



International Junior Math Olympiad

GRADE 4

Time Allowed: 90 minutes

Name:

Country:

INSTRUCTIONS

1. Please DO NOT OPEN the contest booklet until told to do so.
2. There are 30 questions.
Section A: Questions 1 to 10 score 2 points each, no points are deducted for unanswered question and 1 point is deducted for wrong answer.
Section B: Questions 11 to 20 score 3 points each, no points are deducted for unanswered question and 1 point is deducted for wrong answer.
Section C: Questions 21 to 30 score 5 points each, no points are deducted for unanswered or wrong answer.
3. Shade your answers neatly using a 2B pencil in the Answer Entry Sheet.
4. No one may help any student in any way during the contest.
5. No electronic devices capable of storing and displaying visual information is allowed during the exam. Strictly NO CALCULATORS are allowed into the exam.
6. No exam papers and written notes can be taken out by any contestant.

SECTION A – 10 questions**Question 1**

February 2017 has 28 days. The number of days in this year's February is how many times of the number of days in one week?

- A. 4 times
- B. 7 times
- C. 21 times
- D. 35 times
- E. None of the above

Question 2

Westview School is buying 12 new basketball uniforms. Each uniform costs \$46. Which equation shows a way to find the total cost of the uniforms?

- A. $(40 \times 10) + (6 \times 2) = 400 + 12$
- B. $(40 \times 6) + (10 \times 2) = 240 + 20$
- C. $(40 \times 12) + (6 \times 12) = 480 + 72$
- D. $(40 \times 12) + (60 \times 12) = 480 + 720$
- E. None of the above

Question 3

For three days, Kitty was catching mice. Each day Kitty caught 2 more mice than she did the previous day. In total, how many mice did Kitty catch during these three days?

- A. 14
- B. 13
- C. 8
- D. 10
- E. 9

Question 4

Laura decorated each of her 24 cookies. She decorated 15 cookies with green colour and 13 cookies with blue colour. How many cookies were decorated with both green and blue colour?

- A. 4
- B. 3
- C. 5
- D. 6
- E. 2

Question 5

The sum of ages of Allie, Diana and Zoe is 15. Next year, the sum of their ages will be _____.

- A. 16
- B. 18
- C. 17
- D. 15
- E. 45

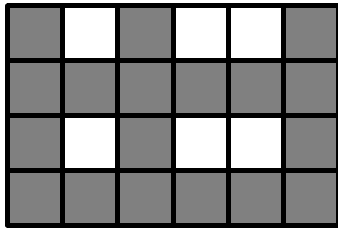
Question 6

Hailey wrote a one-digit number, then she wrote another digit to its right. She added 27 to the obtained number and got 91. What was the first digit that she wrote?

- A. 4
- B. 6
- C. 5
- D. 7
- E. 8

Question 7

What fraction of the whole figure below is shaded?



- A. $\frac{14}{24}$
- B. $\frac{7}{12}$
- C. $\frac{18}{28}$
- D. $\frac{3}{4}$
- E. $\frac{2}{3}$

