



PROVA DI AMMISSIONE AI CORSI DI LAUREA E DI LAUREA MAGISTRALE A CICLO UNICO DIRETTAMENTE FINALIZZATI ALLA FORMAZIONE DI ARCHITETTO (IN LINGUA INGLESE)

Anno Accademico 2016/2017

Test di Ragionamento Logico

- If you say that the statement "All of them don't work" is FALSE, it means that:**
 - at least one of them works
 - none of them works
 - one of them does not work
 - all of them work except one
 - all of them work
- Which of the terms given correctly complete the following verbal proportion?
X : writer = movie : Y**
 - X = book; Y = director
 - X = editor; Y = cinema
 - X = publisher; Y = screenwriter
 - X = analogic; Y = digital
 - X = pages; Y = film
- The statement: "If I use my smartphone too much I will get a headache" implies that:**
 - if I don't get a headache, then I did not use my smartphone too much
 - if I get a headache it means that I used my smartphone too much
 - sometimes I don't get a headache even if I used my smartphone too much
 - either I use my smartphone too much or I get a headache
 - I don't have a headache although I used my smartphone too much
- Which of the following series is connected by the set relation graphically represented by Diagram 1?**



DIAGRAM 1

DIAGRAM 2

DIAGRAM 3

DIAGRAM 4

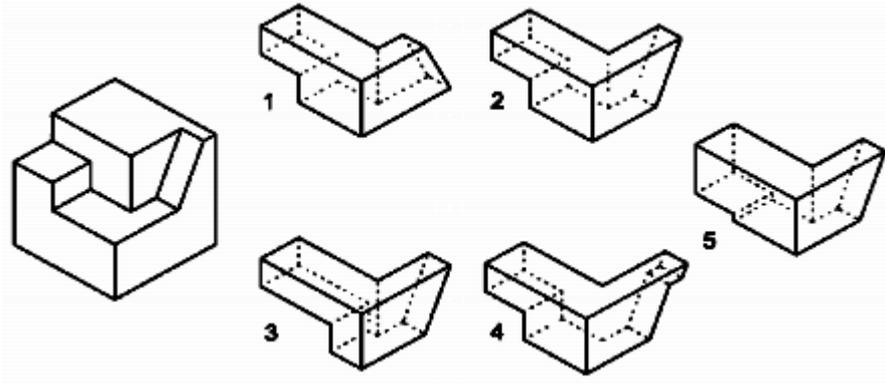
DIAGRAM 5

DIAGRAM 6

DIAGRAM 7

- {12, 2, 14, 7, 5, 8}; {1, 3, 4, 6, 2, 5}; {10, 11, 0, 9, 15, 13}
- {2, 6, 10, 0, 4, 3}; {8, 1, 9, 11, 5, 7}; {0, 6}
- {R, A, K, S, D, J}; {V, R, J, E, Q, B}; {C, L, T, Y, B, X}
- {R, M, X, B, K, D}; {S, V, T, B, K, D}; {S, E, T, M, K, D}
- {13, 17, 3, 8, 9, 5}; {7, 1, 2, 11, 12, 4}; {10, 18, 6, 14, 15, 16}

5. What part is missing to complete the solid, so as to obtain a cube?



- A) Figure 2
- B) Figure 1
- C) Figure 4
- D) Figure 3
- E) Figure 5

6. Among the pairs shown in the figure, identify the one that completes the given sequence.

G, E, ?, A, B, D, ??, H

? = P ?? = C	? = C ?? = F	? = L ?? = M	? = F ?? = C	? = C ?? = P
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- 1 2 3 4 5
- A) Figure 2
 - B) Figure 1
 - C) Figure 3
 - D) Figure 4
 - E) Figure 5

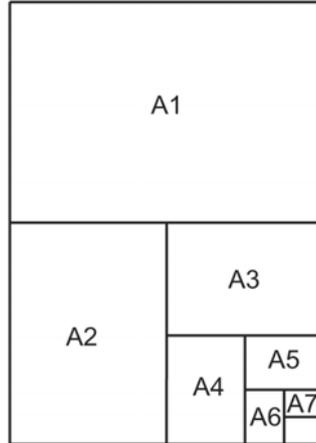
7. In how many different ways can the dots in the figure be divided into groups of three by a single straight line?



