Area: MATH	**Eighth Grade**
Date:	
Name:	

Test Conditions:

- The use of a calculator is not allowed.
- Use the blank sheets at the end of the test to complete the necessary procedures.
- You have 60 minutes to finish the test.
- Use a pencil both to circle the answer that you consider correct and to do the necessary processes.

DEVELOPMENT OF THE TEST

ANSWER QUESTION 1 ACCORDING TO THE FOLLOWING INFORMATION

The coexistence committee of a school is going to be formed. The committee must be made up of three people: a student, a teacher and a manager. Andrea was elected representative of the students. As candidates to complete the committee there are 2 professors (Jaime and Lucía) and two directors (Juan and Carlos).

1. What are the different committees that can be formed?

A.

Andrea, Jaime y Juan
Andrea, Jaime y Carlos
Andrea, Lucía y Juan
Andrea, Lucía y Carlos

B.

Andrea, Jaime y Lucía
Andrea, Jaime y Juan
Andrea, Carlos y Lucía
Andrea, Carlos y Juan

C.

Andrea, Lucía y Jaime
Andrea, Lucía y Juan
Andrea, Carlos y Jaime
Andrea, Carlos y Juan

D.

Andrea, Carlos y Juan
Andrea, Carlos y Jaime
Andrea, Juan y Lucía
Andrea, Juan y Jaime

The graph shows the results of a math test.

**2.** The circular diagram that corresponds to the graph is:
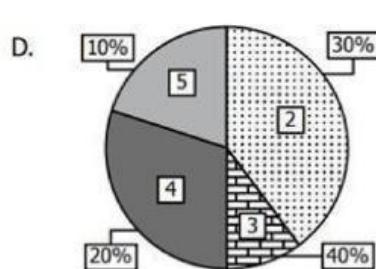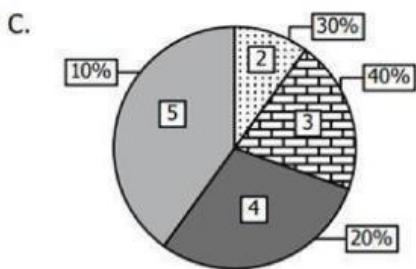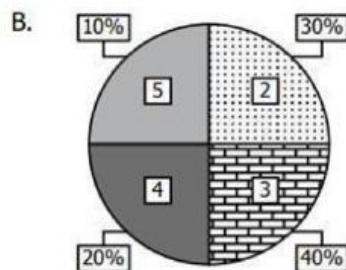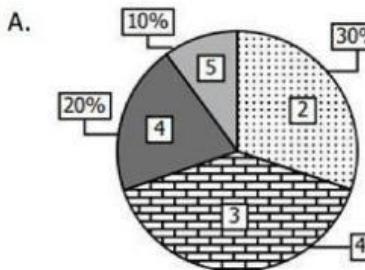
3. The following table shows the relationship between the distance (km) and the time (h) it takes for a car to go from one city to another, at a constant speed.

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ACADEMIC ADMISSION TESTS

Kilometres	60	120	180		300
Hours	1	2	3	4	5

How many kilometers will the car have traveled after four hours?

a. 200   c. 250
b. 240   d. 270

4. A person analyzes the price of the shares of a company and accordingly invests weekly. The graph shows a record of investments for the last 12 weeks.

Dinero invertido en millones de pesos

Gráfica
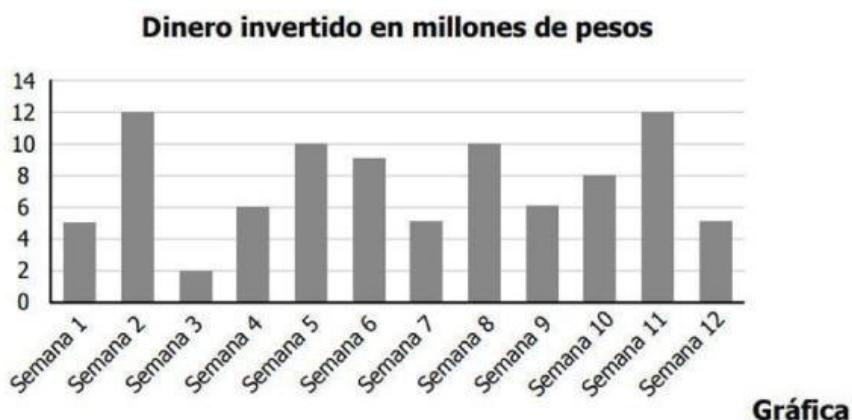
According to the information presented in the graph, it is correct to affirm that the shareholder's investment in the first

a. 4 weeks was greater than the following 4 weeks.
b. 5 weeks was the same as the last 5 weeks.
c. 4 weeks was less than in the last 4 weeks.
d. 6 weeks was the same as the last 6 weeks.

