TEST SAMPLE

Below you can find a series of questions to practice in preparation for the Admission Test.
The items are to be considered as an example and are grouped by topics.
The right answer in bold.

READING COMPREHENSION AREA

Read the passage below and use the information to answer the next question

Every good marketer understands the importance of a work method that combines traditional marketing (outbound) with new marketing (inbound). The increased visibility on search engines and the subsequent word of mouth recommendations increase the number of potential customers genuinely interested in a certain brand. The change in perspective we are currently witnessing is the result of various factors, particularly the advent and development of the web, but this is no reason to believe that the outbound strategy should be abandoned in favor of the inbound one! Rather than being two opposing methods, they are actually two parts of the same process, which meet different requirements

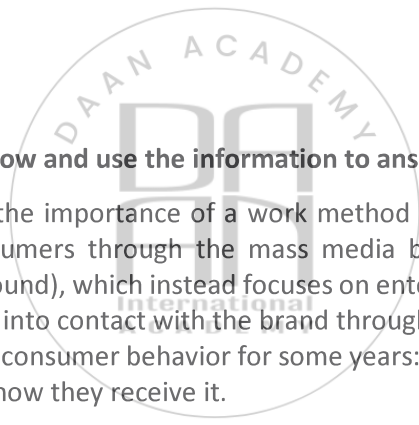**1. The passage expressly recommends:**
 1. always preferring inbound marketing to outbound marketing
 2. rely on simple word of mouth
 3. using the traditional outbound model in the event of uncertainty
 4. using inbound strategies outside the Internet
 5. **considering inbound and outbound marketing as complementary**

Read the passage below and use the information to answer the next question

In purely traditional marketing (outbound marketing), the company has control over the information and, as a matter of fact, 86% of people change channel when an advert break appears on TV and 84% of people say they have stopped using certain sites because of the invasive presence of advertising. However, when the content is interesting and educational, the number of followers increases considerably (inbound marketing). Moreover, the more the content is shared on social networks the more visible it becomes (the content is said to go viral). The increased visibility on search engines and the subsequent word of mouth recommendations increase the number of potential customers genuinely interested in a certain brand.

2. The author of the passage indicates some percentages to demonstrate that:
 1. for over 86% of companies, traditional marketing is too expensive in relation to the profits it creates
 2. including numbers in a text, even random ones, helps to boost sales
 3. in inbound marketing, 86% of people do not change channel when adverts come on
 4. **when faced with outbound marketing strategies, the consumer can only choose to avoid exposure to certain information**
 5. over the Internet people cannot have any control over the information they receive and how they receive it

Read the passage below and use the information to answer the next question

Every good marketer understands the importance of a work method that combines traditional marketing (outbound), which bombards consumers through the mass media by adopting an aggressive, one-way approach, with new marketing (inbound), which instead focuses on entertaining and arousing the interest of the public, so that consumers come into contact with the brand through their own free will. In fact, we have been witnessing a certain change in consumer behavior for some years: over the Internet people can control what information they receive and how they receive it.

3. On the basis of the various marketing types presented, mailing out a leaflet featuring photos and special offers for various products represents which type of marketing?
1. Inbound
2. **Outbound**
3. Inbound, if sent by email
4. Mixed
5. None of these answers is correct

Read the passage below and use the information to answer the next question

In 820, Leo was usurped by one of his old comrades, Michael II from Amorium, a rude soldier who was not interested in religious problems, although he suppressed an iconoclastic insurrection headed by a certain Thomas. In 829, he was succeeded by his son Theophilos, a learned man and just ruler, although he was a convinced iconoclast, enemy of the worshipers of images, educated by one of the most skillful thinkers, John the Grammarian. A few persecutions of the worshippers of images took place from 832 to 836, but his reign marked the end of the dispute. His military defeats were attributed to his iconoclastic tendencies and, immediately after the appearance of his successor Michael III, in 840, the number of supporters of the movement began to fall, until in 843, under the regency of Theodora, there was a return to the worship of images.