- A) 3
- B) 2
- C) 1
- D) 5
- E) 4

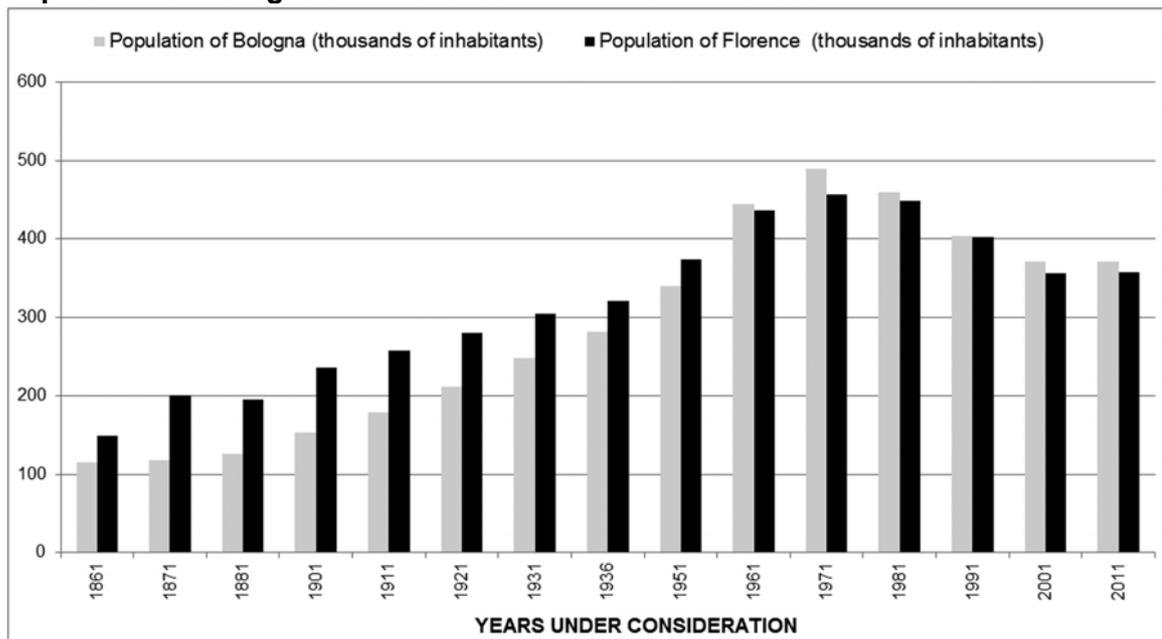


8. Sheet sizes A1, A2, etc. all have the same ratio between the two sides, and in each sheet size the long side is equal to the short side of the previous one. The short side of an A1 sheet is equal to the long side of an A2 sheet and so on, as shown in the figure. How many times does an A7 sheet fit into an A1 sheet?



- A) 64
- B) 32
- C) 48
- D) 128
- E) 63

9. Population of Bologna and Florence in all Italian censuses.



Which of the following statements is certainly true?

- A) At least once, the total population of the two cities exceeded 900,000 inhabitants
- B) In 5 censuses the total population of the two cities exceeded 800,000 inhabitants
- C) The censuses where the population of Bologna is greater than that of Florence are more numerous than those where the population of Florence is greater
- D) The population of Florence is over 400,000 inhabitants in a greater number of censuses than that of Bologna
- E) The total population of the two cities always exceeded 300,000 inhabitants

10. The missing number is:

3	2	4	3
5	3	2	4
30	12	16	(?)

- A) 24
- B) 14
- C) 18
- D) 22
- E) 36



Passage I

Read the passage and answer each question only on the basis of the information contained (explicitly or implicitly) in the passage, not of what you may know about the topic.

For Delacroix, recognized leader of the "Romantic school", history is not an example or guidance for human conduct, it is a drama that began with mankind and continues in the present. Contemporary history is political struggle for freedom. "Liberty Leading the People" is the first political picture in the history of modern painting: it glorifies the insurgency that, in July 1830, ended the White Terror of the restored Bourbon monarchy. In the painting that celebrates the July events, there is sincere enthusiasm and an ambiguous political meaning. For Delacroix and for the Romantics in general, freedom is national independence. In the large 1830 canvas, the woman waving the Tricolor on the barricades embodies Liberty and France at the same time. And who fights for freedom? Commoners and bourgeois intellectuals: in the name of Liberty-Homeland, the shirtless commoners and the bourgeois in their top hats are bound by an "union sacrée". It is not a historical painting, as it does not depict a fact or a situation. Is not an allegorical painting: the only allegorical element is the Liberty-Homeland figure. It is a realistic picture that culminates with a rhetorical tirade. Even the allegorical figure is a mixture of realism and rhetoric: an "ideal" figure that, for this occasion, wears the rags of a commoner and wields a rifle instead of the symbolic sword. In the realistic notes, the painter goes into the social characterization of the figures to demonstrate that boys, young men, adults, workers, farmers, intellectuals, legitimist soldiers and rebel soldiers, are all part of the people, united in brotherhood by the Tricolor. It is precisely with Delacroix's Romanticism that art begins to seek to belong, at all costs, to its time.

(From: G. C. Argan, "L'arte moderna 1770/1970", Sansoni)

11. Which of the following statements CANNOT be inferred from the *passage I*?
- A) Clergy, monarchy and gentry are bound by an "union sacrée"
 - B) Delacroix was first in making art belong to its time
 - C) "Liberty Leading the People" was painted in the second half of 1830
 - D) Delacroix gives a realistic interpretation of the allegorical figure of liberty, painting her with a gun
 - E) "Liberty leading the People" does not have an unequivocal political meaning
12. According to the *passage I*, Delacroix's painting is considered the first political work in the history of modern painting because:
- A) there is a reference to a specific political event
 - B) it glorifies the people's support to the establishment of the Bourbon monarchy
 - C) no one before Delacroix had dared to celebrate the fall of a royal dynasty
 - D) although it does not faithfully represent an event, it has a rhetorical edge
 - E) no one before Delacroix had put commoners and burghers on the same footing
13. How is Delacroix's painting described? (see *Passage I*)
- A) Realistic
 - B) On the whole, rhetorical
 - C) Allegorical
 - D) Historical
 - E) Social
14. According to the *passage I*, what meaning does Delacroix attribute to history?
- A) That of being a constantly evolving drama
 - B) That of being an example to man
 - C) That of being a guide to human actions
 - D) That of not representing facts or situations
 - E) That of being the fulfilment of a destiny of national independence