5. Three car drivers race a track to determine the starting position in the next race, the first driver makes a lap in 56.739 seconds, the second driver makes the lap in 56.740 seconds. Is it possible that the third driver, when making the same lap, takes a time that places him in second place?

a. Yes, because it can turn around in a time greater than 56,740
b. No, because there is no rational number between 56,739 and 56,740

LIVEWORKSHEETS

c. Yes, because in the middle of two rational numbers there are infinite rational numbers.

d. No, because rational numbers only accept three decimal places.

6. Look at figures 1, 2, 3 and 4 that are located on the Cartesian plane.
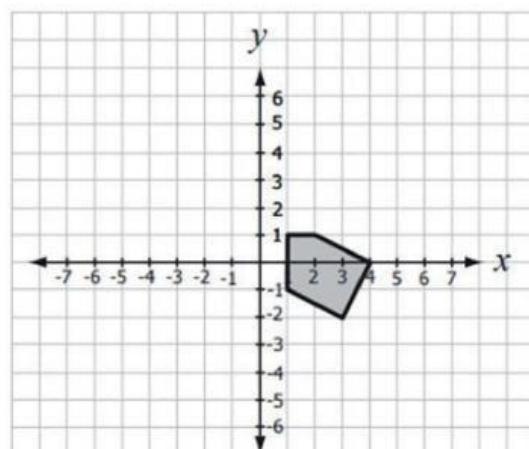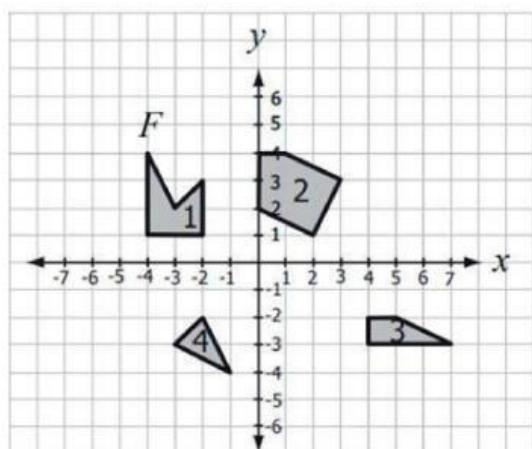
After applying two translations to figure 2, it was in the position shown below. Figure 2 was moved:

a. 1 unit to the right and 1 unit down.

b. 1 unit to the right and 3 units down.

c. 1 unit to the left and 3 units down.

d. 4 units to the right and 2 units down.

7. Look at the figures drawn on the grid.
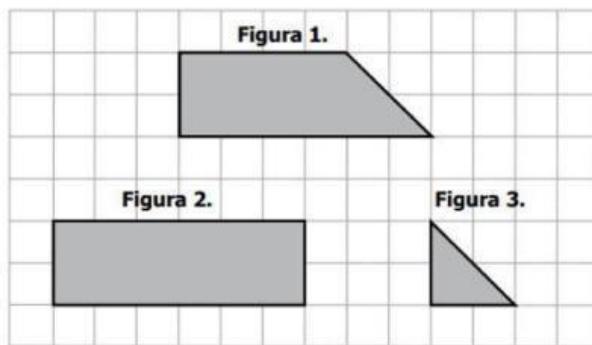
The area in Figure 2 is equal to

a. The area of figure 1 plus the area of figure 3.
b. Twice the area of figure 1.
c. The area of figure 1 minus the area of figure 3.
d. Three times the area of figure 3.

8. Rafael wants to carpet the hallway that has the following shape and dimensions:
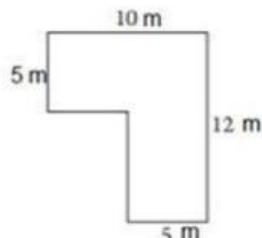
Considering that the square meter of carpet costs $ 12,000, how much money will Rafael have to invest to buy the amount of carpet required to cover the entire hallway? **You must place the detailed process**.

9. Bacteria reproduce by binary fission (they divide in half) and the time between divisions is around an hour in many bacterial species. There is a glass container that contains 100 bacteria, after one hour this container will have 200 bacteria, at the end of the second hour there will be 400 bacteria, that is, every hour the number of bacteria will double. In this way, the sequence that allows modeling the population growth of bacteria is:

LIVEWORKSHEETS

a. 100, 200, 300, 400, 500, 600, ...
b. 1, 2, 4, 8, 16, 32, ...
c. 100, 200, 400, 800, 1600, 3200, ...
d. 100, 300, 500, 700, 900, 1,100, ...