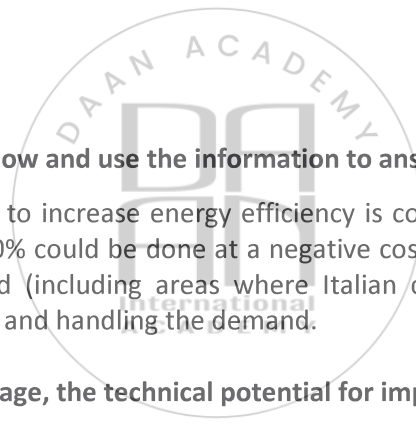**4. As you can deduct from the passage, "iconoclast" means:**
1. worshiper of images
2. persecutor
3. **contrary to the worship of images**
4. minister
5. mercenary

Read the passage below and use the information to answer the next question

According to the IPCC, a panel for studying and fighting against pollution, from now to 2100 the world commercial energy system will be replaced at least twice. This will be an advantage for far-seeing countries which will replace their system for producing, carrying and using energy without untimely replacing the invested capitals, too. Such manoeuvre would allow to intervene at the end of the economic life of plants and machinery, thus highly or totally reducing the economic costs for a community who wish and need to limit **climate-changing gas** emissions.

5. As you can infer from the passage, the term " climate-changing gases" are defined as gases that:
1. with their combustion do not alter the environment
2. are naturally occurring
3. are artificial
4. with their combustion enhance the environment
5. **are environmentally harmful**

Read the passage below and use the information to answer the next question

Worldwide, the technical potential to increase energy efficiency is considerable; in the next two or three decades, saving between 10 and 30% could be done at a negative cost - i.e. with an economical benefit of the investors all around the world (including areas where Italian companies do operate) – simply by intervening on energy conservation and handling the demand.

6. As you can deduct from the passage, the technical potential for improving efficiency is currently:
1. poor
2. **significant**
3. extraordinary
4. absent
5. none of these answers is correct

Read the passage below and use the information to answer the next question

Among actual advantages that companies and organizations may gain thanks to electronic commerce (EC) is: a **global presence**, as an inborn characteristic of the Internet; better quality for the service thanks to a prompt contact with the customers; custom-made goods offered at a limited price; cutting on the supply chain; new product-market opportunities as new kinds of service may be needed or some goods may be offered in markets which were previously difficult to reach.

7. From what can be inferred from the passage, global presence is:
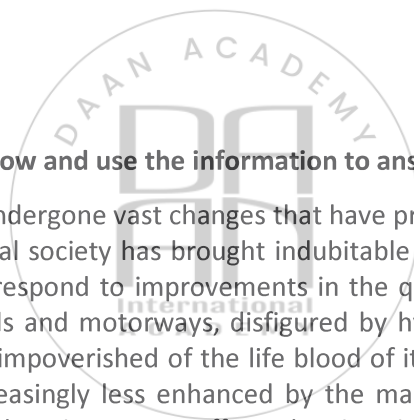1. a consequence of the increased turnover of a company
2. **assured by the use of the Internet**
3. a typical feature of mid-sized companies
4. it is not dealt with in the passage
5. a company which never closes

Read the passage below and use the information to answer the next question

The usage of electronic commerce is growing at an impressive rate, which is mainly related to the widespread of the Internet. Research by various sources shows that the number of "Internet surfers" was about 100 million people at the beginning of 2005, and should get to 250 million in 2007. The gap between the spread of the Internet in the USA and in Europe is quickly reducing, and indeed new websites are now being created in Europe three times as fast as in the USA.

8. From what can be inferred from the passage, what will the increase of Internet users bring to in the near future?
1. An increase in the gap in the number of Internet users between the United States and Europe
2. A drop in the number of sites created in the USA
3. **An increase in electronic commerce**
4. An impressive growth rate of sea commerce
5. The development of new technologies

Read the passage below and use the information to answer the next question

Over recent decades Tuscany has undergone vast changes that have profoundly altered the territory and its image. The pressure of technological society has brought indubitable advantages in terms of standards of living but this does not always correspond to improvements in the quality of life. We now find ourselves facing a territory furrowed by roads and motorways, disfigured by hydrogeological disaster, despoiled of many of its most beautiful forests, impoverished of the life blood of its rivers, frequently transformed into cold channels of cement, and increasingly less enhanced by the many sounds and colours of multiform natural biodiversity. And if the rural environment suffers, the situation is certainly no better in our cities, assailed by pollution, noise, waste and the lack of green spaces. In the face of such a picture, there is an increasingly imperative need for a voice calling for change, for a force that will exert itself to improve the situation.