15. **The allegorical figure of the woman waving the Tricolor on the barricades is described by the author of the *passage I* as a mixture of realism and rhetoric because:**

- A) the woman represents Liberty and France but is portrayed realistically, as a commoner who fights for her country
- B) she carries a rifle and not a sword, and the rifle is what conveys the real final message of the painting, which is to urge the people to fight
- C) this figure completes the identification between Liberty, France and a woman of low birth, since Delacroix wanted to celebrate France as a free country of common people
- D) she embodies the final message of the painting, which is to urge the French to fight, otherwise the common people will again seize power
- E) the woman warrior is a typical cliché of French art, which Delacroix resumes to give his nationalistic painting a character strongly rooted in French culture

Passage II

Read the passage and answer each question only on the basis of the information contained (explicitly or implicitly) in the passage, not of what you may know about the topic.

The Roman town planning scheme was based on the Greek-Hellenistic Hippodameian system. The streets are mostly straight and arranged in a grid, in parallel with the two main thoroughfares: the *cardo maximus* to the north and the *decumanus maximus* from east to west, both in correspondence with the four gates of the city. This layout is not found in Rome, which started as the merging of various settlements in the surrounding hills and valleys. Instead, it is found (and it is often still recognisable) in the cities built by the Romans or Romanised, and corresponds to the plan they used to set up their military camps, many of which later became residential areas. The current names of some modern cities still reveal their origins as a Roman camp, the *castrum*, not only in Italy, but also abroad (Chester, in England, for example).

The intersection between the *cardo* and the *decumanus* was usually the location of the Forum, the city's main square: the political, religious and administrative centre where stood the most important public buildings. We will discuss some of these when reviewing the individual monuments; for the moment, it is interesting to observe the shape of Roman residential houses. In particular, we are very familiar with the types of houses found in Pompeii and Herculaneum. As is well-known, the two cities disappeared during the terrible eruption of Vesuvius in 79 AD, the former buried under a pall of ash and lapilli, the latter under an enormous mudslide. This is why, more than many other towns that have undergone endless transformations throughout the centuries, they can give us an accurate idea of what an ancient city looked like, both with regard to general structures and to individual buildings, from the most beautiful and aristocratic to the most humble.

The simplest type of Pompeian House, with no or few windows on the street, is structured around a courtyard, the atrium, in the middle of which the rainwater from the opening above (*compluvium*) is collected in a square-shaped basin (*impluvium*). All around is a portico on which open the bedrooms (*cubicula*). At the far end of the atrium, in front of the main entrance, is the *tablinum*, the most sacred space, where the family meets and receives guests. From here you can go out in the *hortus*, the garden surrounded by columns (*peristyle*). Adjacent to the *tablinum* there is usually the dining room, the *triclinium*, with three beds next to the three sides of the table.

(From: P. Adorno, "*L'arte italiana*", Casa Editrice G. D'Anna)

16. **More than any other town, Pompeii and Herculaneum can give us an idea of what an ancient city looked like because: (see *Passage II*)**

- A) ashes and mud have preserved the appearance they had at the time of the eruption
- B) the general structures have remained those of the ancient city, while the individual buildings have undergone changes
- C) despite the changes that have taken place over the centuries, they have preserved both the general structures and individual buildings of the Roman era
- D) the eruption of the Vesuvius did not affect either the general structures or the single buildings
- E) they are the only two Roman towns of which we have remains

17. **The typically Roman urban layout is often found still today: (see *Passage II*)**

- A) in cities built by the Romans
- B) in Rome
- C) in Roman villages transformed into camps
- D) in all English cities
- E) in all historic centres



18. In Roman cities the forum was located: (see *Passage II*)
- A) at the intersection of the Cardo and the Decumanus
 - B) at the intersection of parallel thoroughfares
 - C) near the political and religious centre
 - D) far from the most important public buildings
 - E) at the intersection of the hills
19. In Roman houses, which element was the rainwater collecting basin? (see *Passage II*)
- A) The impluvium
 - B) The compluvium
 - C) The atrium
 - D) The courtyard
 - E) The hortus
20. Which of the following statements is consistent with the content of the *passage II*?
- A) Some cities that still exist began as Roman military camps
 - B) The typical Roman city had only two gates: one at the cardo maximus and one at the decumanus maximus
 - C) Simple Pompeii houses never had windows on the street, but only on the inner courtyard
 - D) Like Roman cities, a Pompeii house had a grid layout
 - E) The dining room of Roman houses was triangular to accommodate a three-sided table and three beds

