. 30

Question 2: A sneaker company lets you customize your own sneaker on their website. Using their most popular sneaker as the base, you have the option to customise the colour of each part of the sneaker. How many different customisations can be created?

A. 4,844,160

B. 3,412,520}

C. 2,402,940

D. 642,660

Topic: Probability and Counting 1

Worksheet

Question 1: Let A be the event of the spinner landing on a blue section, and let B be the event of the spinner landing on a section with a number divisible by 3. Find $A \cap B$.

A. $A \cap B = \{7, 15\}$

B. $A \cap B = \{3, 9, 15\}$

C. $A \cap B = \{15\}$

D. $A \cap B = \{3, 7, 9, 15\}$

Question 2: Let A be the event of the spinner landing on a blue section, and let B be the event of the spinner landing on a section with a number divisible by 3. Find $A \cup B$.

A. $A \cup B = \{7, 15\}$

B. $A \cup B = \{3, 9, 15\}$

C. $A \cup B = \{15\}$

D. $A \cup B = \{3, 7, 9, 15\}$

Topic: Probability and Counting 2

Worksheet

Question 1: The complement for an event A is $P(A') = 1 - P(A)$.

A. True

B. False

Question 2: The harvest fair sold 967 raffle tickets for a chance to win a new TV. Find each probability of not winning the TV with the given number of tickets. Choose the correct answers and complete the table.

Number of tickets	Probability of Not Winning
20	
200	
100	
1	

A. 79%

B. 90%

C. 98%

D. 99.9%

Topic: Probability with Permutations and Combinations 1

Worksheet

Question 1: Five geometry students are asked to randomly choose a polygon and describe its properties. What is the probability that the first three students choose hexagon, the pentagon and the triangle in that order.

A. $\frac{1}{20}$

B. $\frac{1}{40}$

C. $\frac{1}{60}$

D. $\frac{1}{80}$

Question 2: Describe the permutation of 5 tracks taken 3 at a time.

A. ${}_nP_r$

B. ${}_3P_5$

C. ${}_0P_5$

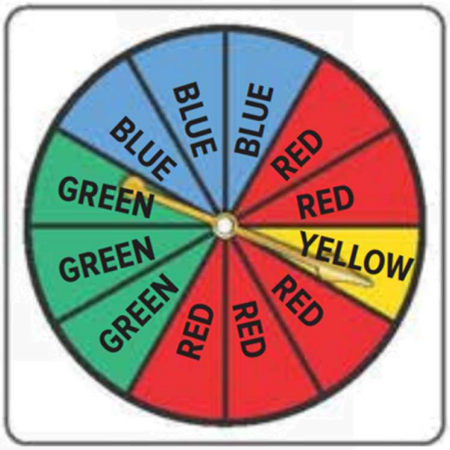
D. ${}_5P_3$

A.

Topic: Probability with Permutations and Combinations 2

Worksheet

Question 1: The physics team is holding a game night fundraiser. To win a grand prize in a particular game, you must spin the spinner four times and land on blue, red, green, and yellow, in that order. What is the probability that you will spin the winning sequence.



A. $\frac{1}{25,480}$

B. $\frac{1}{74,260}$

C. $\frac{1}{92,890}$

D. $\frac{1}{110,880}$

Question 2: A lattice is a point at the intersection of two or more grid lines in a coordinate plane. If two lattice points are chosen randomly in rectangle ABCD, including its sides, the probability that they are in the rectangle WXYZ, including its sides is

A. 19%

B. 39%

C. 63%

D. 99%

Topic: Probability and the Multiplication Rule 1

Worksheet

Question 1: Paola's weather app tells her that there is a 20% chance of rain on Tuesday and a 50% chance of rain on Wednesday. What is the probability that it will rain on both Tuesday and Wednesday.

A. 10%

B. 20%

C. 25%

D. 50%

Question 2: Determine whether the events are dependent or independent.

i) Of the $100 that Rei has to spend; she wants to spend $59 on a blouse and $44 on some jeans.

A. Dependent event.

B. Independent event.

ii) Rei asks each of three store associates which handbag they prefer.

A. Dependent event.

B. Independent event.

iii) Rei purchases a handbag and a belt.

A. Dependent event.

B. Independent event.

Topic: Probability and the Multiplication Rule 2

Worksheet

Question 1 Determine whether the events are dependent or independent.
In a standard deck of cards, a queen is drawn and not replaced, then another queen is drawn.

A. Dependent event.

B. Independent event.

Question 2: $P(B/A)$ indicates the probability of event B after the event B has already occurred.

A. True.

B. False.

Question 3: On a math test, 5 out of 20 students got all the questions correct. If three students are chosen at random without replacement, what is the probability that all three got all the questions correct on the test?.

A. 0.25%

B. 0.5%

C. 0.9%

D. 1.75%

Topic: Probability and the Addition Rule 1

Worksheet

Question 1: If two events cannot happen at the same time, then they are said to be mutually exclusive. These events have no common outcomes.

A. True

B. False

Question 2: A card is drawn from a standard deck of cards; determine whether these scenarios are mutually exclusive or not mutually exclusive.

i) Drawing a 7 or a Jack.

A. Mutually exclusive.

B. Not mutually exclusive.

ii) Drawing an Ace and a club.

