# EKAdemy

Subject: Kangaroo Math Practice Level 5 and 6
Maximum Points: 56
Time Allowed: 50 minutes.

Section A: 3 Point Problems

1. A cake weighs 900 g. Paul cuts it into 4 pieces. The biggest piece weights exactly as much as the other three pieces together. How much does the biggest piece weigh?
    (A) 250 g   (B) 300 g   (C) 400 g   (D) 450 g   (E) 600 g

2. A dog and a cat walk in the park along the path marked by the thick black line. The dog starts from P at the same time as the cat starts from Q. The dogs walks three times as fast as the cat. At which point do they meet.
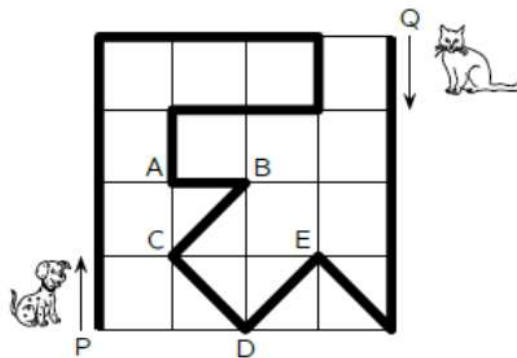
    (A) at A   (B) at B   (C) at C   (D) at D   (E) at E

3. Cindy colours each region of the pattern below either red, blue or yellow. She colours regions that touch each other different colours. She colours the outer region blue. How many regions of the completed pattern are coloured blue?
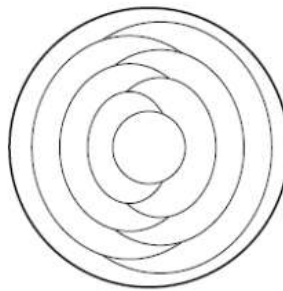
    (A) 2   (B) 3   (C) 4   (D) 5   (E) 6

4. Maria has 10 sheets of paper. She cuts some of the sheets into five parts each. After that Maria has 22 pieces in total. How many sheets did she cut?
   (A) 3   (B) 2   (C) 6   (D) 7   (E) 8

5. Kim has several chains of length 5 and of length 7.

    By joining chains one after the other, Kim can create different lengths. Which of these lengths is impossible to make?
   (A) 10   (B) 12   (C) 13   (D) 14   (E) 15

6. A square with perimeter 48 cm is cut into two equally big pieces with one cut. They are fitted together to make a rectangle as shown in the diagram. How big is the perimeter of that rectangle?
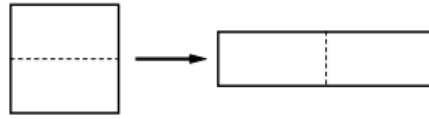
(A) 24 cm   (B) 30 cm   (C) 48 cm   (D) 60 cm   (E) 72 cm

7. Bart sits at the hairdressers. In the mirror he sees a clock as shown in the diagram: What was the mirror image of the clock 10 minutes earlier?

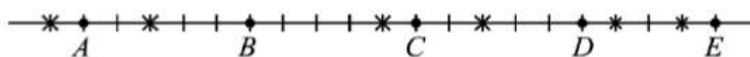(A)   (B)   (C)   (D)   (E)
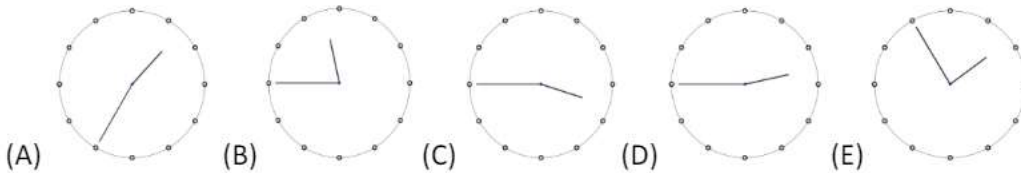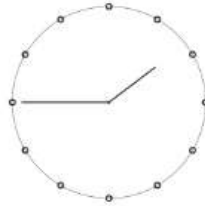
Section B: 4 Point problems

