



Kangaroo Benjamin

(6th and 7th grade)

NAME _____ CLASS/GROUP _____

Points: _____ **Kangaroo leap:** _____

Separate the answer sheet from the test.

Write your answer under each problem number.

If you do NOT know the answer, leave the space empty.

For each WRONG answer, 1/4 of the points is deducted. DO NOT guess!

PROBLEM	1	2	3	4	5	6	7
ANSWER							

PROBLEM	8	9	10	11	12	13	14
ANSWER							

PROBLEM	15	16	17	18	19	20	21
ANSWER							



3 points

1.

A motorcyclist rode a distance of 28 km in 30 minutes at a constant speed. At what speed did he drive, in km per hour?

- (A) 28 km/h (B) 36 km/h (C) 56 km/h (D) 58 km/h (E) 62 km/h

2.

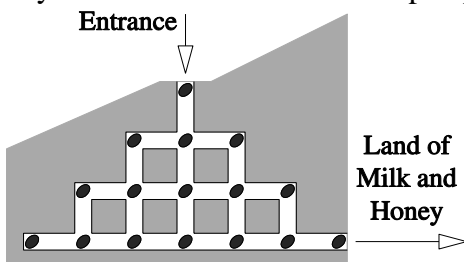
A square of paper is cut into two pieces using a single straight cut. Which of the following cannot be the shape of either piece?



- (A) a square (B) a rectangle (C) a right-angled triangle (D) a pentagon
(E) an isosceles triangle

3.

Hamster Fridolin sets out for the Land of Milk and Honey. His way to the legendary Land passes through a system of tunnels. There are 16 pumpkin seeds spread through the tunnels, as shown in the picture.

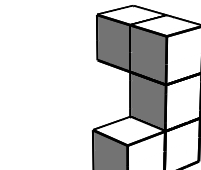
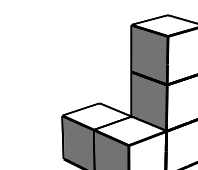
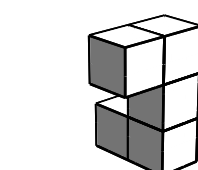
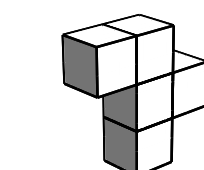
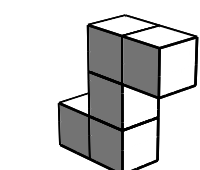
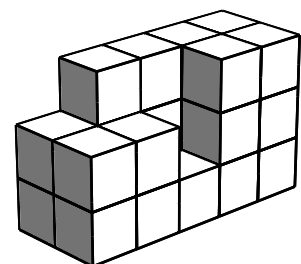


What is the highest number of pumpkin seeds Fridolin can collect if he is not allowed to visit any junction more than once?

- (A) 12 (B) 13 (C) 14 (D) 15 (E) 16

4.

The picture shows a partially built cuboid.
Which of the following pieces will complete the cuboid?

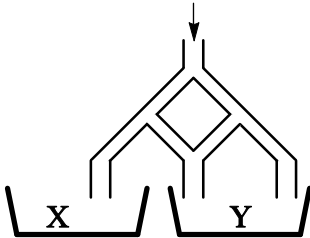




5.

We pour 1000 litres of water into the top of the pipework shown in the picture. Every time a pipe forks, the water splits into two equal parts.

How many litres of water will reach container Y?


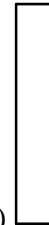
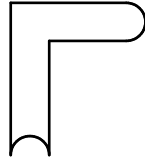
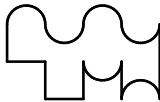



- (A) 800 l (B) 750 l (C) 666.67 l (D) 660 l (E) 500 l

6.

The picture shows four cardboard pieces. All four pieces are put together without gaps or overlaps to form various shapes. Which of the following shapes cannot be made in this way?



- (A)  (B)  (C)  (D)  (E) 

7.

When Liza the cat just lazes around, she drinks 60 ml of milk per day. But each day that she catches mice, she drinks a third more milk. In the last two weeks she has been catching mice every other day. How much milk did she drink in the last two weeks?

- (A) 840 ml (B) 980 ml (C) 1050 ml (D) 1120 ml (E) 1960 ml

4 points

8.

Four of the numbers on the left are moved into the cells on the right so that the addition is correct.

Which number remains on the left?

- (A) 17 (B) 30 (C) 49 (D) 96 (E) 167

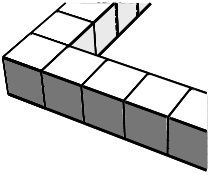
17	167
30	
49	96

+ _____



9.