A. Mutually exclusive.

B. Not mutually exclusive.

iii) Drawing two picture cards.

A. Mutually exclusive.

B. Not mutually exclusive.

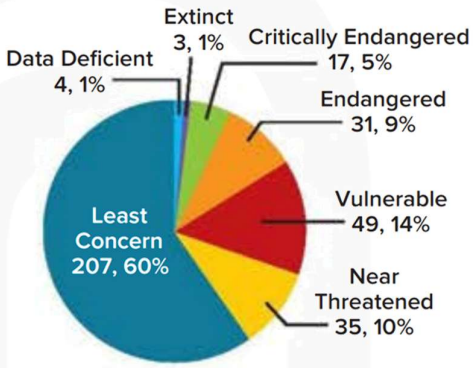
Question 3: Of the more that 79,800 species on a Red List of Threatened Species, seabirds are particular interest because they are indicators of broader marine health issues. The circle graph shows the proportion of seabird species in each Red List category. What is the probability that a randomly selected species of seabird is on the critically endangered list or not endangered list?

A. 7%

B. 14%

C. 20%

D. 25%



Topic: Probability and the Addition Rule 2

Worksheet

Question 1: If two events A and B are not mutually exclusive, then $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$.

A. True

B. False

Question 2: A polygon is chosen at random. Find the probability of each set of events.

i) Choosing a figure that has more than 4 lines of symmetry or more than 7 sides.

A. 25%
B. 37.5%
C. 75%
D. 87.5%

ii) Choosing a figure that has more than 15 diagonals or a total interior angle measure greater than 900°.

A. 25%
B. 37.5%
C. 75%
D. 87.5%

iii) Choosing a figure that has more than 2 pairs of parallel sides or at least 1 diagonal.

A. 25%
B. 37.5%
C. 75%
D. 87.5%

Topic: Conditional Probability

Worksheet

Question 1: The conditional probability of B given A is given as

$$P(B/A) = \frac{P(A \text{ and } B)}{P(A)}$$

A. True

B. False

Question 2: A high school has a total of 1700 students, with 450 seniors. Of the 1700 students, 1550 are taking a math class, 280 of which are seniors. If a student is chosen at random, what is the probability that he or she is taking a math class, given that the student is a senior? Write your answer as a fraction or as a percent expressed to the nearest tenth.

A. 21.7%.

B. 39.8%

C. 52.5%

D. 61.2%

Topic: Two-Way Frequency Tables 1

Worksheet

Question 1: Francesca asks a random sample of 140 upperclassmen at her high school whether they prefer eating breakfast at home or at school. She finds that 55 juniors and 23 seniors prefer eating breakfast at home before school, while 12 juniors and 50 seniors prefer eating breakfast at school. Construct a relative frequency table.

A.

	Breakfast at Home	Breakfast at School	Totals
Senior	49.1%	5.5%	54.5%
Junior	27.3%	18.2%	45.5%
Totals	76.4%	23.6%	100%

C.

	Breakfast at Home	Breakfast at School	Totals
Senior	39.3%	8.6%	47.9%
Junior	16.4%	35.7%	52.1%
Totals	55.7%	44.3%	100%

B.

	Breakfast at Home	Breakfast at School	Totals
Senior	16.4%	35.7%	52.1%
Junior	39.3%	8.6%	47.9%
Totals	55.7%	44.3%	100%

D.

	Breakfast at Home	Breakfast at School	Totals
Senior	27.3%	18.2%	45.5%
Junior	49.1%	5.5%	54.5%
Totals	76.4%	23.6%	100%

Question 2: Immediately after a physics test, the entire class sits together at lunch and discusses how long each of them studied and how many questions they guessed on. The table shows the responses from the classmates.

For these classmates, guessing on more than 5 problems on the physics test is independent of studying 4 hours or less.

A. True

B. False

	Guessed on < 5 Problems	Guessed on > 5 Problems	Totals
Studied ≤ 4 Hours	27.3%	18.2%	45.5%
Studied > 4 Hours	49.1%	5.5%	54.5%
Totals	76.4%	23.6%	100%

Topic: Two-Way Frequency Tables 2

Worksheet

Question 1: Abu posts a question to an online forum about the originality of posts to the site. Of the 55 respondents who have posted viral memes, 27 photos and 15 videos were not original content, while 3 phots and 10 videos were original content.

i) Construct a relative frequency table of the data.

A.

	Not Original Content	Original Content	Totals
Video	49.1%	5.5%	54.5%
Photo	27.3%	18.2%	45.5%
Totals	76.4%	23.6%	100%

C.

	Not Original Content	Original Content	Totals
Video	39.3%	8.6%	47.9%
Photo	16.4%	35.7%	52.1%
Totals	55.7%	44.3%	100%

B.

	Not Original Content	Original Content	Totals
Video	16.4%	35.7%	52.1%
Photo	39.3%	8.6%	47.9%
Totals	55.7%	44.3%	100%

D.

	Not Original Content	Original Content	Totals
Video	27.3%	18.2%	45.5%
Photo	49.1%	5.5%	54.5%
Totals	76.4%	23.6%	100%

ii) Find the probability that a viral meme on the forum is not original content given that it is a photo.

A. 73.6%

B. 86.9%

C. 90.1%

D. 95.9%