A TRADITION OF EXCELLENCE

INSTRUCTIONS

You are about to take Copernicus Exam.

Please read the followings carefully.

1. The exam has 25 multiple choice-questions. Each question weighs 4 points. The maximum score a student can get is 100. There is a penalty of one point for each incorrect answer. So only answer the questions you are sure of.
2. Start with the easier questions, you can always come back to the questions you leave.
3. The time allocated for the exam is 60 minutes. You will start when the invigilator tells you to start.
4. You are required to comply with the directions given by the head invigilator before the examination.
5. Those who are taking the exam with a mobile phone MUST make sure that during the examination no one calls.
6. If anything in the examination is unclear, you can contact the invigilator.
7. Where permitted you may use a translation dictionary.
8. Students must not give or receive assistance of any kind during the exam. Any cheating, any attempt to cheat, assisting others to cheat, participating therein, or engaging in such improper conduct is a serious violation and will generally result in disqualifying.

Remember that “Hard work beats talent when talent doesn't work hard”

We wish you the very best luck on the exam.

1. Calculate the sum:

$$101 + 202 + 303 + 404 + 505$$

A) 999
B) 1500
C) 1515
D) 1551

2. Which one is bigger:

$$X = 123 \times 321$$
$$Y = 100 \times 300$$

A) X
B) Y
C) Equal
D) Impossible to determine

3. Alex started the lesson at 09: 15 and finished at 13: 05. How long did Alex study?

A) 4 hours
B) 4 hours, 10 minutes
C) 3 hours, 50 minutes
D) 3 hours

4. Which answer is correct:

$$\begin{array}{r} 1\square 7 \\ +\quad 6\square \\ \hline 222 \end{array}$$

A) $167 + 65$
B) $177 + 66$
C) $157 + 65$
D) $156 + 65$

5. What number comes next?

$$2, 5, 10, 17, 26, 37, \ldots$$

A) 38
B) 74
C) 50
D) 65

6. There are 20 trees in the row. Distance between each 2 trees is 2 m. What is the distance between the first and the last tree?

A) 38
B) 40
C) 42
D) 24

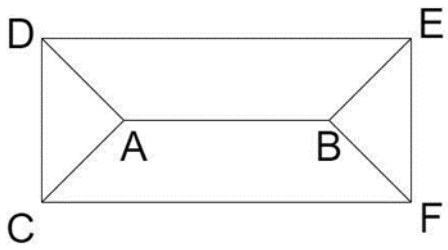
7. If $X \Delta Y = X + Y$ and $X \odot Y = X \times Y$, what will be $(4 \Delta 3) \odot 2$?

A) 14
B) 9
C) 10
D) 16

8. Which day of the week will be 22nd of April, if 22nd of March is Friday?

A) Friday
B) Monday
C) Tuesday
D) Sunday

9. How many different ways you can use to get from A to B? (You can go through each point only once)



A) 9
B) 8
C) 7
D) 6

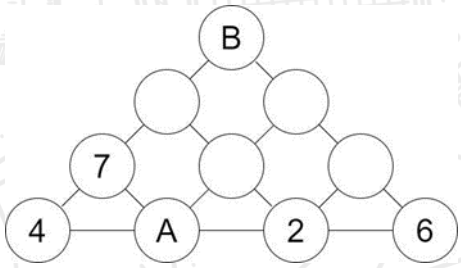
10. Two plums weigh one apple and three apples weigh two oranges. How many plums does one orange weigh?

A) 2
B) 3
C) 4
D) 6

11. The sum of the ages of mother, father and son is 66. What will be the sum of their ages after 3 years?

A) 75
B) 69
C) 72
D) 66

12. Find $A + B$, if the sum of numbers in the bottom two circles is equal to the number in the top ring.



A) 28
B) 19
C) 24
D) 27

13. There are 30 cats in the yard. These include mothers and kittens. Each mother cat has at least 3 kittens. What is the maximum number of mother cats?