Question 8

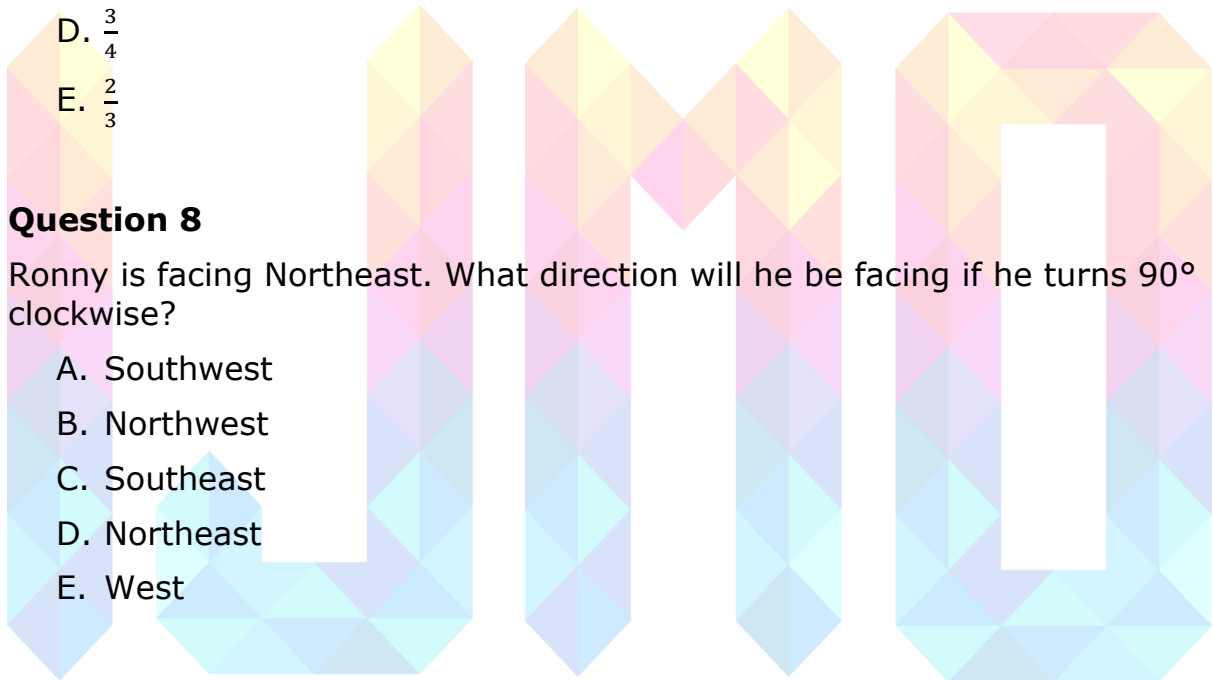
Ronny is facing Northeast. What direction will he be facing if he turns 90° clockwise?

- A. Southwest
- B. Northwest
- C. Southeast
- D. Northeast
- E. West

Question 9

Cindy saved \$15 in the first month, \$30 in the second month, \$45 in the third month, and so forth. The amount of money she saved in the last month was \$120. How much money did Cindy save in total?

- A. 210
- B. 300
- C. 350
- D. 420
- E. 540



Question 10

A number is added to 3. The sum is then multiplied by 5. When 8 is subtracted from the product, the result is 12. What is this number?

- A. 5
- B. 4
- C. 3
- D. 2
- E. 1



Section B – 10 questions**Question 11**

Today is a Saturday and Sara checks her calendar to find out what day of the week her birthday falls this year. If her birthday is in 55 days, on what day of the week is her birthday this year?

- A. Tuesday
- B. Wednesday
- C. Thursday
- D. Friday
- E. Saturday

Question 12

Josiah's mystery number is a 3-digit number with three different digits. The product of its 3 digits is 24. The sum of the digits is equal to 11. The smallest digit of the mystery number is in the hundreds place while the largest is in the tens place. What is Josiah's mystery number?

- A. 138
- B. 234
- C. 146
- D. 164
- E. 183

Question 13

A tournament had six players. Each player played every other player only once, with no ties. If Helen won 4 games, Ines won 3 games, Janet won 2 games, Kendra won 2 games and Lara won 2 games, how many games did Monica win?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

Question 14

How many numbers are there in the sequence 13, 16, 19, ..., 70, 73?

- A. 20
- B. 21
- C. 24
- D. 60
- E. 61

Question 15

A "leap year" is a year which has 366 days including February 29 as an additional day. Any year that is divisible by 4 is a leap year, but a year that is divisible by 100 is a leap year only if it is also divisible by 400. How many leap years are there from 2000 to 2017 (inclusive)?

