

**INTERNATIONAL CONTEST-GAME
MATH KANGAROO
CANADA, 2017**

**INSTRUCTIONS
GRADE 1-2**



1. You have 45 minutes to solve 18 multiple choice problems. For each problem, circle only one of the proposed five choices. If you circle more than one choice, your response will be marked as wrong.
2. Record your answers in the response form. Remember that this is the only sheet that is marked, so make sure you have all your answers transferred here by the end of the contest.
3. The problems are arranged in three groups. A correct answer of the first 6 problems is worth 3 points. A correct answer of the problems 7-12 is worth 4 points. A correct answer of the problems 13-18 is worth 5 points. For each incorrect answer, one point is deducted from your score. Each unanswered question is worth 0 points. To avoid negative scores, you start from 18 points. The maximum score possible is 90.
4. Calculators and graph paper are not permitted. You are allowed to use rough paper for draft work.
5. The figures are not drawn to scale. They should be used only for illustration.
6. Remember, you have about 2-3 minutes for each problem; hence, if a problem appears to be too difficult, save it for later and move on to the other problems.
7. At the end of the allotted time, please **submit the response form** to the contest supervisor. Please do not forget to pick up your Certificate of Participation!

Good luck! *Canadian Math Kangaroo Contest team*

2017 CMKC locations: Algoma University; Bishop's University; Brandon University; Brock University; Carlton University; Concordia University; Concordia University of Edmonton; Coquitlam City Library; Dalhousie University; Evergreen Park School; F.H. Sherman Recreation & Learning Centre; GAD Elementary School; Grande Prairie Regional College; Humber College; Lakehead University (Orillia and Thunder Bay); Laurentian University; MacEwan University; Memorial University of Newfoundland; Mount Allison University; Mount Royal University; Nipissing University; St. Mary's University (Calgary); St. Peter's College; The Renert School at Royal Vista; Trent University; University of Alberta-Augustana Campus; University of British Columbia (Okanagan); University of Guelph; University of Lethbridge; University of New Brunswick; University of Prince Edward Island; University of Quebec at Chicoutimi; University of Quebec at Rimouski; University of Regina; University of Toronto Mississauga; University of Toronto Scarborough; University of Toronto St. George; University of Windsor; The University of Western Ontario; University of Winnipeg; Vancouver Island University; Walter Murray Collegiate, Wilfrid Laurier University; YES Education Centre; York University; Yukon College.

2017 CMKC supporters: Laurentian University; Canadian Mathematical Society; IEEE; PIMS.



Canadian Math Kangaroo Contest

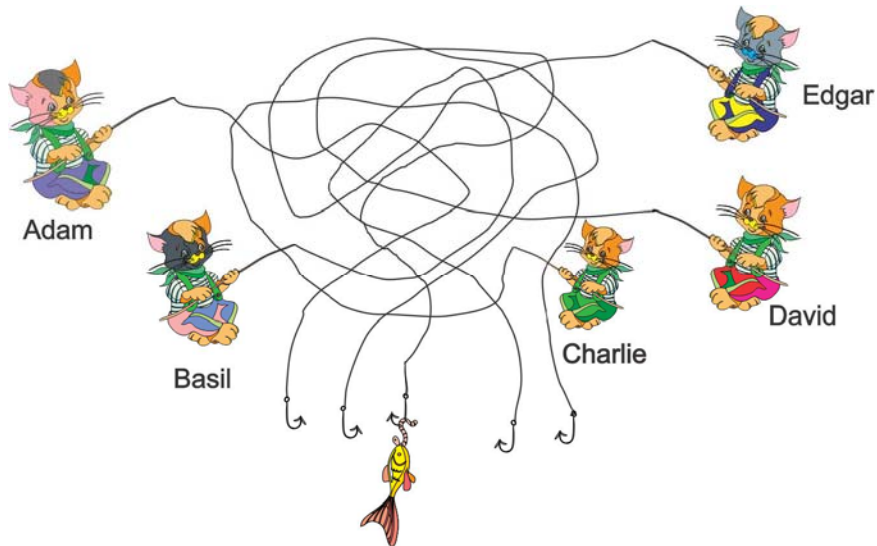
Part A: Each correct answer is worth 3 points