Test di Cultura Generale

21. What is the name of the literary movement born in France in the second half of the 19th century under the influence of positivism, which dictates that the experimental method should be applied to the writer's work?
- A) Naturalism
 - B) Abstractism
 - C) Classicism
 - D) Existentialism
 - E) Decadentism
22. The government of the Italian Social Republic was based in:
- A) Salò
 - B) Milan
 - C) Turin
 - D) Salerno
 - E) Rome

Test di Storia

23. What is a "rose window"?
- A) A large circular window in the middle of the façade of many churches
 - B) An architectural element in the middle of the apse
 - C) A decorative element of the shaft of Byzantine columns
 - D) The compass rose that decorates many civil architectural works
 - E) The mosaic that depicts the miracle of St. Francis and the thornless rose bush

24. In the following list, famous museums are matched with the city where they are located. Which match is wrong?
- A) Hermitage – Moscow
 - B) Capodimonte – Naples
 - C) Metropolitan – New York
 - D) Bargello – Florence
 - E) Prado – Madrid
25. Determine the correct chronological order of the following artistic movements.
- A) Neoclassicism, Impressionism, Expressionism, Pop Art
 - B) Impressionism, Pop Art, Expressionism, Neoclassicism,
 - C) Impressionism, Expressionism, Neoclassicism, Pop Art
 - D) Pop Art, Expressionism, Impressionism, Neoclassicism,
 - E) Neoclassicism, Impressionism, Pop Art, Expressionism
26. The "Aventine secession" took place as a result of which event?
- A) The assassination of Matteotti
 - B) The "very fascist laws"
 - C) The March on Rome
 - D) The imprisonment of Antonio Gramsci
 - E) The Biennio Rosso
27. What was the so-called "Question of Fiume" about?
- A) An international dispute arisen at the end of World War I, concerning sovereignty over the city of Fiume
 - B) The dispute arisen between Fiume and the other cities of Dalmatia, at the end of World War I, for predominance in the Adriatic Sea
 - C) An international dispute concerning sovereignty over the city of Fiume arisen at the end of World War II
 - D) A dispute between Napoleon III and the Austrian Empire after the signing of the Armistice of Villafranca
 - E) A controversy between the Italian State and Tito's Yugoslavia concerning the persecution of the Italians in Istria and Dalmatia
28. The Japanese attack on Pearl Harbor took place in:
- A) 1941
 - B) 1940
 - C) 1939
 - D) 1944
 - E) 1938
29. The style of the Siena Cathedral is:
- A) gothic
 - B) renaissance
 - C) eclectic
 - D) romanesque
 - E) baroque
30. The Domus Aurea was built to be the residence of:
- A) Nero
 - B) Caligula
 - C) Trajan
 - D) Vespasian
 - E) Hadrian



31. The dome shown in the figure belongs to:



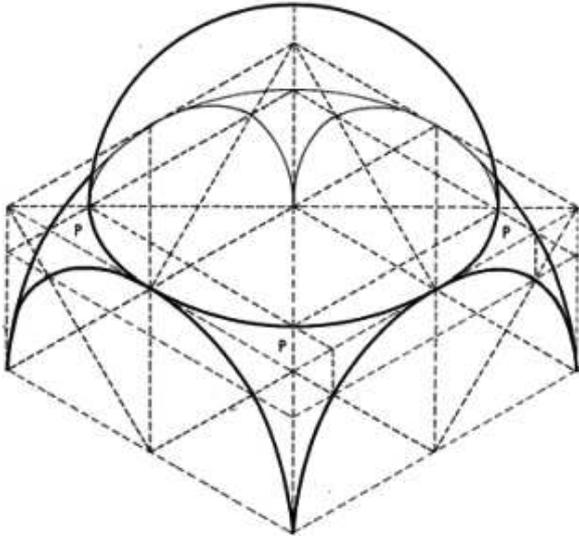
- A) the chapel of the Holy Shroud in Turin, by Guarino Guarini
- B) San Lorenzo in Turin, by Guarino Guarini
- C) the Basilica of Superga, near Turin, by Filippo Juvarra
- D) Santa Chiara, Bra, Cuneo, by Bernardo Vittone
- E) San Gregorio, Messina, by Filippo Juvarra

32. The work shown in the picture was designed by:



- A) Le Corbusier
- B) Pier Luigi Nervi
- C) Giovanni Michelucci
- D) Frank O. Gehry
- E) Charles Garnier

33. The vault shown in the figure is a:



- A) cupola
- B) barrel vault
- C) cloister vault
- D) groin vault
- E) sail vault