A) 10
B) 9
C) 8
D) 7

14. Grandma poured 30 liters of water into five three-liter and four two-liter jars, and the rest into half-liter jars. How many half-liter jars did Grandma use?

A) 12
B) 14
C) 16
D) 18

15. There are four doors and their four keys. How many attempts does it take to figure out which key fits which door? (Each key takes only one door).

A) 6
B) 10
C) 4
D) 16

16. The mother counted and if she gave each child 4 candies, then there would be 3 candies left. And if you give each one 5 candies, then 2 candies will be missing. How many children does the mother have?

A) 3
B) 4
C) 5
D) 6

17. John, Jane, Jimmy and Janet together have 42 balls. John has as many balls as Jane, Jimmy and Janet together. Jane has 5 balls more than Jimmy and 8 balls less than Janet. How many balls does Jane have?

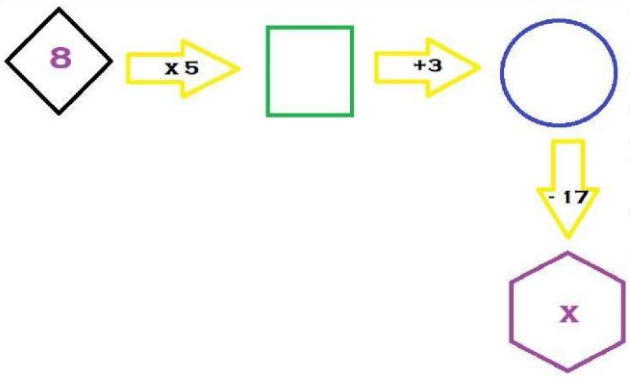
A) 5
B) 6
C) 7
D) 8

18. Discover the pattern in the picture below. Count A, with the same regularity.

2	3	5	9	17
4				A

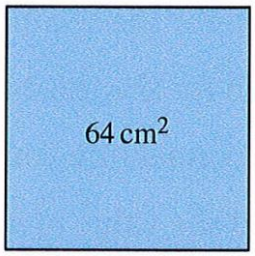
A) 19
B) 34
C) 49
D) 68

19. Find the value of x.



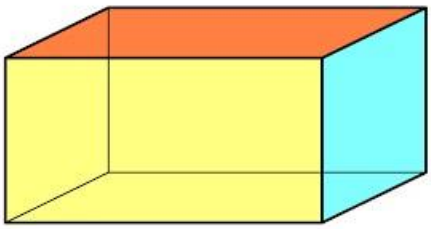
A) 29
B) 43
C) 26
D) 32

20. Area of this square is 64 cm^2. Find the length of one side of this square.



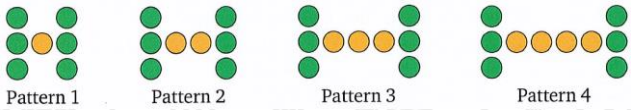
A) 8 cm
B) 12 cm
C) 16 cm
D) 32 cm

21. How many faces does the shape below have?



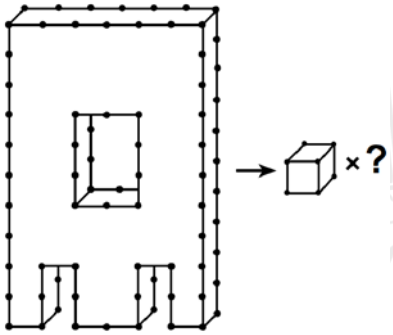
A) 8
B) 6
C) 5
D) 4

22. How many circles will be in pattern 50?



A) 96
B) 69
C) 126
D) 56

23.



A) 48
B) 50
C) 52
D) 54

24. Find Highest Common Factor of 36 and 48.

A) 144
B) 12
C) 8
D) 6

25. The sum of two numbers is 96. The bigger number is twice as large as the smallest number. Find the biggest number.

A) 12
B) 24
C) 36
D) 48