1. How many wheels are there in the picture?



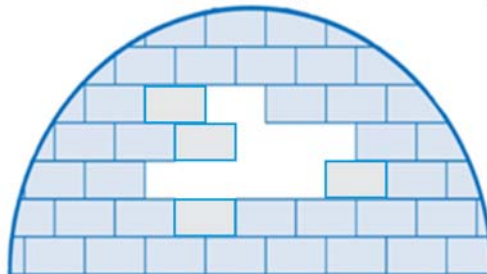
(A) 11 (B) 12 (C) 13 (D) 14 (E) 15

2. Who caught the fish?



(A) Adam (B) Basil (C) Charlie (D) David (E) Edgar

3. How many bricks like this  are missing from the igloo?



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

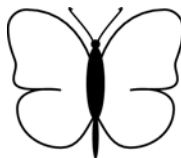


4. In the picture, there are 5-pointed, 6-pointed and 7-pointed stars. How many 5-pointed stars are there?

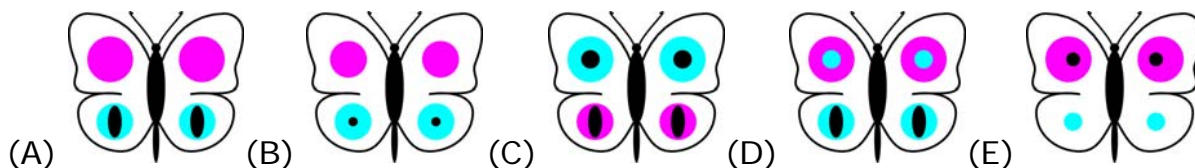


- (A) 2 (B) 3 (C) 4 (D) 5 (E) 9

5. Ellen wants to decorate the butterfly



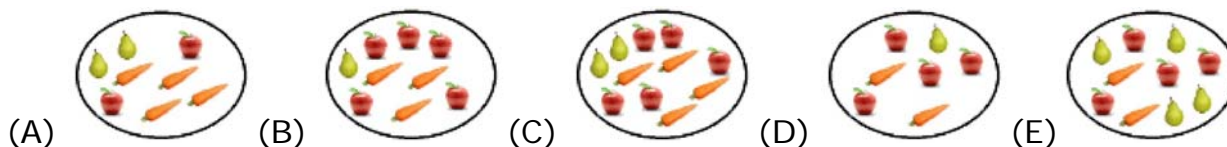
with these stickers . Which butterfly can she make?



6. What number is exactly in the middle of the numbers 11 and 35?
- (A) 14 (B) 20 (C) 22 (D) 23 (E) 46

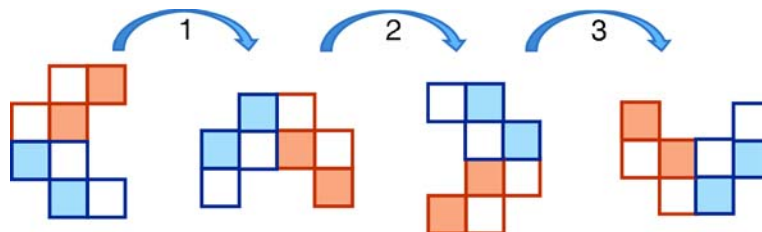
Part B: Each correct answer is worth 4 points

7. In which picture are there twice as many apples as carrots and twice as many carrots as pears?

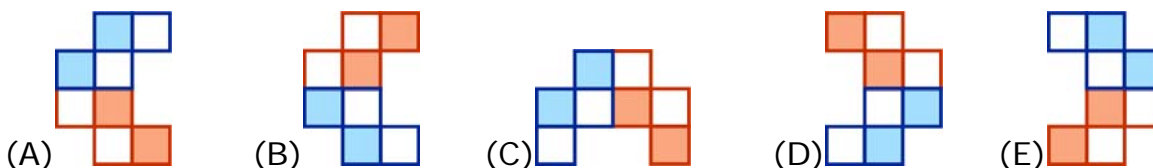




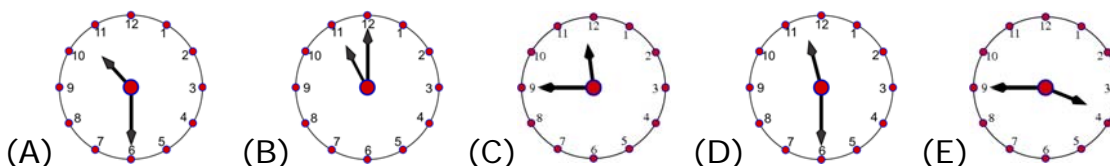
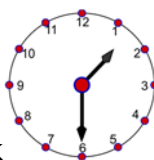
8. Alfred was turning a shape. The first three turns are shown in the picture.



He did six turns in total. What does the shape look like at the end?



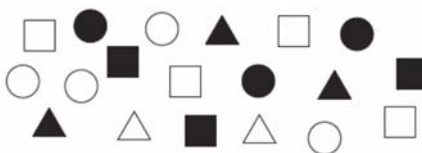
9. Now it is half past one o'clock . What time was it two and a half hours ago?



10. Brian and William stand in line. Brian knows that there are 7 people in front of him. William knows that there are in total 11 people in the line. If Brian is just in front of William, how many people in the line are behind William?

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

11. Looking at the picture below



find the number in the lower right corner of the table.

