3 Point Problems

1. The figure shown in the picture was made out of identical wooden cubes. How many wooden cubes were used?

   A) 6     B) 8     C) 10     D) 12     E) 15

2. \(200 \times 9 + 200 + 9 =\)

   A) 418     B) 1909     C) 2009     D) 4018     E) 2009

3. Where is the kangaroo?

   A) In the circle and in the triangle, but not in the square.
   B) In the circle and in the square, but not in the triangle.
   C) In the triangle and in the square, but not in the circle.
   D) In the circle, but not in the square and not in the triangle.
   E) In the square, but not in the circle and not in the triangle.

4. In a certain family there are five brothers. Each one of them has one sister. How many children are in this family?

   A) 6     B) 7     C) 8     D) 9     E) 10

5. The number 930 is shown on a display (see the picture). How many little squares need to change color in order to show the number 806?

   A) 5     B) 6     C) 7     D) 8     E) 9

6. Mother bought 16 oranges. Carl ate half of them, Eva ate two and Sophie ate the rest. How many oranges did Sophie eat?

   A) 4     B) 6     C) 8     D) 10     E) 12

7. In his garden Anthony made the path shown in the figure, using 10 tiles of size 4 m by 6 m. Anthony painted a black line between the midpoints of the tiles. How long is this black line?

   A) 24 m     B) 40 m     C) 46 m     D) 50 m     E) 56 m
8. A certain movie is 90 minutes long. It started at 5:10 PM. During the movie, there were two commercial breaks, one lasting 8 minutes and one lasting 5 minutes. At what time did the movie finish?

A) At 6:13 PM   B) At 6:27 PM   C) At 6:47 PM
D) At 6:53 PM   E) At 7:13 PM

4 Point Problems

9. A red kangaroo and a gray kangaroo together weigh 139 kg. The red kangaroo weighs 35 kg less than the gray kangaroo. How much does the gray kangaroo weigh?

A) 104 kg   B) 52 kg   C) 87 kg   D) 96 kg   E) 53 kg

10. Peter was dividing a chocolate bar. He broke one row of five pieces for his brother and then one row of seven pieces for his sister in the way you see in the picture. How many pieces were in the whole chocolate bar?

A) 28   B) 32   C) 35   D) 40   E) 54

11. A certain dance group starts out with 25 boys and 19 girls. Every week 2 more boys and 3 more girls join the dance group. After how many weeks will there be the same number of boys and girls in the dance group?

A) 6   B) 5   C) 4   D) 3   E) 2

12. A farmer has 30 cows, some chickens and no other animals. The total number of the legs of the chickens is equal to the total number of the legs of the cows. How many animals does the farmer have altogether?

A) 60   B) 90   C) 120   D) 180   E) 240

13. One side of a rectangle is 8 cm long, while the other is half as long. A square has the same perimeter as the rectangle. What is the length of the side of the square?

A) 4 cm   B) 6 cm   C) 8 cm   D) 12 cm   E) 24 cm

14. Magda threw a die four times and she obtained a total of 23 points. How many times did the roll show 6 dots?

A) 0   B) 1   C) 2   D) 3   E) 4
15. Three squirrels, Hela, Mela and Tola, together found 7 nuts. Each of them found a different number of nuts, but each of them found at least one nut. Hela collected the least, and Mela the most of all. How many nuts did Tola find?

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

16. Peter and Paul went to a boy scout camp. During a meeting, the scouts stood in a single row. On one side of Paul there were 27 scouts, and on the other side there were 13 scouts. Peter was standing exactly in the middle of the row. How many scouts were there between Peter and Paul?

A) 6 B) 7 C) 8 D) 14 E) 21

5 Point Problems

17. Which of the figures below cannot be made using the two dominoes shown in the picture to the right?

A)  

B)  

C)  

D)  

E)  

18. A secret agent wants to break a 6-digit code. He knows that the sum of the first, third and fifth digits is equal to the sum of the second, fourth and sixth digits. Which of the following numbers could be the code?

A) 81**61  B) 7**727*  C) 4**4141  

D) 12**98  E) 181**2*

19. One week, Ms. Florentina sold eggs at the market every day from Monday to Friday. On Wednesday, she sold 60 eggs. On Thursday, she sold 96 eggs, and noticed that every day that week the number of eggs she sold was equal to the sum of the number of eggs she sold the two previous days. How many eggs did Ms. Florentina sell on Monday?

A) 20 B) 24 C) 36 D) 40 E) 48
20. A certain vase contains four flowers: one red, one blue, one yellow, and one white. Maia the Bee sat on every flower in the bouquet only once. She started with the red flower, and she did not fly directly from the yellow flower to the white flower. In how many ways could Maia sit on all the flowers?

A) 1  B) 2  C) 3  D) 4  E) 6

21. At 6:15 AM Casper the friendly ghost vanished, and the crazy clock, which had been showing the right time until then, started to run at the right speed but backwards. The ghost appeared again at 7:30 PM that same day. What time did the crazy clock show at the moment when the ghost appeared?

A) 5:00 PM  B) 5:45 PM  C) 6:30 PM  D) 7:00 PM  E) 7:15 PM

22. The squares of a 3 \times 3 table were filled in with numbers as shown in the picture. In one move, we can switch any two numbers. What is the smallest number of moves like this that we need to make to get a table in which the sum of the numbers in each row is divisible by 3?

\[
\begin{array}{ccc}
4 & 5 & 1 \\
8 & 10 & 4 \\
7 & 1 & 2 \\
\end{array}
\]

A) 1  B) 2  C) 3  D) 4  E) It is impossible to get such a table.

23. Agnes was drawing figures made up of segments of length 1. At the end of each segment, she always turned at a right angle either to the left or to the right. Each time she turned right, she drew the symbol \( \heartsuit \) on a piece of paper, and each time she turned the left, she drew the symbol \( \blacklozenge \). One day, she drew a figure and drew these symbols in this order: \( \heartsuit \blacklozenge \blacklozenge \blacklozenge \blacklozenge \heartsuit \). Which of the following figures could Agnes have drawn?

A)  \( \begin{array}{c}
\text{I}
\end{array} \)  B)  \( \begin{array}{c}
\text{II}
\end{array} \)  C)  \( \begin{array}{c}
\text{III}
\end{array} \)  D)  \( \begin{array}{c}
\text{IV}
\end{array} \)  E)  \( \begin{array}{c}
\text{V}
\end{array} \)

24. In the land of Funnyfeet, the left foot of each man is two sizes bigger than his right foot, and the left foot of each woman is one size bigger than her right foot. However, shoes are always sold in pairs of the same size, and only in whole sizes. A group of friends decided to buy green shoes, and to save money they bought shoes together. After they all put on the shoes that fit them, there were exactly two shoes left over, one of size 36 and another of size 45. What is the smallest possible number of people in the group?

A) 4  B) 5  C) 6  D) 7  E) 9