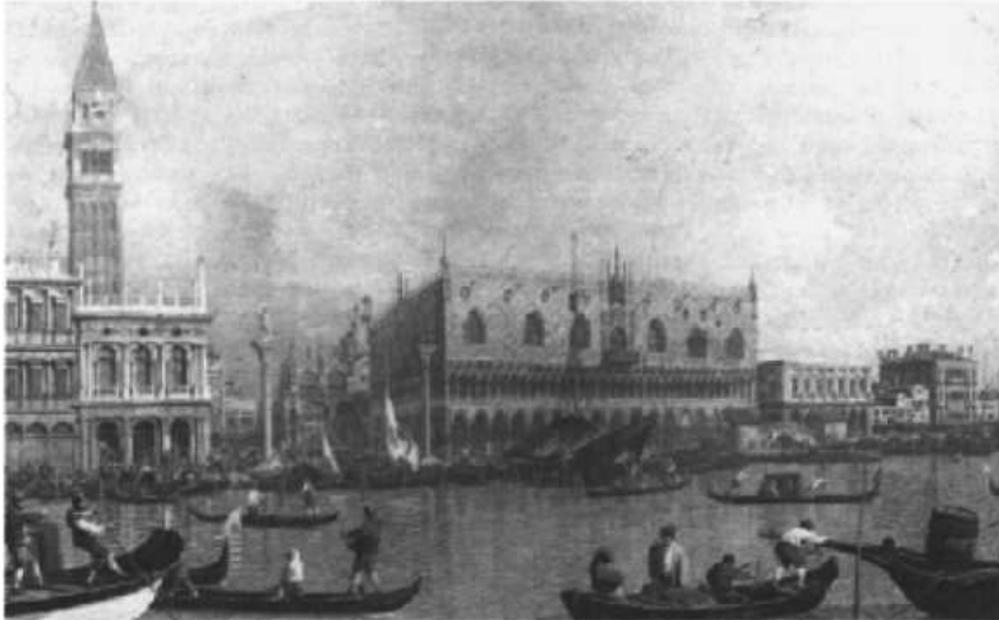
34. The work represented in the figure is:



- A) Oskar Kokoschka, "The Bride of the Wind", 1914
- B) John William Waterhouse, "The Siren", 1900
- C) Jackson Pollock, "Autumn Rhythm", 1950
- D) Marc Chagall, "The Lovers", 1954-55
- E) Egon Schiele, "The Lovers", 1917



35. The author of the given painting is:



- A) Canaletto
- B) Giambattista Tiepolo
- C) Tintoretto
- D) Titian
- E) Bernardo Bellotto

36. The author of the given painting is:



- A) Paul Klee
- B) Vasilij Kandinskij
- C) Pablo Picasso
- D) Georges Braque
- E) Fernand Léger

37. The "Discobolus", shown in the picture, was sculpted by:



- A) Myron
- B) Phidias
- C) Sotades
- D) Polykleitos
- E) Daedalus

38. Looking at the table, associate the works with the architects who designed them.

a	Robie House – Chicago
b	School of Art – Glasgow
c	Secession Building – Vienna
d	AEG Turbine Factory – Berlin
e	Villa Savoye – Poissy

1	Charles Rennie Mackintosh
2	Frank Lloyd Wright
3	Peter Behrens
4	Joseph Maria Olbrich
5	Le Corbusier

- A) a-2; b-1; c-4; d-3; e-5
- B) a-5; b-4; c-2; d-1; e-3
- C) a-3; b-4; c-1; d-2; e-5
- D) a-5; b-1; c-4; d-3; e-2
- E) a-2; b-3; c-5; d-1; e-4

Test di Disegno e Rappresentazione

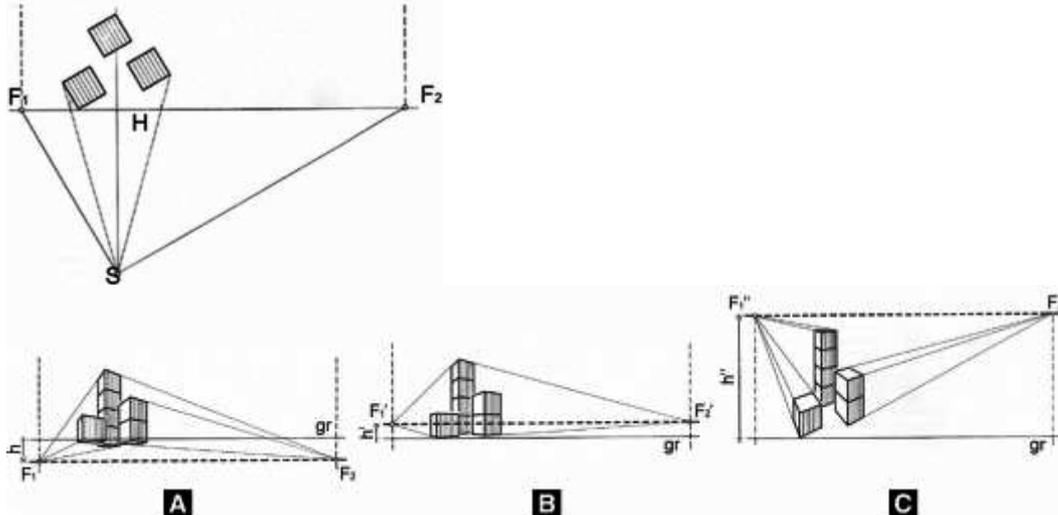
39. Which of the following statements is NOT correct?

