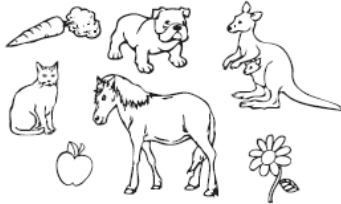


Math Kangaroo 2012 Sample Questions

LEVELS 1 AND 2

SAMPLE QUESTION FOR 3 POINTS

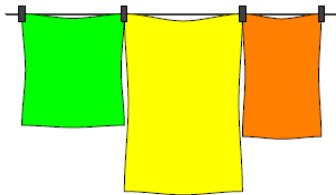
How many animals are there in the picture below?



- A) 3 B) 4 C) 5 D) 6 E) 7

SAMPLE QUESTION FOR 4 POINTS

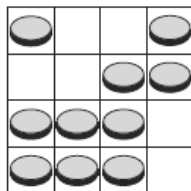
Father hangs the laundry outside on a clothesline. He wants to use as few pins as possible. For 3 towels he needs 4 pins, as shown. How many pins does he need for 9 towels?



- A) 9 B) 10 C) 12 D) 16 E) 18

SAMPLE QUESTION FOR 5 POINTS

There are coins on the board. We want to have 2 coins in each column and 2 coins in each row. How many coins need to be removed?



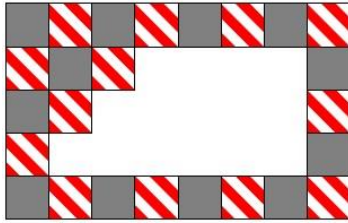
- A) 0 B) 1 C) 2 D) 3 E) 4

Math Kangaroo 2012 Sample Questions

LEVELS 3 AND 4

SAMPLE QUESTION FOR 3 POINTS

A regular rectangular pattern on a wall was created with 2 kinds of tiles: grey and striped. Some tiles have fallen off the wall (see the picture). How many grey tiles have fallen off?



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

SAMPLE QUESTION FOR 4 POINTS

Among Nikolay's classmates there are twice as many girls as boys. Which of the following numbers can be equal to the number of all children in this class?

- A) 30 B) 20 C) 24 D) 25 E) 29

SAMPLE QUESTION FOR 5 POINTS

Gregory forms two numbers with the digits 1, 2, 3, 4, 5 and 6. Both numbers have three digits, and each digit is used only once. He adds these two numbers. What is the greatest sum Gregory can get?

- A) 975 B) 999 C) 1083 D) 1173 E) 1221

Math Kangaroo 2012 Sample Questions

LEVELS 5 AND 6

SAMPLE QUESTION FOR 3 POINTS

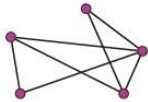
Sally can put 4 coins in a square made using 4 matches (see picture). At least how many matches will she need in order to make a square containing 16 coins that do not overlap?



- A) 8 B) 10 C) 12 D) 15 E) 16

SAMPLE QUESTION FOR 4 POINTS

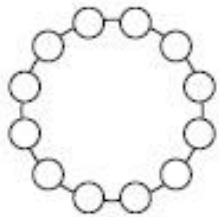
There are five cities in Wonderland. Each pair of cities is connected by one road, either visible or invisible. On the map of Wonderland, there are only seven visible roads, as shown. Alice has magical glasses: when she looks at the map through these glasses she only sees the roads that are otherwise invisible. How many invisible roads can she see?



- A) 9 B) 8 C) 7 D) 3 E) 2

SAMPLE QUESTION FOR 5 POINTS

Kanga wants to arrange the twelve numbers from 1 to 12 in a circle in such a way that any neighboring numbers always differ by either 1 or 2. Which of the following pairs of numbers have to be neighbors?



- A) 5 and 6 B) 10 and 9 C) 6 and 7 D) 8 and 10 E) 4 and 3

Math Kangaroo 2012 Sample Questions

LEVELS 7 AND 8

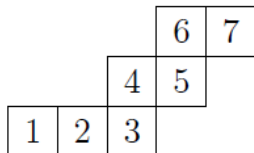
SAMPLE QUESTION FOR 3 POINTS

Mary has a pair of scissors and five cardboard letters. She cuts each letter exactly once (along a straight line) so that it falls apart into as many pieces as possible. Which letter falls apart into the most pieces?



SAMPLE QUESTION FOR 4 POINTS

A cube is rolled on a plane so that it turns around its edges. It begins at position 1, and is rolled so that one of its faces touches the plane in positions 2, 3, 4, 5, 6, and 7, in that order, as shown. Which two of these positions were occupied by the same face of the cube?



- A) 1 and 7 B) 1 and 6 C) 1 and 5 D) 2 and 7 E) 2 and 6

SAMPLE QUESTION FOR 5 POINTS

A rope is folded in half, then in half again, and then in half again. Finally the folded rope is cut through, forming several strands. The lengths of two of the strands are 4 m and 9 m. Which of the following could not have been the length of the whole rope?

- A) 52 m B) 68 m C) 72 m D) 88 m E) All the previous are possible.