9. The impact of the transformations on the territory has been felt above all:
1. **in the rural and urban areas**
2. only in the urban areas
3. only in the rural areas
4. in the hydrogeological areas
5. there has been no impact on the territory

Read the passage below and use the information to answer the next question

The State forcedly and unilaterally levies taxes on the citizens so as to found their activity; in other words, it withdraws a part of the citizens' income through taxation. Direct tax affects personal income and property because owners directly show their ability to pay tax. Indirect tax affects wealth transfers and consumption. In such cases, the ability to pay tax is shown indirectly through the expenditure. The most important indirect tax is the VAT, which affects the purchase of goods and services.
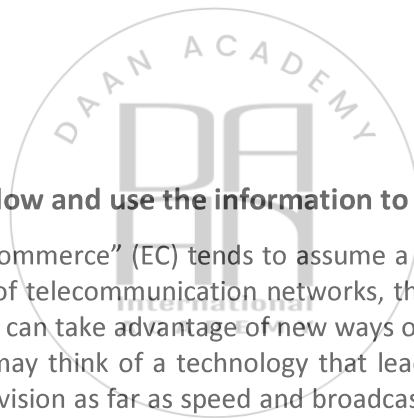
10. The VAT:
1. **is a levy on the purchase of goods and services**
2. helps consolidating the citizens' income more precisely
3. gives citizens an overview of their possibility to buy goods
4. is a levy on property and personal income
5. is a tax on workers' salaries

Read the passage below and use the information to answer the next question

Every year, the State operations are listed in the balance sheet, which can either be "estimate" or "final". The balance sheet gives a comprehensive view on the revenue and the expenditure, both foreseen and actual: it translates the decisions of the public body for the future into figures as well as recording the activities carried out in the past. The budget for the next year is drawn up by the Government and it is approved by the Parliament. Public operators forcedly and unilaterally levy taxes on the citizens so as to found their activity. The State withdraws a part of the citizens' income through taxation.

11. The Government:
1. intervenes in drawing up the State budget when it is needed
2. is responsible for checking that the budget is affordable from the financial point of view
3. **draws up the estimate of the revenue and expenditure for the next year**
4. assesses the feasibility of measures to increase the tax request from citizens
5. approves the balance sheet presented by the Parliament

Read the passage below and use the information to answer the next question

Today, the expression "electronic commerce" (EC) tends to assume a particular meaning in relation to the development on a planetary scale of telecommunication networks, thus distinguishing the realisation of a new channel with which companies can take advantage of new ways of making commercial contact with its suppliers and clients. And so one may think of a technology that leads to a radical change of our habits, comparable with the advent of television as far as speed and broadcast range are concerned. Object of the exchange are goods, services, certifications and information, whereas the principals are private citizens, companies and public institutions. If we consider the relationships that have progressively been initiated among the different users, we can distinguish three prevalent areas. "**Business to business**" relationships, where the transactions between businesses and suppliers and their retail stores are already involved in significant changes based on EDI (Electronic Data Interchange) technology; relationships between businesses and consumers; relationships with public administrations.

12. "Business to business" relationships refer to:
   1. commercial relationships between places that are distant from one another
   2. commercial relationships at prices which are extremely convenient
   3. commercial relationships that can be managed through telecommunications
   4. **commercial relationships already managed through telecommunications**
   5. commercial relationships between businesses and customers

Read the passage below and use the information to answer the next question

In 820, Leo was usurped by one of his old comrades, Michael II from Amorium, a rude soldier who was not interested in religious problems, although he suppressed an iconoclastic insurrection headed by a certain Thomas. In 829, he was succeeded by his son Theophilos, a learned man and just ruler, although he was a convinced iconoclast, enemy of the worshipers of images, educated by one of the most skillful thinkers, John the Grammarian. A few persecutions of the worshippers of images took place from 832 to 836, but his reign marked the end of the dispute. His military defeats were attributed to his iconoclastic tendencies and, immediately after the appearance of his successor Michael III, in 840, the number of supporters of the movement began to fall, until in 843, under the regency of Theodora, there was a return to the worship of images.

