

## Comórtas Sóisearach Matamaitice Éireann 2015

### SECTION A (5 Marks)

- 1) X is the point at 0.56 and Y is the point 1.2 on the numberline.  
The point which is halfway between X and Y is at  
(A) 0.34 (B) 0.64 (C) 0.83 (D) 0.88 (E) 0.93
- 2) Three squares each with an area of  $25 \text{ cm}^2$  are placed side by side to form a rectangle.  
The perimeter of the rectangle, in cms, is  
(A) 20 (B) 36 (C) 40 (D) 75 (E) 100
- 3) How many Tuesdays can there be at most in 52 consecutive days?  
(A) 5 (B) 6 (C) 7 (D) 8 (E) 9
- 4) A diamond weighs 900g. A jeweller cuts it into four pieces. The weight of the largest piece is the same as the total weight of the other three pieces.  
The weight of the largest piece is:  
(A) 250g (B) 300g (C) 400g (D) 450g (E) 600g
- 5) A car with four tyres and a spare travelled 30000 km. All five tyres were used equally. How many kilometres of wear did each tyre receive?  
(A) 6000 (B) 7500 (C) 24000 (D) 30000 (E) 150000

### Section B (6 Marks)

- 6) There are 100 rooms in a hotel. Joe must number the rooms from 1 to 100 with plastic digits. How many times does he need the digit 7?  
(A) 10 (B) 11 (C) 18 (D) 19 (E) 20

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- 7) A one euro coin is placed flat on a table. What is the maximum number of one euro coins that can be placed around it, flat on the table, with each one a tangent to it (that is touching it at one point only)?

(A) 4      (B) 5      (C) 6      (D) 7      (E) 8

- 8) Part of a calendar is shown below.

| Mon | Tues | Wed | Thurs |
|-----|------|-----|-------|
|     |      |     |       |
|     |      |     |       |
|     |      |     |       |
|     |      |     |       |

In a certain month the sum of the numbers (from Monday to Thursday) is 26.

What is the date of Monday in the first row?

- (A) 5      (B) 8      (C) 10      (D) 23      (E) 26
- 9) In a quiz consisting of 20 questions, 6 point are awarded for each correct answer and 2 points are deducted for each wrong answer. Jack answered all questions and scored 88 points. How many questions did Jack answer correctly?

- (A) 15      (B) 16      (C) 17      (D) 18      (E) 19
- 10) When a bucket is half full of water, it has a mass of 12 kg. When the bucket is one third full of water it has a mass of 10 kg.

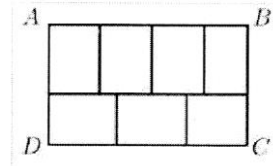
What is the mass of the empty bucket, in kg?

(A) 2      (B) 4      (C) 5      (D) 6      (E) 8

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### Section C ( 8 Marks)

- 11) We divide the rectangle ABCD into seven rectangles of equal size as in the figure below. If the area of the rectangle ABCD is  $84 \text{ cm}^2$ , what is the perimeter of a small rectangle in cm?



- (A) 7 (B) 9 (C) 14 (D) 19 (E) 38
- 12) A bus leaves a bus stop at 10.35 am and then stops at 4 other bus stops. If neighbouring bus stops are 10 minutes apart and the bus remains at each stop for 3 minutes, at what time does the bus stop at the last stop?
- (A) 11.11 am (B) 11.14 am (C) 11.21 am (D) 11.24 am (E) 11.27 am
- 13) The price of an article is increased by 10%. Later the new price is increased by 20%. By what percentage has the original price increased?
- (A) 12 (B) 30 (C) 32 (D) 45 (E) 200
- 14) Sam can afford to buy either 6 cans of coke and 7 packets of crisps or 8 cans of coke and 4 packets of crisps. Both options leave her with no change. If she bought only crisps, how many packets could she afford?
- (A) 11 (B) 12 (C) 13 (D) 16 (E) 25
- 15) Jim and Jane wanted to buy the same book. Jim needed €2.80 more to buy it, while Jane needed €2.60 more. They put their money together and bought the book. They then had €2.60 left. How much was the book?
- (A) €6 (B) €7 (C) €8 (D) €9 (E) €10



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(Irish Junior Mathematics Competition) 2015

ANSWER KEY

SECTION A

1. D

2. C

3. D

4. D

5. C

SECTION B

6. E

7. C

8. A

9. B

10. D

SECTION C

11. C

12. D

13. C

14. D

15. C