

أوراق عمل الدرس السادس Rule Addition the and Probability من الوحدة السابعة



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ← المناهج الإماراتية ← الصف العاشر العام ← رياضيات ← الفصل الثالث ← ملفات متنوعة ← الملف

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ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل
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المزيد من مادة
رياضيات:

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التواصل الاجتماعي بحسب الصف العاشر العام



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف العاشر العام والمادة رياضيات في الفصل الثالث

أوراق عمل الدرس الخامس Rule Multiplication the and Probability من الوحدة السابعة

1

أوراق عمل الدرس الرابع Combinations and Permutations with Probability من الوحدة السابعة

2

أوراق عمل الدرس الثاني Counting and Probability من الوحدة السابعة

3

أوراق عمل الدرس الأول spaces Sample الفضاءات العينية من الوحدة السابعة

4

حل أوراق عمل الوحدة 9 الاحتمالات والقياس

5

Objectives:

To apply the addition rule to situations involving mutually exclusive events.

To apply the addition rule to situations involving events that are not mutually exclusive.

Vocabulary

Mutually exclusive events أحداث متباعدة (منفصلة)

Not Mutually Exclusive events أحداث ليست متباعدة (متقاطعة)

Mutually exclusive events are those events that do not occur at the same time

Probability of Mutually Exclusive Events

If two events A and B are mutually exclusive, then the probability that A or B occurs is the sum of the probabilities of each individual event.

If two events A and B are mutually exclusive, then $P(A \text{ or } B) = P(A) + P(B)$

A card is drawn from a standard deck of 52 cards. Determine whether the events are mutually exclusive or not mutually exclusive. Explain your reasoning.

- a. drawing a 3 or a 2
- b. drawing a 7 or a red card
- c. drawing a queen or a spade

SOCIAL MEDIA: Daniel organizes all of his social media contacts into three groups. If the program sends Daniel an update from a randomly chosen contact, what is the probability that the contact is either a close friend or acquaintance?

Close Friends 68
Acquaintance 24
Restricted 10

A: Close friend

B: acquaintance

$$P(A \text{ or } B) = P(A) + P(B) = \frac{68}{102} + \frac{24}{102} = \frac{46}{51} \approx 90\%$$

Probability of Events that are Not Mutually Exclusive

Not Mutually Exclusive events are events that have common elements.

If two events A and B are not mutually exclusive, then the probability that A or B occurs is the sum of their individual probabilities minus the probability that both A

$$P(A \text{ or } B) = P(A) + P(B) - P(A \cap B)$$

Solved example

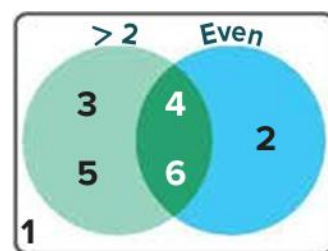
When two dice are rolled, what is the probability of getting a number greater than 2 or an even number?

A: greater than 2 $\Rightarrow A = \{3, 4, 5, 6\}$

B: an even number $\Rightarrow B = \{2, 4, 6\}$

$$A \cap B = \{4, 6\}$$

$$P(A \text{ or } B) = P(A) + P(B) - P(A \cap B) = \frac{4}{6} + \frac{3}{6} - \frac{2}{6} = \frac{5}{6}$$



A game piece is selected at random from the plate at the right. What is the probability that the game piece is round or orange?

A: Round B: Orange

$$P(A \text{ or } B) = P(A) + P(B) - P(A \cap B) = \frac{5}{10} + \frac{4}{10} - \frac{2}{10} = \frac{7}{10}$$



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

1) choosing a figure that has more than 4 lines of symmetry or more than 7 sides

A: More than 4 lines of symmetry

B: More than 7 sides

$$P(A \text{ or } B) = P(A) + P(B) - P(A \cap B) = \frac{6}{8} + \frac{3}{8} - \frac{3}{8} = \frac{6}{8} = \frac{3}{4} = 75\%$$

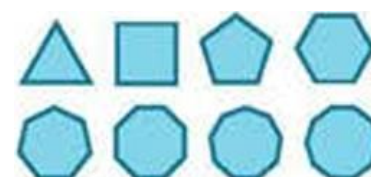


2) choosing a figure that has more than 15 diagonals or a total interior angle measure greater than 900°

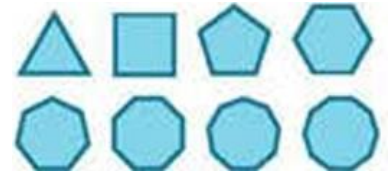
A: more than 15 diagonals

B: a total interior angle measure greater than 900°

$$P(A \text{ or } B) = P(A) + P(B) - P(A \cap B) = \frac{3}{8} + \frac{3}{8} - \frac{3}{8} = \frac{3}{8} = 37.5\%$$



3) choosing a figure that has more than 2 pairs of parallel sides or at least 1 diagonal



Determine whether the events are mutually exclusive or not mutually exclusive.

1) A die is rolled while a game is being played. The result of the next roll is a 6 or an even number.

2) adopting a cat or a dog

AWARDS The student of the month gets to choose one award from 9 gift certificates to area restaurants, 8 T-shirts, 6 water bottles, or 5 gift cards to the mall. What is the probability that the student of the month chooses a T-shirt or a water bottle?

يحصل طالب الشهر على جائزة واحدة من بين 9 شهادات هدايا لمطاعم المنطقة، أو 8 قمصان، أو 6 زجاجات مياه، أو 5 بطاقات هدايا للمركز التجاري. ما احتمال أن يختار طالب الشهر قميصًا أو زجاجة ماء؟