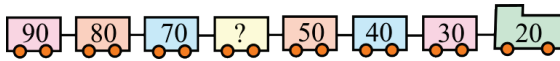# LEVELS 1 AND 2

SAMPLE QUESTION FOR 3 POINTS

Fill in the empty space marked with a question mark on the fourth car from the left.

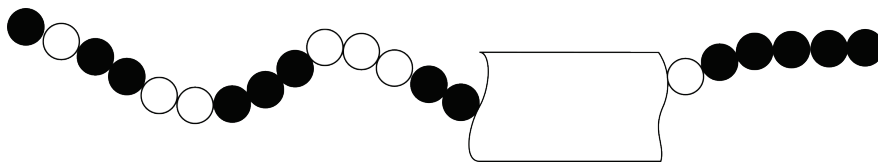A) 10   B) 20   C) 40   D) 60   E) 80

SAMPLE QUESTION FOR 4 POINTS

Lucy, Maria, and Anna have a meeting at 12:30. Lucy's walk takes 10 minutes, Maria's a quarter of an hour, and Anna's 40 minutes. At what time must the person who needs the longest time to get to the meeting leave her house?

A) 12:00   B) 12:10   C) 12:15   C) 12:20   E) 11:50
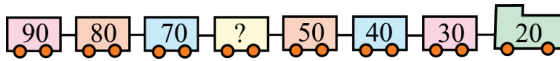
SAMPLE QUESTION FOR 5 POINTS

Which dots are covered?

LEVELS 1 AND 2 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

Fill in the empty space marked with a question mark on the fourth car from the left.

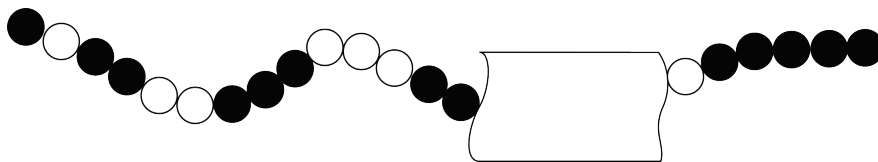A) 10   B) 20   C) 40   **D) 60**   E) 80

SAMPLE QUESTION FOR 4 POINTS

Lucy, Maria, and Anna have a meeting at 12:30. Lucy's walk takes 10 minutes, Maria's a quarter of an hour, and Anna's 40 minutes. At what time must the person who needs the longest time to get to the meeting leave her house?

A) 12:00   B) 12:10   C) 12:15   C) 12:20   **E) 11:50**

SAMPLE QUESTION FOR 5 POINTS

Which dots are covered?

LEVELS 3 AND 4

SAMPLE QUESTION FOR 3 POINTS

What is the value of this expression: $2 \times 0 \times 0 \times 6 + 2006$?

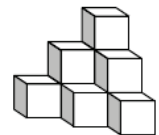A) 0   B) 2006   C) 2014   D) 2018   E) 4012

SAMPLE QUESTION FOR 4 POINTS

On one side of Long Street the houses are numbered with the consecutive odd numbers from 1 to 19. On the other side of that street, the houses are numbered with the consecutive even numbers from 2 to 14. How many houses are there on Long Street?

A) 8   B) 16   C) 17   D) 18   E) 33

SAMPLE QUESTION FOR 5 POINTS

The structure shown in the picture is made by gluing together the sides of 10 cubes. Roman painted the entire structure, including the bottom. How many faces of the cubes did he paint?

A) 18   B) 24   C) 30   D) 36   E) 42

LEVELS 3 AND 4 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

What is the value of this expression: $2 \times 0 \times 0 \times 6 + 2006$?

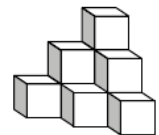A) 0   **B) 2006**   C) 2014   D) 2018   E) 4012

SAMPLE QUESTION FOR 4 POINTS

On one side of Long Street the houses are numbered with the consecutive odd numbers from 1 to 19. On the other side of that street, the houses are numbered with the consecutive even numbers from 2 to 14. How many houses are there on Long Street?

A) 8   B) 16   **C) 17**   D) 18   E) 33

SAMPLE QUESTION FOR 5 POINTS

The structure shown in the picture is made by gluing together the sides of 10 cubes. Roman painted the entire structure, including the bottom. How many faces of the cubes did he paint?
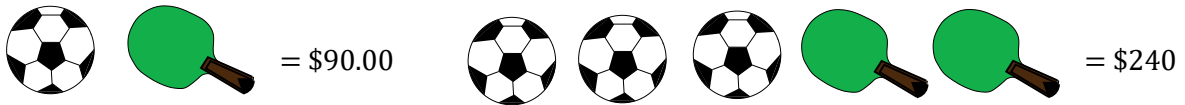

A) 18   B) 24   C) 30   **D) 36**   E) 42

LEVELS 5 AND 6

SAMPLE QUESTION FOR 3 POINTS

There is an advertisement in a sport store:
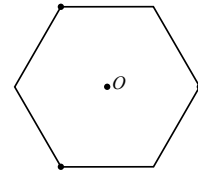
 = $90.00   = $240

How much does a soccer ball cost?

