



TIAMSE NATIONAL FOUNDATION PHASE
MATHEMATICS OLYMPIAD

DATE OF OLYMPIAD (30-31 AUGUST; 1-10 SEPTEMBER 2021)

2021 - GRADE ONE

QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES

TIME: 08:30 - 09:45

MARKS: 20

NAME OF LEARNER: _____

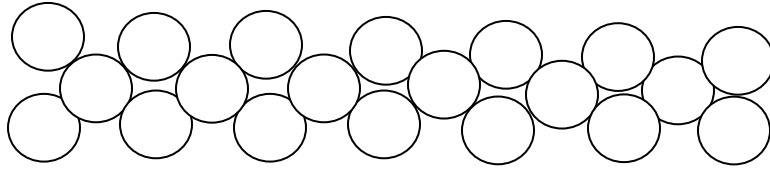
NAME OF SCHOOL: _____

INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. These are multiple choice questions. Circle the correct answer.
3. Use blank pages for working. Circle the answer after you have done the working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Do not rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-15: 2 marks each.
9. TIAMSE: The Institute for Advancement of Mathematics; Sciences and English

ENJOY THE OLYMPIAD!

1. Count the number of circles in this arrangement.



- (A) 19 (B) 20 (C) 21

2. Give the number which is 15 more than 27?

- (A) 42 (B) 44 (C) 46

3. Which number is out of order?

14; 17; 23; 20; 26

- (A) 17 (B) 23 (C) 26

4. Give the value of in this addition problem.

$$\begin{array}{r} 66 \\ + 4 \square \\ \hline 112 \end{array}$$

- (A) 6 (B) 7 (C) 8

5. Give the 6th number in this pattern (adding 5):

12; 17; 22; 27;

- (A) 32 (B) 37 (C) 42

6. Find the value of:

$$44 + \square = \square + \square$$

- (A) 22 (B) 33 (C) 44

7. Look at this pretty square below:

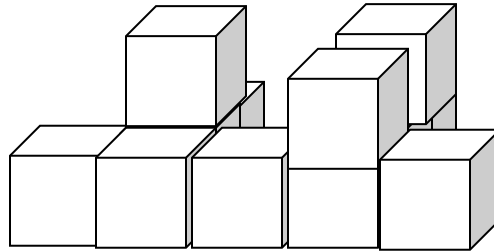
26	28	30	32
24	22	20	18
10	12	14 ⁰	16
8	6	4	2

A coin was placed at 14.

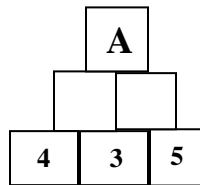
It was moved one (1) place to the left; two (2) places up and two (2) place to the right.

On which numbered square is the coin now on?

- (A) 28 (B) 30 (C) 32
8. How many blocks are there in this stack?



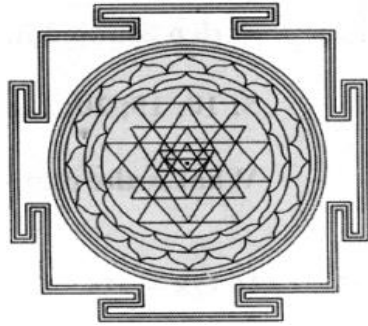
- (A) 12 (B) 13 (C) 14
9. Double the number '15' and take away '5' from the answer. What will the number now be?
- (A) 20 (B) 25 (C) 30
10. In the game called Pyramaths the rule is to double the number on the left and add to the number on the right. Find A.



- (A) 33 (B) 36 (C) 391

11. Rose gave 12 health biscuits to one group of friends. She then gave $\frac{1}{2}$ the remaining biscuits to another group. She still had 10 biscuits left. How many biscuits did Rose start off with?
- (A) 28 (B) 30 (C) 32
12. 3 cans cool drink was sold for R25. How much would you pay for 12 cans cool drink at this rate?
- (A) R80 (B) R100 (C) R120
13. Pam gave Sipho the same number of coins that Sipho had. Sipho now had 30 coins. Pam had 20 coins left. How many coins did Pam off start with?
- (A) 30 (B) 35 (C) 40
14. Bunny ate 2 cakes more than half of the cakes. She still had 18 cakes. How many cakes were there before she started eating?
- (A) 40 (B) 38 (C) 36
15. Carey makes 5 paper flowers in 9 minutes. Terry makes 2 paper flowers in 3 minutes. How many paper flowers can they make in 27 minutes if they work at the same rate?
- (A) 27 (B) 30 (C) 33

END



TIAMSE NATIONAL FOUNDATION PHASE
MATHEMATICS OLYMPIAD

DATE OF OLYMPIAD (30-31 AUGUST; 1-10 SEPTEMBER 2021)

2021 - GRADE TWO

QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES

TIME: 08:30 - 09:45

MARKS: 20

NAME OF LEARNER: _____

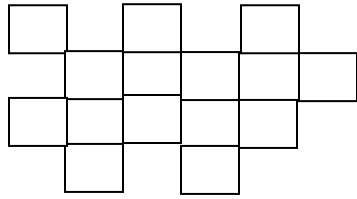
NAME OF SCHOOL: _____

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ENJOY THE OLYMPIAD!