- A. 3
- B. 4
- C. 5
- D. 6
- E. None of the above

Question 16

The seats on a children's merry-go-round are labelled 1, 2, 3, On the merry-go-round, Asad was sitting on seat number 2, exactly opposite Shaden, who was sitting on seat number 7. How many seats are there on the merry-go-round?

- A. 6
- B. 7
- C. 8
- D. 10
- E. None of the above

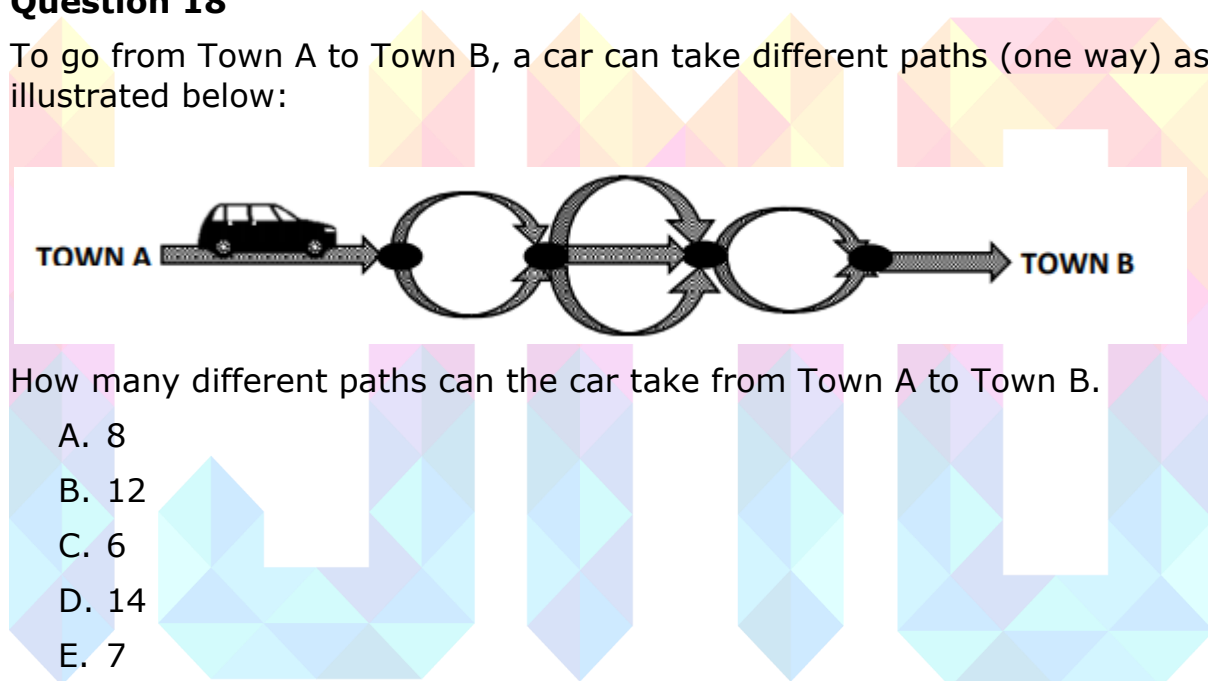
Question 17

Five fishermen, Ahe, Bahe, Cahe, Don, and Zella, all wanted to go out fishing. However, they only had three fishing poles, so only three of them could go out each day. How many different groups of 3 fishermen can be formed?

- A. 25
- B. 20
- C. 15
- D. 12
- E. 10

Question 18

To go from Town A to Town B, a car can take different paths (one way) as illustrated below:



How many different paths can the car take from Town A to Town B.

- A. 8
- B. 12
- C. 6
- D. 14
- E. 7

Question 19

How many times does the digit "4" appear from 1 to 70?

- A. 12
- B. 13
- C. 14
- D. 15
- E. None of the above

Question 20

A bucket contains 1 red, 1 yellow, 1 blue and 1 white flower. Maja, the bee, visit every flower in the bucket only once. She start from the red flower, and she does not fly directly from the blue one to the yellow one. In how many ways can Maja visit all the flowers exactly once?