A) $130.00   B) $60.00   C) $50.00   D) $40.00   E) $30.00
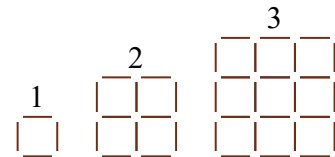
SAMPLE QUESTION FOR 4 POINTS

A piece of paper in the shape of a regular hexagon, like the one shown, is folded in such a way that the three corners marked with dots touch each other at the center of the hexagon. The obtained figure is a/an:

A) six-pointed star   B) dodecagon   C) hexagon   D) square   E) equilateral triangle

SAMPLE QUESTION FOR 5 POINTS

Barbara is creating different squares using sticks of equal length in the way shown in the picture. She labeled the squares with numbers 1, 2, 3, and so on. How many more sticks will she use to create the 31st square compared to the 30th square?
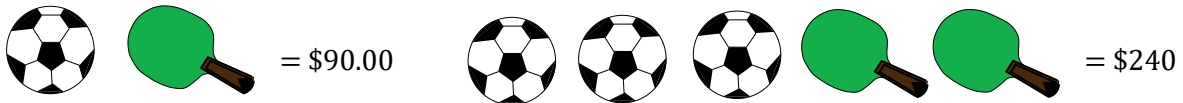

A) 148   B) 61   C) 254   D) 120   E) 124

LEVELS 5 AND 6 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

There is an advertisement in a sport store:
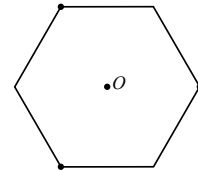
 = $90.00   = $240

How much does a soccer ball cost?

A) $130.00   **B) $60.00**   C) $50.00   D) $40.00   E) $30.00
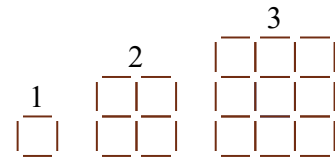
SAMPLE QUESTION FOR 4 POINTS

A piece of paper in the shape of a regular hexagon, like the one shown, is folded in such a way that the three corners marked with dots touch each other at the center of the hexagon. The obtained figure is a/an:

A) six-pointed star   B) dodecagon   C) hexagon   D) square   **E) equilateral triangle**

SAMPLE QUESTION FOR 5 POINTS

Barbara is creating different squares using sticks of equal length in the way shown in the picture. She labeled the squares with numbers 1, 2, 3, and so on. How many more sticks will she use to create the 31st square compared to the 30th square?
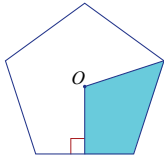

A) 148   B) 61   C) 254   D) 120   **E) 124**

LEVELS 7 AND 8

SAMPLE QUESTION FOR 3 POINTS

Point O is the center of the regular pentagon. What part of the whole pentagon is the shaded region?

A) 10%   B) 20%   C) 25%   D) 30%   E) 40%
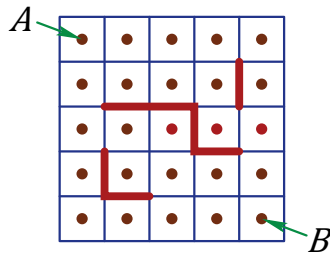
SAMPLE QUESTION FOR 4 POINTS

How many whole numbers smaller than 100 can you get as a sum of nine consecutive integers?

A) 13   B) 12   C) 11   D) 10   E) 9

SAMPLE QUESTION FOR 5 POINTS

Helen drew a 5×5 square and marked the center of each small square. Afterwards, she drew obstacles and then she tested in how many ways it was possible to move from A to B in the shortest possible way while avoiding the obstacles and moving vertically or horizontally from center to center of each small square. How many such paths with the shortest length are there?

A) 6   B) 8   C) 9   D) 11   E) 12

LEVELS 7 AND 8 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

Point O is the center of the regular pentagon. What part of the whole pentagon is the shaded region?

A) 10%   B) 20%   C) 25%   **D) 30%**   E) 40%

SAMPLE QUESTION FOR 4 POINTS

How many whole numbers smaller than 100 can you get as a sum of nine consecutive integers?

A) 13   **B) 12**   C) 11   D) 10   E) 9

SAMPLE QUESTION FOR 5 POINTS

Helen drew a 5×5 square and marked the center of each small square. Afterwards, she drew obstacles and then she tested in how many ways it was possible to move from A to B in the shortest possible way while avoiding the obstacles and moving vertically or horizontally from center to center of each small square. How many such paths with the shortest length are there?
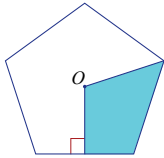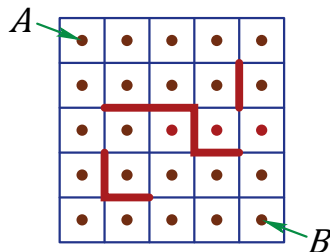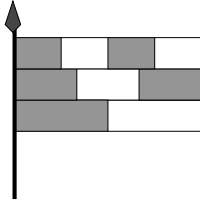

A) 6   B) 8   C) 9   D) 11   **E) 12**

LEVELS 9 AND 10

SAMPLE QUESTION FOR 3 POINTS

A flag consists of three stripes of equal width, which are divided into two, three, and four equal parts, as shown. What fraction of the flag's area is shaded?

