# National Foundation Phase Maths Olympiad - Grade1 

## Collection Editor:

The Association for Mathematics Education of South Africa - Kwa-Zulu Natal

# National Foundation Phase Maths Olympiad - Grade1 

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CONNEXIONS
Rice University, Houston, Texas

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## Chapter 1

## National Foundation Phase Maths Olympaid - Grade1

### 1.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD



Figure 1.1

[^0]Available for free at Connexions [http://cnx.org/content/col11229/1.1](http://cnx.org/content/col11229/1.1)

### 1.2 GRADE ONE - PILOT PAPER QUESTION BOOKLET

## DURATION: 1 HOUR 15 MINUTES TIME: 08:30-09:45 MARKS: 20

NAME OF LEARNER: $\qquad$
NAME OF SCHOOL: $\qquad$

### 1.3 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. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions -1 mark each.
8. Questions 11-20: 2 marks each.

## ENJOY THE OLYMPIAD

### 1.4 TEST QUESTIONS

## Exercise 1.1

Count the number of circles in this arrangement.


Figure 1.2
(A) 9 (B) 10 (C) 11

## Exercise 1.2

Which number is the largest? 45 ; 54 ; 51 (A) 54 (B) 51 (C) 45

## Exercise 1.3

Which number is out of order?24; 22; 26; 28 (A) 22 (B) 26 (C) 28
Exercise 1.4
Give the value of $\Phi$ in this addition problem.

|  | 4 | 3 |
| :---: | :---: | :---: |
| + | 2 | $\Phi$ |
| $=$ | 7 | 0 |

Table 1.1

## Exercise 1.5

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

## Exercise 1.6

Give the next number in this pretty pattern(adding 3) $9 ; 12 ; 15 ; \ldots \ldots$ (A) 18 (B) 17 (C) 16

## Exercise 1.7

Find the value of $\Phi$ in $24+6=20+\Phi$

## Exercise 1.8

Look at this pretty square: A coin $\Phi$ was placed at 7. It was moved two(2) places to the left; one(1) place down and one(1) place to the right. On which numbered square is the coin ? (A) 9 (B) 10 (C) 11

| 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- |
| 5 | 6 | $\Phi 7$ | 8 |
| 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 |

Table 1.2

## Exercise 1.9

How many blocks are there in this stack?


Figure 1.3
(A) 6 (B) 7 (C) 8

## Exercise 1.10

Double the number 7 and take away 3 from the answer. What will the number now be ?(A) 11 (B) 12 (C) 13

## Exercise 1.11

You are given 3 plastic number digits 2 ; 4 and 5 . How many different 3 digit numbers can be made ?(A) 3 (B) $6(\mathrm{C}) 9$
Exercise 1.12
After giving $\frac{1}{2}$ the number of health biscuits to her friends Patricia has 14 left. How many biscuits did Patricia start off with ? (A) 26 (B) 28 (C) 30
Exercise 1.13
Sipho had to take 5 ml . of medicine in the morning, midday and in the afternoon (3 times per day). How much of medicine did Sipho take in 5 days ?(A) 75 ml (B) 60 ml (C) 45 ml

## Exercise 1.14

Lesley saw the time on the clock. What time will it be in 10 hours time ? (A) 1 o' clock (B) 2 o' clock (C) 3 o' clock


Figure 1.4

Exercise 1.15
If $296+194=490$ then what is the answer to $296+174$ ? (A) 480 (B) 470 (C) 460
Exercise 1.16
Pam makes 1 paper jet every 5 minutes. Tweedie makes 2 paper jets every 15 minutes. They continue to work like this. If they made 60 paper jets then how many paper Jets did Tweedie make ?(A) 20 (B) 30 (C) 40

## Chapter 2

# National Foundation Phase Maths Olympiad - Answer sheet template 

### 2.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD



Figure 2.1

## ANSWER SHEET

NAME OF LEARNER:
GRADE: $\qquad$
$\qquad$
Circle the correct answer after doing your working.

[^1]| 1 |  | A | B | C |
| :--- | :---: | :---: | :---: | :---: |
| 2 |  | A | B | C |
| 3 |  | A | B | C |
| 4 |  | A | B | C |
| 5 |  | A | B | C |
| 6 |  | A | B | C |
| 7 |  | A | B | C |
| 8 |  | A | B | C |
| 9 |  | A | B | C |
| 10 |  | A | B | C |
| 11 |  | A | B | C |
| 12 |  | A | B | C |
| 13 |  | A | B | C |
| 14 |  | A | B | C |
| 15 |  | A | B | C |

Table 2.1
MARKS: Numbers 1-10: $10 \times 1=10$
Numbers 11-15: $5 \times 2=10$ (TOTAL: 20)

## Chapter 3

# National Foundation Phase Maths <br> Olympiad - Grade one - final round 2006 

### 3.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD



Figure 3.1

[^2]
### 3.2 GRADE ONE - FINAL ROUND PAPER: 2006 QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES
MARKS: 20
NAME OF LEARNER: $\qquad$
NAME OF SCHOOL: $\qquad$

### 3.3 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. Don't rush.

6 . Your teacher will read the question to you.
7. First 10 questions -1 mark each.
8. Questions 11-20: 2 marks each.

ENJOY THE OLYMPIAD

### 3.4 Test Questions:

### 3.4.1 Exercise 1

How many circles are there in this arrangement?


Figure 3.2

### 3.4.2 Exercise 2

Which number is the smallest?
73 ; 69 or 86

### 3.4.3 Exercise 3

Write down the number which is 7 less than 30 .

### 3.4.4 Exercise 4

Give the value of $\square$ in this addition problem:


Figure 3.3

### 3.4.5 Exercise 5

Give the next number in this pattern:
$6 ; 11 ; 16 ; 21 \ldots$.

### 3.4.6 Exercise 6

Find the value of $\Delta$ :

$$
\begin{equation*}
36=\Delta+\Delta+\Delta \tag{3.1}
\end{equation*}
$$

### 3.4.7 Exercise 7

Teaser counted in 5's as follows:
$5 ; 10 ; 15 ; 20 ; 25 \ldots$.
What is the $12^{\text {th }}$ number counted by Teaser?

### 3.4.8 Exercise 8

How many blocks are there in this stack?


Figure 3.4

### 3.4.9 Exercise 9

3 energy bars cost R20. How many energy bars could you get for R80?

### 3.4.10 Exercise 10

At a supermarket you could buy 5 pencils for the same price as 3 pens. Deon bought 15 pens. How many pencils could he have gotten for the same price?

### 3.4.11 Exercise 11



Figure 3.5

4 matchsticks are used to make 1 square. 7 matchsticks are used to make 2 squares. 10 matchsticks are used to make 3 squares. How many matchsticks are used to make the $10^{\text {th }}$ figure?

### 3.4.12 Exercise 12

Mandy has 2 secret numbers in two envelopes. When she added the 2 numbers she got 10 . When she double the first number and added it to the second number she got 17 . What is the smaller secret number?

### 3.4.13 Exercise 13

A taxi makes 3 stops each time in one round trip. If the taxi made 73 stops in one week and started at A, what is the last stop?


Figure 3.6

### 3.4.14 Exercise 14

Four friends live on the same straight road. Wendy lives to the right of Larry. Pam lives to the right of Larry. Wendy lives to the right of Pam. Princess lives to the right of Wendy. Who lives between Pam and Princess?

### 3.4.15 Exercise 15

Two red beads are placed between every two blue beads. There are 20 blue beads. After looking at the arrangement below work out the number of red beads.

B R R B R R B R R B . . .

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