1. Count the number of squares in this arrangement:



- (A) 13 (B) 14 (C) 15

2. Find the value of:

$$54 + 18 = 80 - \text{$$

- (A) 8 (B) 10 (C) 12

3. Find $\frac{1}{2}$ of 20 + $\frac{1}{2}$ of 22:

- (A) 21 (B) 22 (C) 23

4. Double 36 equals:

- (A) 62 (B) 64 (C) 72

5. Write down the value of in the following addition problem:

$$\begin{array}{r} \text{} \text{ } \\ + 9 \ 7 \\ \hline 1 \text{ } 1 \\ \hline \end{array}$$

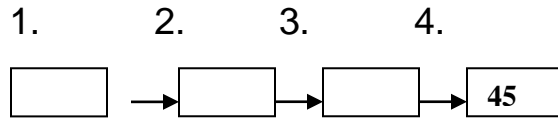
- (A) 3 (B) 4 (C) 5

6. After giving 22 apples to her friends in Grade 2B and 23 to her friends in Grade 2C Aster still had 25 left. How many did she start off with?

- (A) 70 (B) 65 (C) 60

7. Links and Chains

Double the number and add 3 each time to move from one block to the other. Which number is in block 1?



- (A) 2 (B) 3 (C) 4

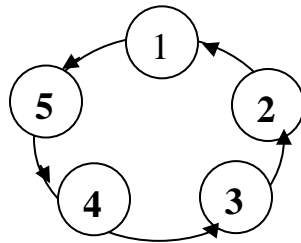
8. There are 24 numbered blocks below:

1	3	5	7	9	11
23	21	19	17	15	^d 13
25	27	29	31	33	35
47	45	43	41	39	37

d moves 2 blocks downwards, 3 blocks to the left; 3 blocks upwards and 1 block to the left. On which block is *d* now on?

- (A) 7 (B) 3 (C) 1

9.



Busy moves from one numbered circle to the other starting from 1 to 5 to 4 to 3 and so on. She visited 33 circles. On which circle did Busy land on?

- (A) 4 (B) 3 (C) 2

10. 3 more than $\frac{1}{4}$ of the sweets is 9 then what is $\frac{1}{2}$ of the sweets?

- (A) 14 (B) 13 (C) 12

11. Paula was on a certain step on a staircase. She climbed up 9 steps and then went down 6 steps. She then climbed up 4 steps. She was on step 10. On which step did she start from?

- (A) 1 (B) 2 (C) 3

12. Study the following problem. Do you know that # is doing to the two numbers.

$$5 \# 6 = 4 \qquad 3 \# 2 = 4$$

$$6 \# 2 = 10 \qquad 7 \# 8 = 6$$

Find the value of:

$$8 \# 9$$

- (A) 5 (B) 6 (C) 7

13. Who collected the most money for charity?
Amy collected R200 more than Betty.
Cedric collected R100 less than Des.
Des collected R300 more than Betty.

- (A) Amy (B) Cedric (C) Des

14. Enver has R200 more than Fres.
Fres has R100 more than George.
How much does Enver have if all 3 have R1 000?

- (A) R500 (B) R400 (C) R300

15. The following is in balance.



How many circles are needed to balance 2 triangles?

- (A) 3 (B) 4 (C) 5

END



TIAMSE NATIONAL FOUNDATION PHASE
MATHEMATICS OLYMPIAD

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2021 - GRADE THREE

QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES

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NAME OF SCHOOL: _____

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ENJOY THE OLYMPIAD!

1. Find the value of \square to make this sentence true.

$$33 + \square + \square + \square = 96$$

- (A) 20 (B) 21 (C) 22
2. My cellphone number is 0634625129.
The sum of the digits of my cellphone number is...
- (A) 36 (B) 37 (C) 38
3. Write down the 9th number of this addition pattern:
7; 13; 19; 25;...
- (A) 54 (B) 55 (C) 56
4. Emy counted in 3's as follows from 9:
9; 12; 15; 18;....
What position does 78 occupy in the above pattern
- (A) 24th (B) 25th (C) 26th
5. What is the 8th number of this pattern?
3; 3; 6; 9; 15; 24; ...
- (A) 61 (B) 63 (C) 65
6. Wendy needs R900 to buy a computer game. She has three R50 notes, four R100 notes and two R20 notes.
How much more does she need to buy this game?
- (A) R210 (B) R310 (C) R410
7. Jill gave out $\frac{3}{4}$ of the cakes which was same as 36.
What is $\frac{1}{3}$ of the number of cakes?
- (A) 16 (B) 20 (C) 24

13. In the game below no letter must appear more than once in a row, column or 2 by 2 block(shaded). Use only S; T; E and M.

What letter would be at 2?

S		E	
	T		M
			2

- (A) E (B) T (C) S
14. Guess the number I stand for:
- I am a 3 digit number.
 - My hundred's digit is half my ten's digit.
 - The sum of my digits is 13.
 - My ten's digit is 2 less than twice my unit's digit.

- (A) 246 (B) 364 (C) 481

15. There are 3 mystery numbers in the 3 boxes:

A
 B
 C

$$A + B = 30$$

$$B + C = 34$$

$$A + C = 36$$

Find $A + B + C$.

- (A) 30 (B) 40 (C) 50

END