- A) An A0 sheet is equal to four A3 sheets
- B) An A1 sheet is equal to four A3 sheets
- C) An A2 sheet is equal to four A4 sheets
- D) An A1 sheet is equal to eight A4 sheets
- E) An A0 sheet is equal to four A2 sheets



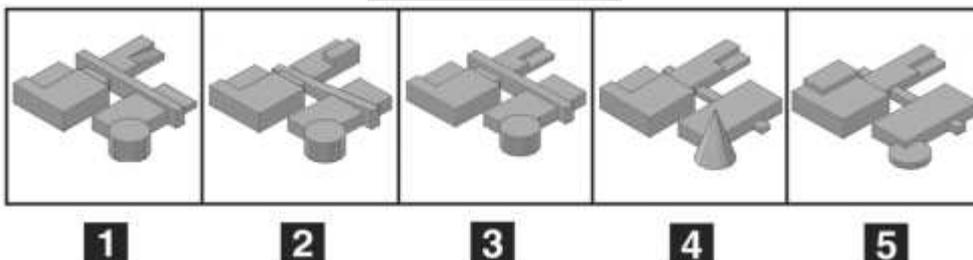
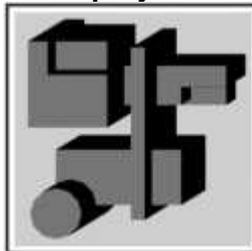
40. Match the type of perspectives listed below with the corresponding graphical representation:

- 1) Bird's eye perspective
- 2) Head height perspective
- 3) Perspective from below



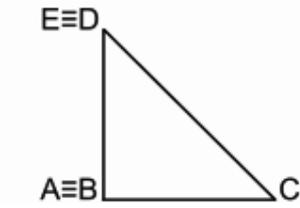
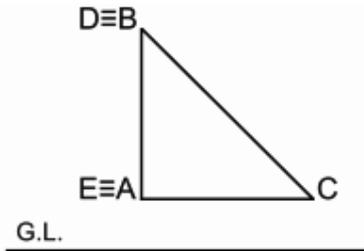
- A) 1-c; 2-b; 3-a
- B) 1-a; 2-b; 3-c
- C) 1-b; 2-a; 3-c
- D) 1-b; 2-c; 3-a
- E) 1-c; 2-a; 3-b

41. Identify the correct axonometric projection for the solid shown in figure.



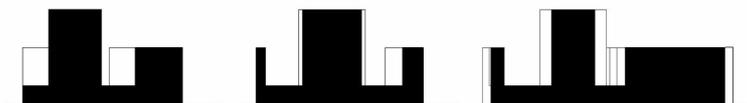
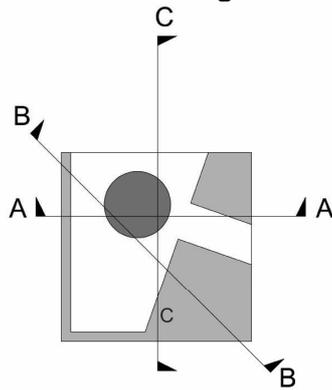
- A) 3
- B) 2
- C) 4
- D) 1
- E) 5

42. Determine the number of faces of the solid shown in the figure.



- A) 5
- B) 8
- C) 6
- D) 3
- E) 7

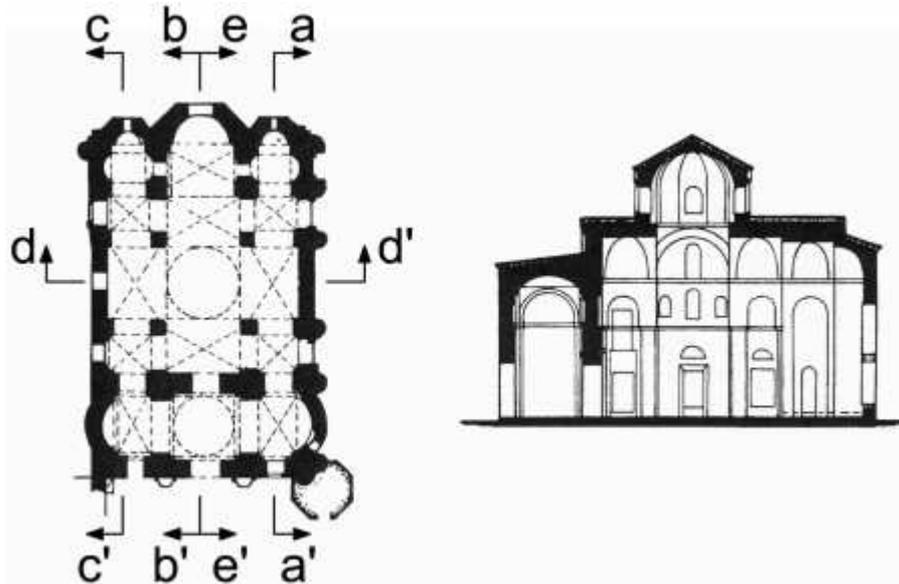
43. Determine the correct matching of the sections:



- A) 1-CC; 2-AA; 3-BB
- B) 1-BB; 2-CC; 3-AA
- C) 1-CC, 2-BB; 3-AA;
- D) 1-AA; 2-CC; 3-BB;
- E) 1-AA; 2-BB; 3-CC;



