

## أوراق عمل الدرس الثاني Counting 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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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 الأول Sample spaces الفضاءات العينية من الوحدة السابعة

1

حل أوراق عمل الوحدة 9 الاحتمالات والقياس

2

حل أوراق عمل الوحدة 8 التوسع في مساحة السطح والحجم

3

مقرر الدروس المطلوبة الفصل الثالث منهج بريدج

4

الخطة الفصلية لتوزيع المقرر منهج بريدج

5

## Objectives:

To describe events as subsets of sample spaces by using intersections and unions.

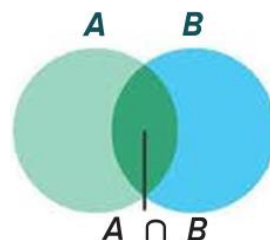
To describe events as subsets of sample spaces by using complements.

## Vocabulary:

intersection of A and B- union of A and B -complement of A.

## Probability Rule for Intersections

$$P(A \cap B) = \frac{\text{number of outcomes in } A \text{ and } B}{\text{total number of possible outcomes}}$$



## Union of Two Events

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$n(A \cup B)$  is read as, the number of elements in A or B.

A and B =  $A \cap B$   
A or B =  $A \cup B$

① A fair die is rolled once. Let A be the event of rolling an odd number, and let B be the event of rolling a number greater than 3.

Find: ①  $A \cap B$ . ②  $A \cup B$

$$A = \{1, 3, 5\} \quad B = \{4, 5, 6\}$$

$$\textcircled{1} A \cap B = \{5\}$$

$$\textcircled{2} A \cup B = \{1, 3, 4, 5, 6\}$$

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.

What are the possible outcomes of each event?

$$1) A = \quad B =$$

$$2) A \cap B = \quad A \cup B =$$

Answer:

$$1) A = \{7, 15\} \quad B = \{3, 9, 15\}$$

$$2) A \cap B = \{15\} \quad A \cup B = \{3, 9, 7, 15\}$$

Playing Card: Standard deck of card = 52



Spades=13	Hearts=13	Diamonds=13	Clubs=13	Black =26	Red =26

**3 PLAYING CARDS** A card is selected from a standard deck of cards. What is the probability that the card is a queen and is red?

**4** A fair die is rolled once. Let A be the event of rolling a number less than 5, and let B be the event of rolling a multiple of 2.  
Find  $A \cup B$ .

**5** 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. What are the possible outcomes of each event?

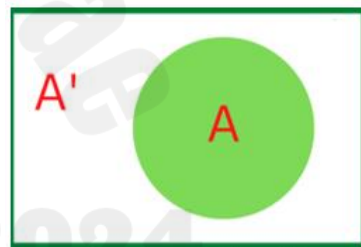
A =  
A  $\cup$  B =  
B =  
A  $\cap$  B =



### Complement

The complement of A consists of all the outcomes in the sample space that are not included as outcomes of event A

The complement of event A can be noted as  $A'$



Complement of a set A

### Probability of the Complement of an Event احتمال متممة الحدث

The probability that an event will not occur is equal to 1 minus the probability that the event will occur.

$$P(A') = 1 - P(A)$$

The Harvest Fair sold 967 raffle tickets for a chance to win a new TV. Copy and complete the table to find each probability of not winning the TV with the given number of tickets.

Number of Tickets	Probability of not winning
20	
200	
100	
1	

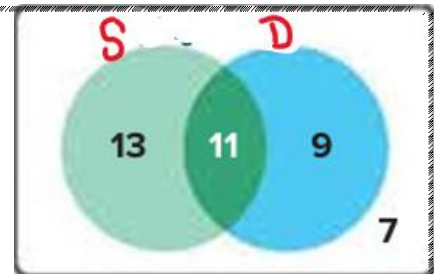
A card is selected from a standard deck of cards. What is the probability that the card has a number on it that is divisible by 2 and is black?

A card is selected from a standard deck of cards. What is the probability that the card is a diamond and is a seven?

Determine the probability of each event. Round to the nearest hundredth, if necessary.

- 1) What is the probability of drawing a card from a standard deck and not getting a spade?
- 2) What is the probability of flipping a coin and not landing on tails?
- 3) Carmela purchased 10 raffle tickets. If 250 were sold, what is the probability that one of Carmela's tickets will not be drawn?
- 4) What is the probability of spinning a spinner numbered 1 to 6 and not landing on 5?

Raya asks 40 people outside the mall whether or not they visited for shopping or dining. She records the results in a Venn diagram. One person will be chosen at random to be interviewed on the local evening news. Find the probability that the person chosen will be someone who visited the mall for shopping and dining.



$$P = \frac{n(\text{Shopping} \cap \text{Dinning})}{n(S)} = \frac{11}{40} = 0.275$$

**CREATE** Let A be the months of the year with 31 days and let B be the months of the year that begin with the letter J. Create a Venn diagram to display this data.

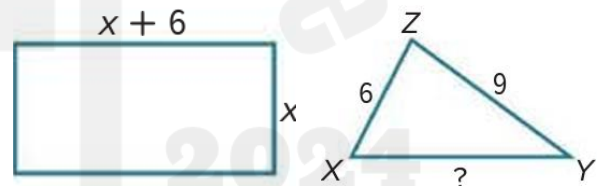
**PERSEVERE:** Let A be the possible integer side measures of the rectangle with perimeter  $P = 52$ . Let B represent the possible integer measures of  $\overline{XY}$  in  $\triangle XYZ$ . Find  $A \cap B$ . b. Find  $A \cup B$ .

Answer:

$$2x + 2x + 12 = 52$$

$$x = 10$$

$$A = \{10, 16\}$$



Suppose that the length of  $\overline{XY} = x$

$$9 - 6 < x < 9 + 6$$

$$3 < x < 15$$

$$\Rightarrow B = \{4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14\}$$

$$A \cup B =$$

$$A \cap B =$$