Math Kangaroo 2016 Sample Questions

LEVELS 1 AND 2

SAMPLE QUESTION FOR 3 POINTS

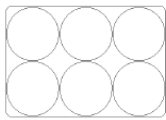How many ropes are there in the picture?

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

SAMPLE QUESTION FOR 4 POINTS

Lisa's hens lay white eggs and brown eggs. Lisa puts six eggs in the box shown below. Two brown eggs cannot touch each other. At most, how many brown eggs can Lisa put in the box?

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

SAMPLE QUESTION FOR 5 POINTS

Five sparrows sat on a wire as shown in the picture. Each sparrow chirped only once to each bird it saw on the side it faced. For example, the second sparrow chirped one time. In total, how many times did they chirp?

A) 6   B) 8   C) 9   D) 10   E) 12

Math Kangaroo 2016 Sample Questions

LEVELS 1 AND 2 ANSWERS

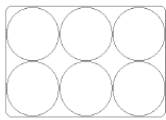**SAMPLE QUESTION FOR 3 POINTS**

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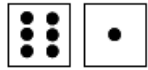

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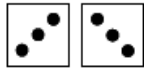
Math Kangaroo 2016 Sample Questions

LEVELS 3 AND 4

SAMPLE QUESTION FOR 3 POINTS

Amy, Bert, Carl, Doris, and Ernst each rolled two dice and added the number of dots.

Who rolled the largest total?

A) Amy   B) Bert   C) Carl   D) Doris   E) Ernst

SAMPLE QUESTION FOR 4 POINTS

The sum of the digits of the year 2016 is equal to 9. What is the next year, after 2016, where the sum of the digits of the year is equal to 9 again?

A) 2007   B) 2025   C) 2034   D) 2108   E) 2134

SAMPLE QUESTION FOR 5 POINTS

Magic trees grow in a magic garden. Each tree has either 6 pears and 3 apples, or 8 pears and 4 apples. There are 25 apples in the garden. How many pears are there in the garden?

A) 35   B) 40   C) 45   D) 50   E) 56

Math Kangaroo 2016 Sample Questions

LEVELS 3 AND 4 ANSWERS
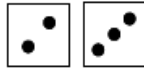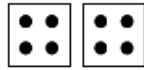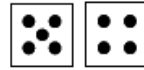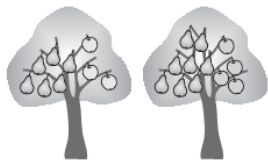
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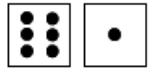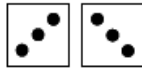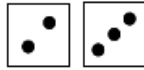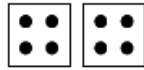
Amy   Bert   Carl   Doris   Ernst

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Magic trees grow in a magic garden. Each tree has either 6 pears and 3 apples, or 8 pears and 4 apples. There are 25 apples in the garden. How many pears are there in the garden?


A) 35   B) 40   C) 45   **D) 50**   E) 56

Math Kangaroo 2016 Sample Questions

LEVELS 5 AND 6

SAMPLE QUESTION FOR 3 POINTS

Which of the following traffic signs has the largest number of lines of symmetry?

A)   B)   C)   D)   E)

SAMPLE QUESTION FOR 4 POINTS

Mary, Ann, and Nata work at a kindergarten. Each day from Monday to Friday exactly two of them come to work. Mary works 3 days per week and Ann works 4 days per week. How many days per week does Nata work?

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

SAMPLE QUESTION FOR 5 POINTS

Clara wants to construct a big triangle using identical small triangular tiles. She has already put some tiles together as shown in the picture. What is the smallest number of tiles she needs to complete a triangle?

A) 5   B) 9   C) 12   D) 15   E) 18

Math Kangaroo 2016 Sample Questions

LEVELS 5 AND 6 ANSWERS

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Math Kangaroo 2016 Sample Questions
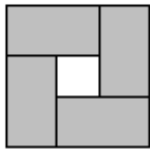
LEVELS 7 AND 8

SAMPLE QUESTION FOR 3 POINTS

What is the sum of the two marked angles in the figure on the right?

A) 150° B) 180° C) 270° D) 320° E) 360°

SAMPLE QUESTION FOR 4 POINTS

The diagram shows four identical rectangles placed inside a square. The perimeter of each rectangle is 16 cm. What is the perimeter of the big square?

A) 16 cm   B) 20 cm   C) 24 cm   D) 28 cm   E) 32 cm

SAMPLE QUESTION FOR 5 POINTS

Twelve girls met in a coffee shop. On average, they ate 1.5 cupcakes each. None of them ate more than two cupcakes and two of them had only mineral water. How many girls ate two cupcakes?