44. Given the floor plan shown in the figure, indicate the section line corresponding to the section.



- A) b-b'
- B) d-d'
- C) a-a'
- D) c-c'
- E) e-e'

45. Given the A-E floor plans, match them with the corresponding front views.



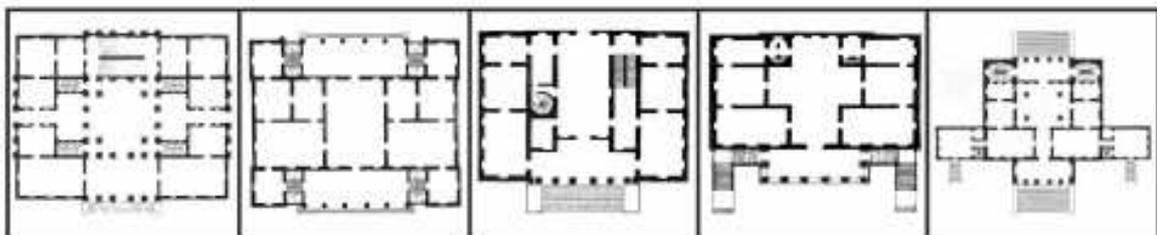
1

2

3

4

5



A

B

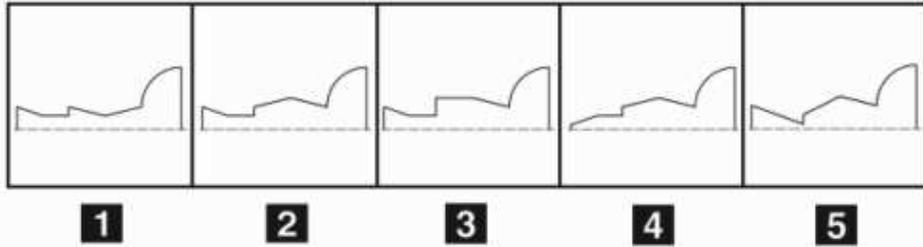
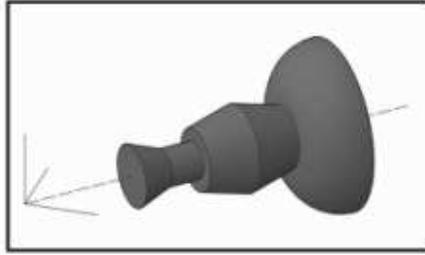
C

D

E

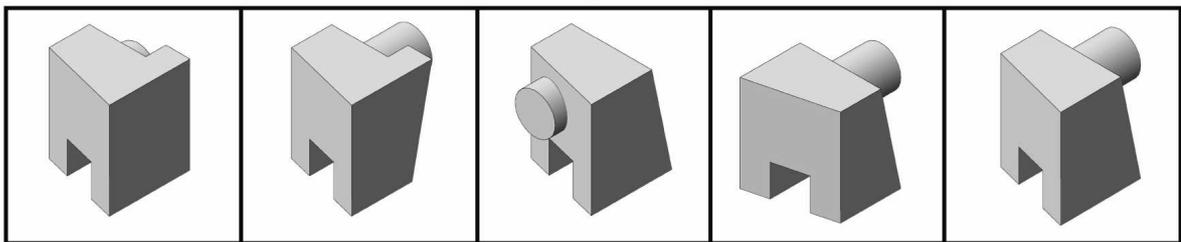
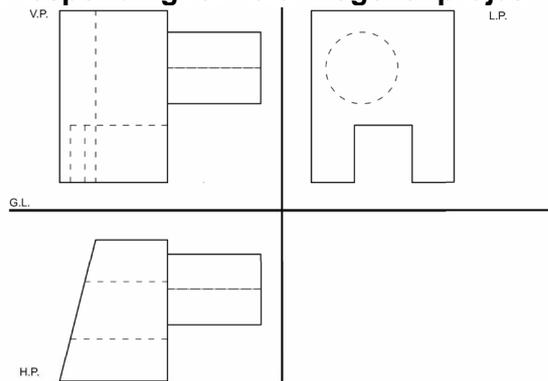
- A) A-3; B-1; C-2; D-5; E-4
- B) A-3; B-5; C-4; D-1; E-2
- C) A-5; B-3; C-2; D-1; E-4;
- D) A-2; B-4; C-3; D-5; E-1
- E) A-4; B-2; C-5; D-3; E-4

46. Locate the generatrix of the surface of revolution shown in the figure.



- A) 2
- B) 3
- C) 1
- D) 4
- E) 5

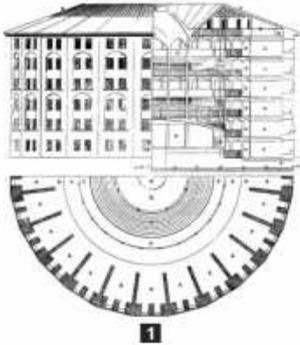
47. Determine the solid corresponding to the orthogonal projection in the figure.