13. Theophilos is described as:
   1. a rude soldier
   2. a just ruler and anti-iconoclastic
   3. **a just ruler and iconoclastic**
   4. a corrupt man
   5. an old comrade of Michael II

DAAN international academy

Reply to the next question referring also to the table below

The Italian cellular phone market (in thousands)

Companies	Sales 2018		Sales 2019	
	N	%	N	%
P.P.	95	14.9	131	21.7
Ns	84	13.2	61	10.1
Marlon	66	10.3	59	9.8
NIC	50	7.8	47	7.8
Laros	42	6.6	27	4.5
Others	301	47.2	279	46.1

1. In the Italian market, which company had the largest decline in sales of cellular phones between 2018 and 2019?
1. P.P.
2. **Ns**
3. Marlon
4. NIC
5. Laros

Reply to the next question referring also to the table below

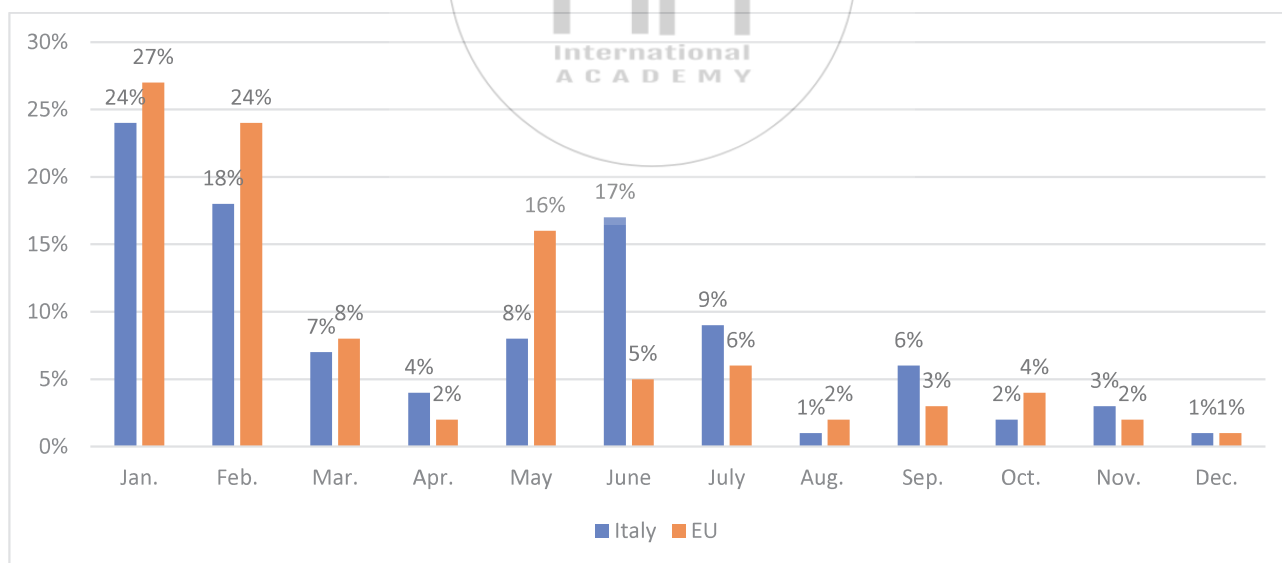Information searched for by WAP mobile phones (connections)

	Morning	Afternoon	Evening	TOT.
Tourist Information	410	182	53	645
Weather	280	390	190	860
Games	205	332	370	907
Sports Information	360	228	405	993
Horoscope	120	160	148	428
Financial Information	325	108	34	467
TOT.	1,700	1,400	1,200	4,300

2. As regards as sports information searched for on WAP mobile phones, what percentage of sports information is searched for in the evening?
1. 33.75%
2. 10.25%
3. 7.5%
4. **40.78%**
5. 15.40%

Reply to the next question referring also to the chart below

Car sales in Italy and EU (year 2019)

3. In reference to car sales in 2019, which are the busiest buying months?
   1. January for the Italian market and February for the EU market
   2. February for the EU market and June for the Italian market
   3. **January for both the Italian market and the EU market**
   4. February for both the Italian market and the EU market
   5. It is not possible to answer on the basis of the data provided

Reply to the next question referring also to the table below
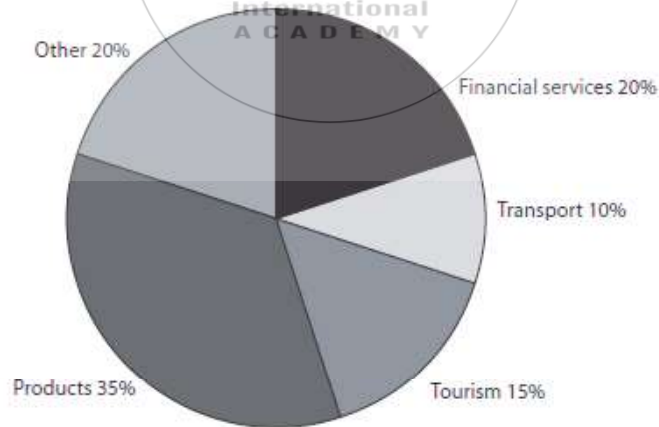
Car adverts in monthly magazines