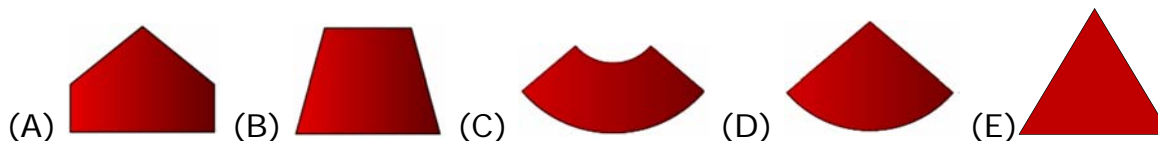
black		3	
white	4		?

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



12. Billy was trying to make a pointed hat  with a big brim out of

coloured paper. He cut out a piece  for the brim and one of the following pieces for the remaining part. Which one?



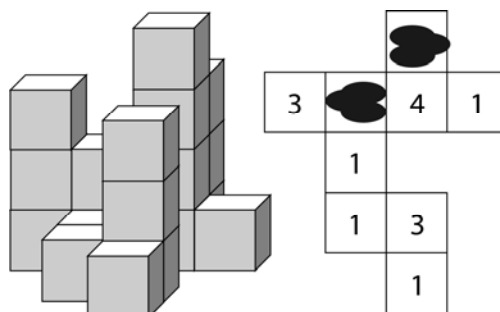
Part C: Each correct answer is worth 5 points

13. Each of the 4 keys fits only one of the 4 padlocks and the numbers on the keys refer to the letters on the padlocks.



What is written on the last padlock?

- (A) GDA (B) ADG (C) GAD (D) GAG (E) DAD
14. The picture shows a group of building blocks and a plan of the same group. Some ink has dripped onto the plan. What is the sum of the numbers under the ink blots?











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








15. Ann put six toys in a shelf with six boxes as shown.



When you look at the shelf, you see that:

-  is between  and .
-  is right above .
-  is to the left of  and to the right of .

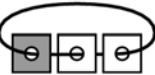
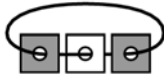
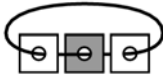

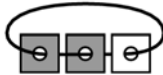
Which toy is in the upper right box?

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

16. In a stack of three cards with holes, the top of each card is white and the bottom is grey. Basil threaded these cards on a rope.

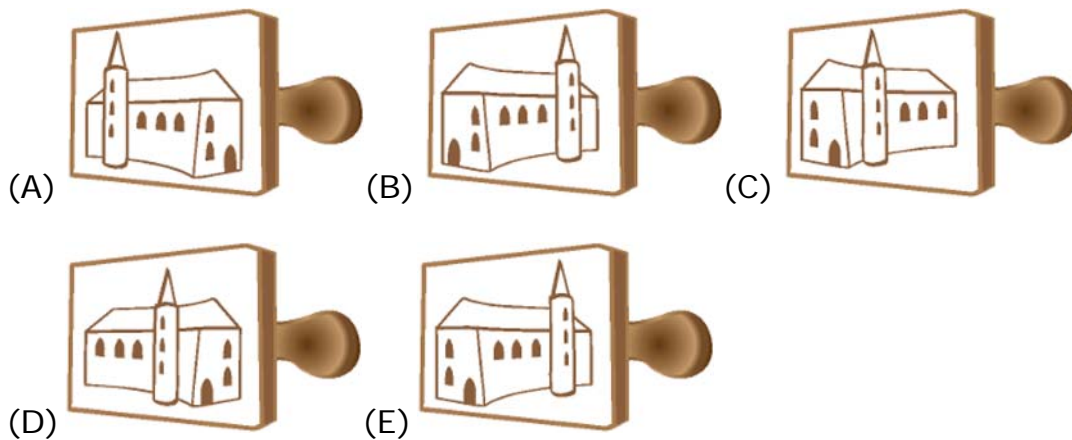


After some arrangement of the cards, which situation is possible to obtain without untying the rope?

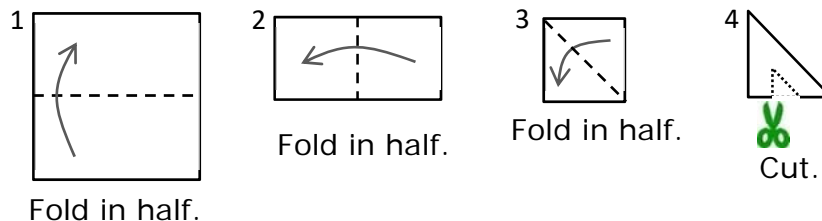
- (A)  (B)  (C)  (D)  (E) 



17. Which stamp has been used to get the picture?



18. Sally is playing with a paper square. She folds the sheet of paper three times in the direction of the arrows and cuts it, as shown below.



What will she get?