8. Each square contains one of the numbers 1, 2, 3, 4, or 5, so that both of the calculations following the arrows are correct. A number may be used more than once. What number goes into the box with the question mark?
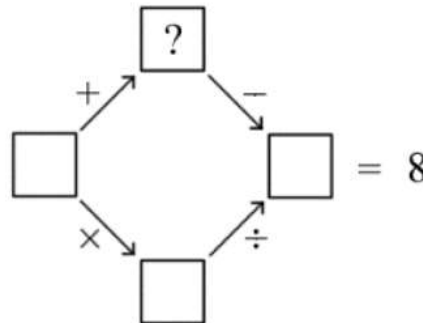
(A) 1   (B) 2   (C) 3   (D) 4   (E) 5

9. Five squirrels A, B, C, D and E are sitting on the points marked. The crosses indicate 6 nuts that they are collecting. The squirrels start to run at the same time with the same speed to the nearest nut in order to pick it up. As soon as a squirrel has picked up the first nut it immediately continues to run in order to get another nut.
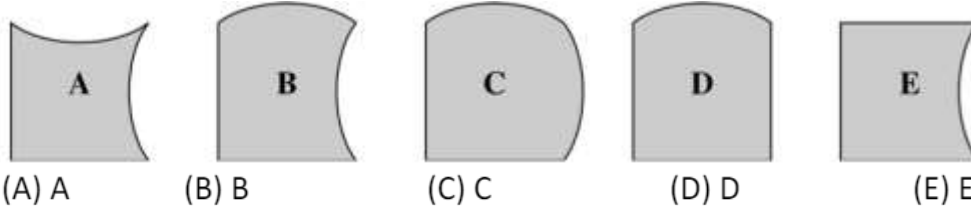
Which squirrel gets a second nut?
(A) A   (B) B   (C) C   (D) D   (E) E

10. Which square has to replace the question mark so that the white area and the black area are equally big?
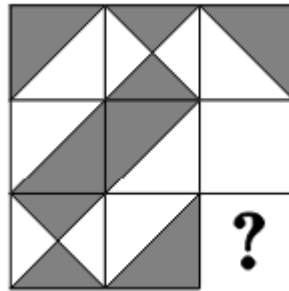
(A)   (B)   (C)   (D)   (E)

11. A square can be made out of four of the given pieces. Which piece will not be used?


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

12. Hansi writes the number 2581953764 on a strip of paper. Twice he cuts through the strip of paper between two digits and obtains three numbers which he adds. How big is the smallest sum he can obtain in this way?

(A) 2675   (B) 2975   (C) 2978   (D) 4217   (E) 4298

Section C: 5 Point problems

13. Kirsten has written numbers into 5 of the 10 circles. She wants to write numbers into the remaining circles so that the sum of the three numbers along every side of the pentagon is always the same. Which number does she have to write into the circle marked X?
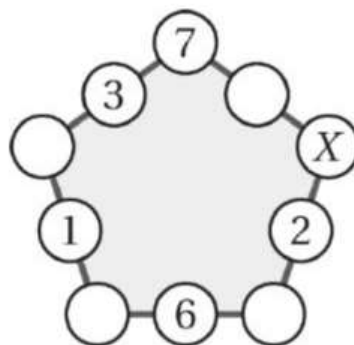
(A) 7   (B) 8   (C) 11   (D) 13   (E) 15

14. Two three-digit numbers are made up of six different digits. The first digit of the second number is twice as big as the last digit of the first number. (Note: 0 is also a digit but cannot be the first digit of a number!) How big is the smallest possible sum of the two numbers?

(A) 301   (B) 535   (C) 537   (D) 546   (E) 552

15. The king travels with his messengers at a speed of 5 km/h from his castle to his summer residence. Each hour he sends a messenger with a speed of 10 km/h back to the castle. How much difference is time is there between two consecutive messengers arriving at the castle?

(A) 30 min   (B) 60 min   (C) 75 min   (D) 90 min   (E) 120 min