Type	For young people	Women's	Men's
MPV	1	8	10
Family	2	7	6
Utility	5	13	11
Saloon	1	6	8
4x4	8	1	6
Coupé	4	5	7
SUV	12	4	15

4. In reference to car adverts in monthly magazines, we can say that:
   1. the "Utility" vehicle is the most advertised car type in men's magazines
   2. the "4x4" is the most advertised car type in women's magazines
   3. the "Utility" vehicle is the most advertised car type in both men's magazines and women's magazines
   4. **the "SUV" is the most advertised car type in magazines for young people**
   5. it is not possible to answer on the basis of the data provided

DAAN international academy

Reply to the next question referring also to the chart below

Italian advertising turnover divided by sector (percentages, year 2019)

5. If the annual turnover of advertising companies for 2019 is equivalent to *P*, we can say that:
   1. **the turnover of "Products" plus that of "Tourism" is equivalent to 0.50*P***
   2. the turnover of "Financial services" is equivalent to 20*P*
   3. the turnover of "Transport" is equivalent to 10*P*
   4. the turnover of "Financial services" plus that of "Other" is equivalent to 0.50*P*
   5. It is not possible to answer on the basis of this data

Reply to the next question referring also to the table below

Adverts in Italian newspapers

Subject matter	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Clothing	41	71	29	27	29	37	75
Travel	29	45	17	19	20	27	32
Glasses	13	17	9	10	10	15	23
Shoes	21	31	13	15	17	19	25
Jewellery	17	23	17	15	13	22	47
Cars/Motorbikes	11	19	14	16	11	19	33
Total	132	206	99	102	100	139	235

6. The percentage of "Jewellery" adverts in Italian newspapers compared to the total number of adverts each day is:
   1. **bigger on Sunday than Tuesday**
   2. bigger on Saturday than Wednesday
   3. bigger on Monday than Thursday
   4. smaller on Friday than Tuesday
   5. It is impossible to establish based on the information provided only

DAAN international academy

Reply to the next question referring also to the data below

Sandram Ltd sells two types of machinery. The first type costs €2,000 and covers an area of 10 square metres; the second type costs €3,000 and covers an area of 5 square metres.

7. A company purchased some types of machinery from Sandram Ltd, spending €8,000 exactly.
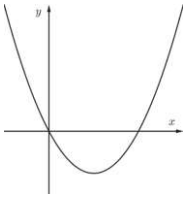**Which area do these machineries cover?**
1. Certainly 13.3 square metres
2. Certainly 40 square metres
3. From a minimum of 13.3 to a maximum of 40 square metres
4. **From a minimum of 20 to a maximum of 40 square metres**
5. Certainly more than 40 square metres

DAAN international academy

MATHEMATICS AREA
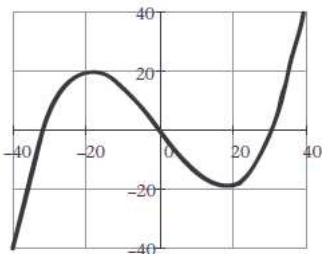
1. Consider the graph below:

The above graph shows a parabola the equation of which is:
1. $y = 2x^2 + 4x$
2. $y = -2x^2 + 4x$
3. $y = -2x^2 - 4x$
4. **$y = 2x^2 - 4x$**
5. $y = 2x^2 - 4$

2. How many real solutions are there to the inequality $x^2 + x < 0$?
1. 0
2. 1
3. 2
4. **Infinite**
5. It depends on x

3. Here below you can see the graph of the function $f(x)$ over a certain interval. How many real solutions admits the equation $f(x) = 30$ in such an interval?