10. The following graph shows the relationship between temperature and time of day in a municipality.
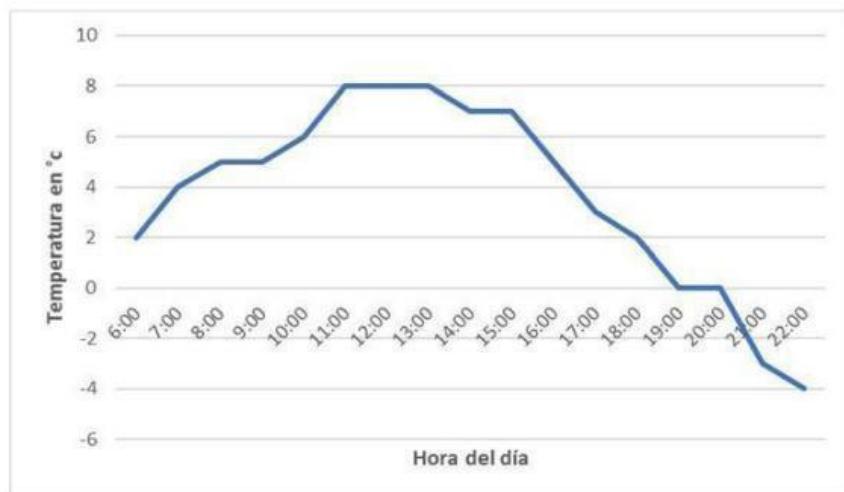

According to the graph, how many degrees and at what time of day is the lowest temperature recorded in this municipality. What is the difference between the temperature at 10:00 and 22:00? **You must place the detailed process**

11. In the first grade of a school, the ages of the students are recorded in the following table:

AGES	ABSOLUTE FREQUENCY
5 or less	3
6	11
7	6
8	5

What percentage of students, with respect to all first grade children, are 7 years old or younger? **You must place the detailed process**

12. The line on the plane shows the path taken by a rabbit from point **X** to a carrot crop located at point **Z**.
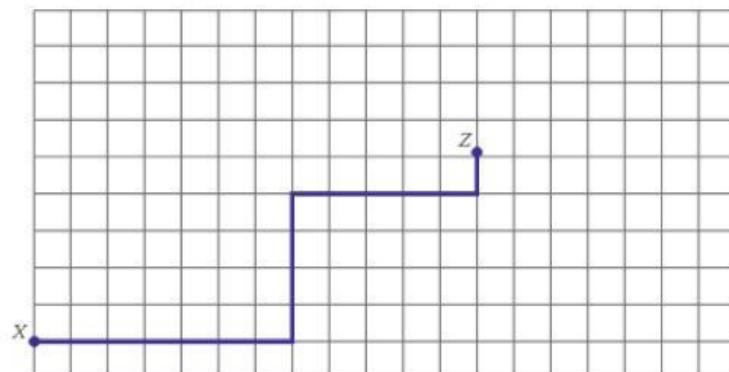

On the plane, the side of each square corresponds to 3 meters of the terrain.

How many meters did the rabbit travel?

a. 12 meters
b. 17 meters
c. 51 meters
d. 60 meters

13. In a contest, a prize is given to whoever, without seeing, takes a black ball out of a bag in one attempt.

The participant has the following options:

Bolsa 1   Bolsa 2   Bolsa 3   Bolsa 4
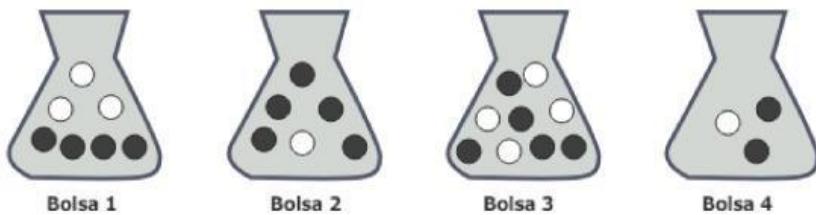
Which of the four bags is the participant most likely to win?

a. Bag n° 1
b. Bag n° 2
c. Bag n° 3
d. Bag n° 4

14. Carlos distributed an amount of money among his three children, like this:

● José received 35% of the money.
● María received 40% of the money
● Luis received 25% of the money.

Which of the following statements is correct regarding the amount of money received?

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a. Maria was the one who received the most money and José the one who received the least

b. Jose was the one who received the most money and Luis who received the least.

c. María was the one who received the most money and Luis who received the least.

d. Jose was the one who received the most money and Maria who received the least.

15 . Ana is designing a rectangular garden in her Yard. She wants to put a fence around her garden and needs to calculate the total length of the fence. The garden has a length of 10 meters and a width of 5 meters. Ana asks her friends how long the perimeter of the garden is.

Which of the following answers is correct?

a. The perimeter of the garden is 30 meters.

b. The perimeter of the garden is 25 meters.

c. The perimeter of the garden is 20 meters.

d. The perimeter of the garden is 15 meters.