A) 2   B) 5   C) 6   D) 7   E) 8

Math Kangaroo 2016 Sample Questions

# LEVELS 7 AND 8 ANSWERS

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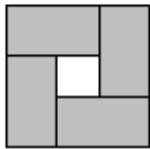
Math Kangaroo 2016 Sample Questions

LEVELS 9 AND 10

SAMPLE QUESTION FOR 3 POINTS

On a test consisting of 30 questions, Ruth had 50% more right answers than she had wrong answers. Each answer was either right or wrong. How many correct answers did Ruth have, assuming she answered all questions?
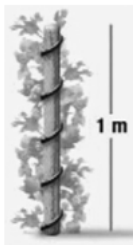
A) 10   B) 12   C) 15   D) 18   E) 20

SAMPLE QUESTION FOR 4 POINTS

In a tennis knock-out tournament, six of the results of the quarter-finals, the semi-finals and the final were (not necessarily in this order): Bella beat Ann, Celine beat Donna, Gina beat Holly, Gina beat Celine, Celine beat Bella, and Emma beat Farah. Which result is missing?

A) Gina beat Bella
B) Celine beat Ann
C) Emma beat Celine
D) Bella beat Holly
E) Gina beat Emma

SAMPLE QUESTION FOR 5 POINTS

A plant wound itself exactly 5 times around a pole with a height of 1 m and a circumference of 15 cm as shown in the picture. As it climbed, its height increased at a constant rate. What is the length of the plant?

A) 0.75 m   B) 1.0 m   C) 1.25 m   D) 1.5 m   E) 1.75 m

Math Kangaroo 2016 Sample Questions

LEVELS 9 AND 10 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

On a test consisting of 30 questions, Ruth had 50% more right answers than she had wrong answers. Each answer was either right or wrong. How many correct answers did Ruth have, assuming she answered all questions?

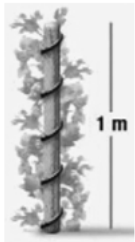A) 10   B) 12   C) 15   **D) 18**   E) 20

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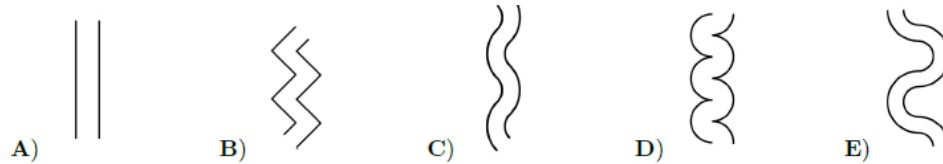

A) 0.75 m   B) 1.0 m   **C) 1.25 m**   D) 1.5 m   E) 1.75 m

Math Kangaroo 2016 Sample Questions
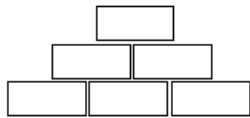
LEVELS 11 AND 12

SAMPLE QUESTION FOR 3 POINTS

Maria wants to build a bridge across a river and knows that the shortest possible bridge from each point on one shore is always of the same length. Which of these pictures cannot be a picture of her river?
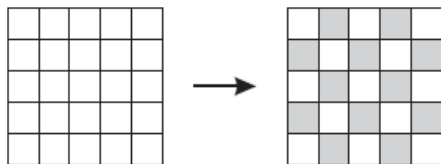

SAMPLE QUESTION FOR 4 POINTS

In this pyramid of numbers (shown below) each upper field is the product of the two fields directly underneath. Which of the following numbers cannot appear in the top field if the three bottom fields only contain natural numbers bigger than 1?

A) 56   B) 84   C) 90   D) 105   E) 220

SAMPLE QUESTION FOR 5 POINTS

Consider a 5 x 5 square divided into 25 cells. Initially all its cells are white. In each move we can change the color of any three consecutive cells in a row or in a column to the opposite color (i.e., white cells become black and black ones become white). What is the smallest possible number of moves needed to obtain the chessboard coloring shown in the figure?
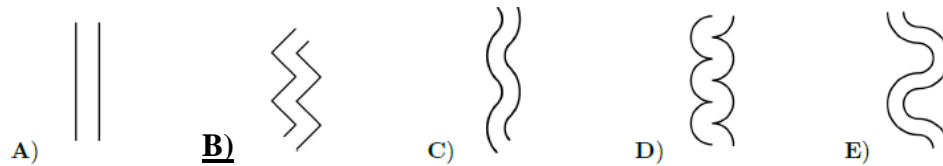

A) less than 10   B) 10   C) 12   D) more than 12   E) It is impossible to do.

Math Kangaroo 2016 Sample Questions
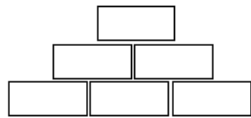
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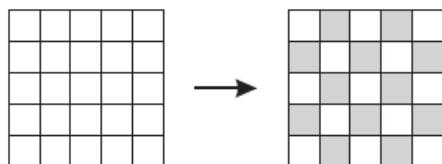A)   **B)**   C)   D)   E)

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