1. 0
2. **1**
3. 2
4. 3
5. Cannot be known

4. If $0 < x < 1$ and $-1 < y < 0$ then certainly:
1. $x + y > 0$
2. $0 < xy < 1$
3. $\dfrac{1}{x} - \dfrac{1}{y} > 1$
4. $\dfrac{1}{x} + \dfrac{1}{y} > 0$
5. $x - y > 1$

DAAN international academy

5. A triangle has sides of length a, b, c.
If $a^2 + b^2 < c^2$, then the triangle is:
1. isosceles
2. equilateral
3. right-angled
4. acute-angled
5. **obtuse-angled**

6. A, B and C define three sets in set-universe U, and A^C, B^C, C^C are their complementary sets.
The set of elements that belong to A or B but not to C is:
1. $(A \cap B) \cup C^C$
2. **$(A \cup B) \cap C^C$**
3. C^C
4. $(A \cup B) \cap C$
5. $(A \cap B) \cup C$

7. 260 quintals of salt are stored in a warehouse belonging to AQ Co., a sea salt distribution firm. However, due to evaporation, there has been a 325 kg reduction over 5 days.
What is the percentage of the reduction?
1. 8.5%
2. 11%
3. 4.3%
4. **1.25%**
5. 3%

8. In a farm there are 120 animals between rabbits and chickens and in all there are 320 legs.
How many chickens are there?
1. 70
2. 50
3. 60
4. 40
5. **80**

9. Which of the following numbers is between 3/5 and 5/8?
1. 2/3
2. 4/7
3. **8/13**
4. 5/9
5. 7/11

DAAN international academy

10. A bag contains 12 blue balls and 4 red balls.
How many red balls must be added so that the chance of drawing a red ball is 2/3?
1. 4
2. 6
3. 12
4. 18
5. 20

11. How many solutions can the following system have?

$$\begin{cases} x + y = 3 \\ 2x + 2y = 6 \end{cases}$$

1. **Infinite**
2. No solution
3. One solution
4. Two solutions
5. Four solutions

12. Which is the max value of the function $f(x) = 4x - x^2$?
1. 0
2. 2
3. 4
4. 6
5. 8

13. For which values of a and b the system with variables x and y

$$\begin{cases} x + 2y = 3 \\ ax + by = -3 \end{cases}$$

has the following solution $x = -1$, $y = 2$?
1. For no values of a and b
2. **$a = 5$ and $b = 1$**
3. $a = 3$ and $b = 6$
4. $a = 3$ and $b = 5$
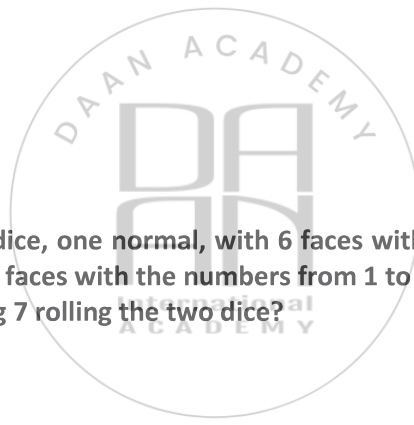5. For every value of a and b

14. For which values of k does the equation $x^3 - kx = 0$ have only one real solution $x = 0$?
1. For no value of k
2. $k > 1$
3. $0 < k < 1$
4. **$k \leq 0$**
5. For every value of k

15. The real number $\log_{10}(1789)$ is included between:
  1. 0 and 1
  2. 1 and 2
  3. **3 and 4**
  4. 2 and 3
  5. 4 and 5

LOGIC AREA

1. In a board game there are two dice, one normal, with 6 faces with the numbers 1 to 6, and the other one double-pyramid shaped with 8 faces with the numbers from 1 to 8.
What is the probability of obtaining 7 rolling the two dice?
1. **1/8**
2. 5/48
3. 7/48
4. 1/6
5. 3/48

2. There was a robbery at a store after 8 p.m. and there are three suspects, A, B and C. A said, "I wasn't involved in the theft". B said, "C was involved". C stated, "Two did it". The police have reason to believe that all three are lying and they have established that the theft was committed by one of three employees, A, B or C.
A passer-by saw A coming out of the store; therefore:
1. B was involved in the theft
2. A and C are both guilty or both innocent
3. **the culprit is only A**
4. all three are guilty
5. B was not involved in the theft

3. In a group of students, 12 speak Italian, 9 speak English and 9 speak Spanish. 5 speak Italian and Spanish, 4 speak English and Spanish and 3 speak English and Italian.
How many of the group only speak Spanish?
1. 6
2. The data is insufficient
3. 5
4. 7
5. **None**

4. In a college class of 90 students, two are to be selected as class representatives. The choice is completely random.
What is the probability that the last two in the alphabetical list of students will being chosen as class representative?
1. 2/90
2. **2/(90 × 89)**
3. $2/90^2$
4. 1/(90 × 89)
5. 1/90

