

The University of the West Indies
The 2019 Junior Mathematical Olympiad

FIRST ROUND EXAMINATION, GRADES 5 AND 6

TUESDAY, FEBRUARY 19, 2019

This examination consists of fifteen multiple-choice questions. For each one, decide whether (a), (b), (c), (d), or (e) is the best response. Then fill in the circle for that letter on the answer sheet provided. Each question is worth 5 marks.

1) What is the value of $2 \times 0 + 1 \times 9$?

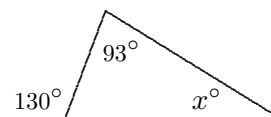
- (a) 11 (b) 9 (c) 0 (d) 18 (e) 2019

2) If one-half of a number is 32, what is the value of two times the same number?

- (a) 128 (b) 64 (c) 32 (d) 256 (e) 16

3) In the figure on the right, what is the value of x ?

- (a) 57 (b) 37 (c) 47 (d) 60 (e) 17



4) If a machine produces 150 items in 1 minute, how many would it produce in 10 seconds?

- (a) 10 (b) 15 (c) 20 (d) 25 (e) 30

5) When the square on the right is completed, the sum of the numbers in any row, column, or diagonal will be the same. What is the value of x ?

- (a) 12 (b) 13 (c) 16 (d) 17 (e) 18

14	19	
	15	
x	11	

6) There are 12 boys and 8 girls in the Rapid River Mathematics Club. Each week, 1 new boy and 2 new girls will join the club. When the number of boys in the club equals the number of girls, how many children will be in the club?

- (a) 20 (b) 24 (c) 28 (d) 32 (e) 36

7) There are several identical square tables in the library and four students can sit at each one. For a school party, students put 7 of these tables together to make one long rectangular table. How many children can sit at the long table?

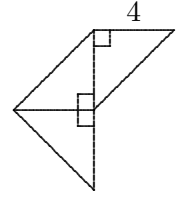
- (a) 14 (b) 16 (c) 21 (d) 24 (e) 28

8) Scott challenged Chris to a 100 m race. For every 5 m that Chris runs, Scott can only run 4 m. When Chris crosses the finish line, how many metres will Scott have run?

- (a) 75 (b) 96 (c) 20 (d) 76 (e) 80

- 9) In the figure on the right, three equal isosceles right triangles have been put together to form a pentagon. What is the area of this pentagon?

(a) 36 (b) 48 (c) 20 (d) 24 (e) 60



- 10) Juan and Mary played a game in which the winner receives 2 points and the loser loses 1 point. Juan won 3 games in all, and Mary finished with 5 points. How many games did they play?

(a) 7 (b) 8 (c) 4 (d) 5 (e) 11

- 11) In the sequence below, what will be the 2019th symbol?

→ ↓ ← ↑ → ↓ ← ↑ → ↓ ← ↑ ...

(a) → (b) ↓ (c) ← (d) ↑ (e) 0

- 12) Which expression can be placed in the box below to make a true equation?

$$\frac{3 \times 6 \times 9}{3} = \frac{\square}{2}$$

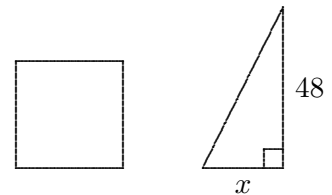
(a) $2 \times 4 \times 6$ (b) $3 \times 4 \times 6$ (c) $2 \times 6 \times 9$ (d) $2 \times 4 \times 8$ (e) $2 \times 12 \times 18$

- 13) Ariane, Beth, and Carol are having a race. If there are no ties, in how many different orders could they finish?

(a) 7 (b) 6 (c) 5 (d) 4 (e) 3

- 14) In the figure on the right (not drawn to scale), the square has perimeter 48 and the triangle has height 48. If the two shapes have equal area, what is the value of x ?

(a) 1.5 (b) 12 (c) 6
(d) 3 (e) 24



- 15) Sheila made a list of all the whole numbers from 1 to 1000. How many of these numbers have at least two 7's appearing side-by-side?

(a) 10 (b) 11 (c) 21 (d) 30 (e) 19