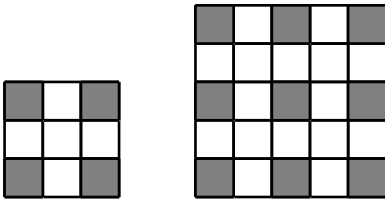
Nina used 36 identical cubes to build a fence of cubes around a square region. Part of her fence is shown in the picture. How many more cubes will Nina need in order to fill the region inside her fence?



- (A) 36 (B) 49 (C) 64 (D) 81 (E) 100

10.

Some square floors have been covered with white and grey tiles. Floors using 4 and 9 grey tiles are shown in the picture. Each floor has a grey tile in every corner and all the tiles around a grey tile are white. How many white tiles are needed altogether for a floor using 25 grey tiles?



- (A) 25 (B) 39 (C) 45 (D) 56 (E) 72

11.

Paul wanted to multiply an integer by 301, but he forgot the zero and multiplied by 31 instead. The result he got was 372 (He did manage to multiply by 31 correctly!). What result was he supposed to get?

- (A) 3010 (B) 3612 (C) 3702 (D) 3720 (E) 30720

12.

In three games FC Kangaroo scored three goals and let one goal in. In these three games, the club won one game, drew one game and lost one game. What was the score in the game FC Kangaroo won?

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

13.

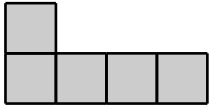
All 4-digit integers with the same digits as the number 2011 are listed in increasing order (so each number in the list has two 1s, one 0 and one 2). What is the difference between the two numbers appearing on either side of 2011 in this list?

- (A) 890 (B) 891 (C) 900 (D) 909 (E) 990



14.

Using only pieces like the one in the picture, Daniel wants to make a complete square without gaps or overlaps. What is the smallest number of pieces he can use?



- (A) 8 (B) 10 (C) 12 (D) 16 (E) 20

5 points

15.

There are ten pupils in a dance class. More than one of the pupils is a girl. Their teacher Susan has 80 jelly beans. When she tries to divide the jelly beans to the girls in the class giving each girl the same amount of jelly beans, there are three jelly beans left over. How many boys are there in the class?

- (A) 1 (B) 2 (C) 3 (D) 5 (E) 7

16.

In a particular month there were 5 Saturdays and 5 Sundays, but only 4 Fridays and 4 Mondays. In the next month there were

- (A) 5 Wednesdays (B) 5 Thursdays (C) 5 Fridays
(D) 5 Saturdays (E) 5 Sundays

17.

You are given four positive numbers a , b , c and d in ascending order of size. You are asked to increase one of them by 1 in such a way that the product of the four resulting numbers is as small as possible. Which number should you increase?

- (A) a (B) b (C) c (D) d (E) b or c

18.

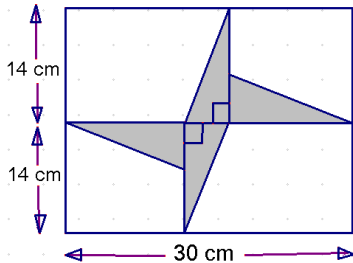
The digits of a positive five-digit number are 1, 2, 3, 4, 5 in some order. The first digit of the number is divisible by 1, the first two digits (in order) form a number divisible by 2, the first three digits (in order) form a number divisible by 3, the first four digits (in order) form a number divisible by 4, and the whole number is divisible by 5. How many such numbers are there?

- (A) 0 (B) 1 (C) 2 (D) 5 (E) 10



19.

The picture shows four identical right-angled triangles inside a rectangle. What is the total area of all four triangles?



- (A) 46 cm² (B) 52 cm² (C) 54 cm² (D) 56 cm² (E) 64 cm²

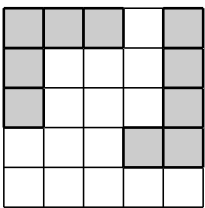
20.

Alex says Pelle is lying. Pelle says Mark is lying. Mark says Pelle is lying. Tony says Alex is lying. How many of these four boys are lying?

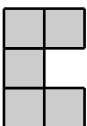
- (A) 0 (B) 1 (C) 2 (D) 3 (E) 4

21.

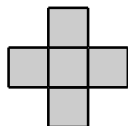
Lina has fixed two shapes on a 5 x 5 board, as shown in the picture. Which of the following 5 shapes should she place on the empty part of the board so that none of the remaining 4 shapes will fit in the empty space that is left? (The shapes may be rotated or turned over, but can only be placed so that they cover complete squares.)



(A)



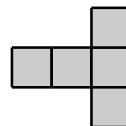
(B)



(C)



(D)



(E)