5. The following table shows the data on employees of a company:

	Female	Male
Sales	35	30
Administration	15	20
Research and Development	10	10

Picked at random up a female employee in this firm, what is the probability that she does not work in Administration?
1. 1/3
2. 7/8
3. 1/8
4. 1/4
5. **3/4**

6. A student in one year has completed 8 math's tests. The grade point average is 7.75, the lowest grade is 6 and the highest is 8 (grades are only integers).
Then the student received:
1. four 6's and four 8's
2. one 6 and two 7's
3. two 6's
4. **never a 7**
5. the data is insufficient

7. In the Museum of Man in Paris, at the entrance is continuously shown a 12 minutes documentary all day long, with a 3 minutes interval between one show and the other. The showing begins at 9.15 a.m. and stops at 6.00 p.m. Every morning, at the beginning of the showing, the documentary starts from the beginning.
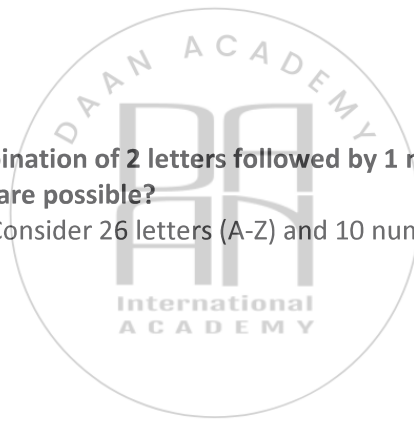**How many times is the documentary shown in a day?**
1. 36
2. **35**
3. 40
4. 25
5. 20

8. In a test, each right answer is given 3 scores, each wrong answer 1 score is taken off and each unanswered question is not given any score. There are 5 questions and the maximum score is 15.
Which are the scores higher than 9 you can get?
1. **11, 12 and 15**
2. 10, 12, 13 and 15
3. All numbers between 10 and 15
4. 12 and 15
5. 12, 13, 14 and 15

DAAN international academy

9. A safebox opens through a combination of 2 letters followed by 1 number (eg. PF5).
How many different combinations are possible?
(Repeated letters are not allowed. Consider 26 letters (A-Z) and 10 numbers (0-9))
1. **6,500**
2. 6,760
3. 5,100
4. 6,100
5. 6,250

10. 10 old school friends meet in a pizzeria. Males are more than females and graduates are more than non-graduates.
Thus:
1. there is at least one graduate female
2. **there is at least one graduate male**
3. there is at least one non-graduate female
4. there is at least one non-graduate male
5. graduate males are more than graduate females

11. Michele and Fabrizio play chess and are same-level players, so each one wins with a 50% chance. Tomorrow, they will meet in the afternoon and play 5 games.
What is the chance that Fabrizio wins one single game?
1. 1/32
2. 5/16
3. 1/4
4. **5/32**
5. 5/8

12. "In a hotel are lodged 350 people: 50 are French, 100 are males and 100 stay in a single room".
On the basis of this information, of how many people you can affirmed that they are at the same time French, male and stay in a single room?
1. Twenty
2. Ten
3. Fifty
4. Thirty
5. **None**

13. A natural number p greater than 1 is called *prime* if its only divisors are 1 and p. Two natural numbers a and b are called *prime among themselves* if their greatest common divisor is equal to 1: GCD(a, b) = 1.
Which of the following statements is true?
1. If GCD(a, b) = 1 then a and b are both prime
2. If at least one of either a or b is prime, then GCD(a, b) = 1
3. If GCD(a, b) > 1 then neither a nor b is prime
4. If neither a nor b is prime then GCD(a, b) > 1
5. **If GCD(a, b) > 1 then a or b is not prime**

DAAN international academy

14. Tizio has in his pocket two European coins (Euros), which together make 70 cents, but one of them isn't a 20 cents coin.

Which coins are they?

1. **A 20 cents and a 50 cents coin**
2. According to the data of the problem, there isn't a possible solution
3. All answers are wrong

15. Supposing that the following statement is true: "If a student applies himself, he will pass the exam", which of the following statements is true?

1. If a student applies himself, he will get the maximum result
2. Only the ones who apply themselves will pass the exam
3. **If a student passed the exam it's possible he applied himself**
4. If a student doesn't apply himself, he won't pass the exam
5. None of these