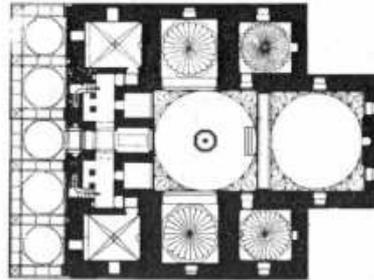
- A) 5
- B) 3
- C) 1
- D) 2
- E) 4



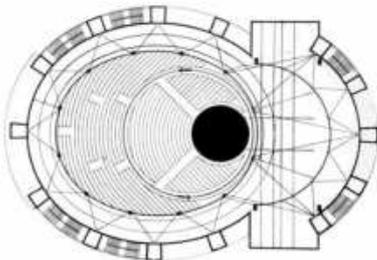
48. Match the floor plans shown with their intended use.



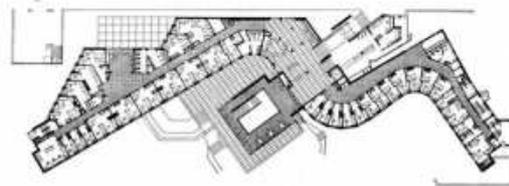
1



2



3



4

- A) 1 - Prison; 2 - Place of worship; 3 - Theatre; 4 - Residence
B) 1 - Theatre; 2 - Residence; 3 - Place of worship; 4 - Prison
C) 1 - Residence; 2 - Theatre; 3 - Prison; 4 - Place of worship
D) 1 - Prison; 2 - Place of worship; 3 - Residence; 4 - Theatre
E) 1 - Place of worship; 2 - Prison; 3 - Theatre; 4 - Residence

Test di Fisica e Matematica

49. Consider a $5 \mu\text{F}$ capacitor connected to a 1.5 V battery. What is the charge deposited on each of the plates of the capacitor?
- A) $7.5 \cdot 10^{-6} \text{ C}$
B) $4 \cdot 10^{-6} \text{ C}$
C) $3.33 \cdot 10^{-6} \text{ C}$
D) $1.2 \cdot 10^{-6} \text{ C}$
E) $4.8 \cdot 10^{-6} \text{ C}$
50. A 24 N force applied to a 3 kg mass produces an acceleration of:
- A) 8 m/s^2
B) 72 m/s^2
C) 21 m/s^2
D) 3 m/s^2
E) $3,14 \text{ m/s}^2$
51. What is approximately the work performed by gravity on a 2 kg coconut falling from a 10-metre high palm?
- A) 200 J
B) 100 J
C) 5 J
D) 20 J
E) 10 J

52. If the temperature of a perfect gas increases from 15°C to 30°C , the pressure-volume product (PV):
- increases, but does not double
 - becomes 2 times bigger
 - is reduced by 15%
 - becomes zero
 - is halved
53. At 3:30 p.m. the odometer of a car marks 22,715. If at 5:00 p.m. the odometer marks 22,865, what was the average speed of the car?
- 100 km/h
 - 150 km/h
 - 50 km/h
 - 10 km/h
 - 200 km/h
54. A metal bar 1 metre long is suspended by its centre. At 10 cm from the left end hangs a 10 kg weight, while at the other end hangs a 12 kg weight. What must you do to balance the bar and keep it horizontal?
- Add to the weight hung on the left end another weight of 5 kg
 - Add to the weight hung on the right end another weight of 5 kg
 - Add to the weight hung on the left end another weight of 4 kg
 - Nothing, the bar is already balanced
 - Add to the weight hung on the right end another weight of 4 kg
55. The solutions to the inequality $(2 - x)(x + 1)x < 0$ are:
- $-1 < x < 0$ or $x > 2$
 - $x < -1$ or $0 < x < 2$
 - $-1 < x < 0$
 - $x > 2$
 - $0 < x < 1$ or $x > 2$
56. A blindfolded person draws one ball from an urn containing 20 balls numbered from 1 to 20. Assuming that all the balls have the same probability of being drawn, what is the probability that a ball marked with a perfect square will be drawn?
- 1/5
 - 1/10
 - 3/20
 - 1/4
 - 2/5
57. In a Cartesian plane Oxy, the graph of the function $y = x^2 + 4$:
- does not intersect the x-axis
 - passes through the origin O
 - intersects the x-axis at the abscissa point $x = -2$
 - does not intersect the y-axis
 - intersects the y-axis at the ordinate point $y = -2$
58. Given the line r of equation $y = mx + q$. The line r' of equation $y = Mx + Q$ is perpendicular to r if:
- $M = -1/m$
 - $M = -2/m$
 - $M = -m$
 - $Q = -1/q$
 - $Q = q$



59. The average height of 5 friends is 180 cm. If a 1.65 m tall boy joins the group, the average height of the 6 friends becomes:
- A) 177,5 cm
 - B) 167,5 cm
 - C) 172,5 cm
 - D) 174 cm
 - E) 177 cm
60. In a clothes shop, Valeria buys on sale a skirt that has a price tag of €40. If the discount applied is 30% and Valeria pays with a €50 note, how much change will she receive?
- A) €22
 - B) €20
 - C) €28
 - D) €10
 - E) €15

***** FINE DELLE DOMANDE *****

Tutte le risposte corrette sono alla posizione A)