A) $\dfrac{1}{2}$　　　B) $\dfrac{2}{3}$　　　C) $\dfrac{3}{5}$　　　D) $\dfrac{4}{7}$　　　E) $\dfrac{5}{9}$

SAMPLE QUESTION FOR 4 POINTS

An indiscreet neighbor asked Mrs. Novak how old she was. Mrs. Novak replied, "If I live to be one hundred, then my age is two thirds of the time I have left." How old is Mrs. Novak?

A) 20　　　B) 40　　　C) 50　　　D) 60　　　E) 80

SAMPLE QUESTION FOR 5 POINTS

Working on a certain *Math Kangaroo* problem, Barbara noticed that the following conclusions are correct:

1) If answer A is true, then answer B is also true.
2) If answer C is not true, then answer B is also not true.
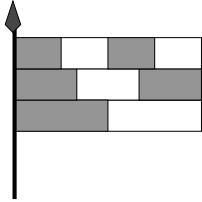3) If answer B is not true, then neither D nor E is true.

Which answer is correct, if there is only one correct answer?

A) A　　　B) B　　　C) C　　　D) D　　　E) E

LEVELS 9 AND 10 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

A flag consists of three stripes of equal width, which are divided into two, three, and four equal parts, as shown. What fraction of the flag's area is shaded?

A) $\dfrac{1}{2}$ B) $\dfrac{2}{3}$ C) $\dfrac{3}{5}$ D) $\dfrac{4}{7}$ **E)** $\dfrac{5}{9}$

SAMPLE QUESTION FOR 4 POINTS

An indiscreet neighbor asked Mrs. Novak how old she was. Mrs. Novak replied, "If I live to be one hundred, then my age is two thirds of the time I have left." How old is Mrs. Novak?

A) 20   **B) 40**   C) 50   D) 60   E) 80

SAMPLE QUESTION FOR 5 POINTS

Working on a certain *Math Kangaroo* problem, Barbara noticed that the following conclusions are correct:

1) If answer A is true, then answer B is also true.
2) If answer C is not true, then answer B is also not true.
3) If answer B is not true, then neither D nor E is true.

Which answer is correct, if there is only one correct answer?

A) A   B) B   **C) C**   D) D   E) E

LEVELS 11 AND 12

SAMPLE QUESTION FOR 3 POINTS

Which of the following products is the greatest?

A) 2006 × 2006   B) 2005 × 2007   C) 2004 × 2008   D) 2003 × 2009   E) 2002 × 2010

SAMPLE QUESTION FOR 4 POINTS

The radius of a traffic sign is 20 inches. The area of the lighter region is equal to the area of the darker region. How many inches long is the radius of the circle made out of the four darker pieces?

A) $10\sqrt{2}$ B) $4\sqrt{5}$ C) $\dfrac{20}{5}$ D) 12.5   E) 10

SAMPLE QUESTION FOR 5 POINTS

The cells of a 4 × 4 table are colored black and white as shown in Figure 1. One move allows us to exchange any two cells positioned in the same row or in the same column. What is the least number of moves necessary to obtain Figure 2?
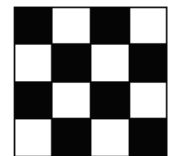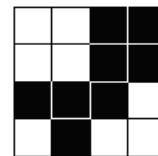

Figure 1   Figure 2

A) It is not possible.
B) 2
C) 3
D) 4
E) 5

LEVELS 11 AND 12 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

Which of the following products is the greatest?

A) 2006 × 2006   B) 2005 × 2007   C) 2004 × 2008   D) 2003 × 2009   E) 2002 × 2010

SAMPLE QUESTION FOR 4 POINTS

The radius of a traffic sign is 20 inches. The area of the lighter region is equal to the area of the darker region. How many inches long is the radius of the circle made out of the four darker pieces?

A) $10\sqrt{2}$ B) $4\sqrt{5}$ C) $\dfrac{20}{5}$ D) 12.5   E) 10

SAMPLE QUESTION FOR 5 POINTS

The cells of a 4 × 4 table are colored black and white as shown in Figure 1. One move allows us to exchange any two cells positioned in the same row or in the same column. What is the least number of moves necessary to obtain Figure 2?
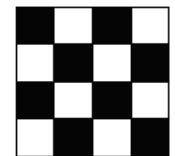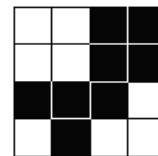

Figure 1   Figure 2

A) It is not possible.
B) 2
C) 3
D) 4
E) 5