- A. 3
- B. 4
- C. 6
- D. 24
- E. None of the above



Section C**Question 21**

A farm has 30 chickens and rabbits altogether. There are only 100 legs. Find the number of rabbits in the farm.

Question 22

A father is 50 years old. His son is 24 years old. How many years ago was the father's age three times his son's age?

Question 23

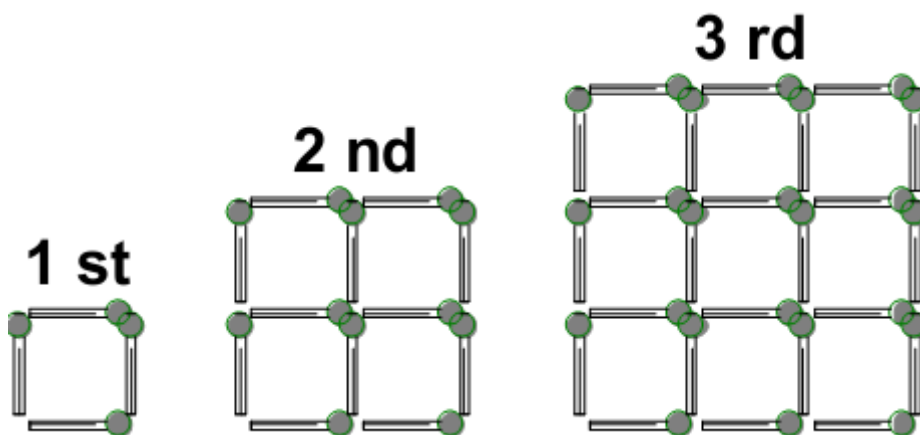
When Tom weighed an apple and banana, the scale showed 230 grams. When he replaced the apple with an orange, the scale showed 370 grams. When Tom put the apple back, the scale showed 540 grams. What is the combined weight of the apple and orange?

Question 24

In a class, 14 students collect stamps, 16 students collect postcards, 5 students collect both and 4 students collect none of them. How many students are there in this class?

Question 25

Ali is making squares using matches. He made the next square by adding more matches to the previous square. How many matches does he have to add to the 5th square to build the 6th square?



Question 26

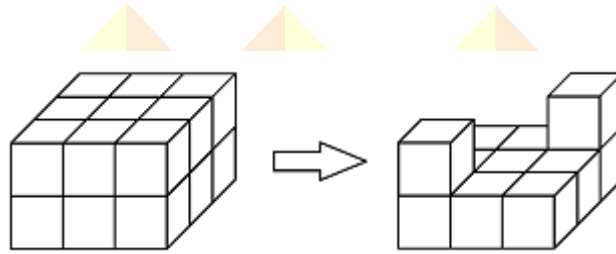
There were 60 birds on three trees. Then 6 birds flew away from the first tree, 8 birds flew away from the second tree and 4 birds flew away from the third tree. Now there are the same number of birds on each tree. How many birds were there on the second tree in the beginning?

Question 27

Iqra is 10 years old. Her father Arman is currently 4 times as old as Iqra. How old will Arman be when Iqra is twice as old as she is now?

Question 28

How many small cubes were removed from the original cuboid in the picture below?

**Question 29**

Four students can sit around a square table. Students placed 10 square tables side by side in order to make one long table for a school party. How many students could sit around this long table?

Question 30

How many times will the digit "7" be written if you write down the numbers 1, 2, 3, 4, ..., 2016, 2017?

END OF PAPER

1	A
2	C
3	E
4	A
5	B
6	B
7	D
8	C
9	E
10	E
11	D
12	D
13	C
14	B
15	C
16	D
17	E
18	B
19	E
20	B
21	0020
22	0011
23	0480
24	0029
25	0024
26	0022
27	0050
28	0007
29	0022
30	0602

