

# The 2002 Living Maths Olympiad

## Grade: 5

It's about the stuff in maths and the maths in stuff.

### PLEASE NOTE:

- Answer the questions according to the instructions on the answer sheet.
- You may NOT use a calculator.
- We hope you enjoy it!

### LET OP ASSEBLIEF:

- Beantwoord die vrae volgens die instruksies op die antwoordblad.
- Jy mag nie 'n sakrekenaar gebruik nie.
- Ons hoop jy geniet dit!

1. Steve gives Michelle 2 dozen roses for her birthday. One rose for every year of her age. How old is Michelle?

1. Steve gee vir Michelle 2 dosyn rose vir haar verjaarsdag. Een roos vir elke jaar van haar ouderdom. Hoe oud is Michelle?



- (A) 6                      (B) 14                      (C) 24                      (D) 16                      (E) 12

2. What would be the 10<sup>th</sup> number in the pattern below?

**1; 4; 9; 16; .....**

2. Wat sal die 10de getal in die ry hieronder wees?

**1; 4; 9; 16; .....**

- (A) 20                      (B) 40                      (C) 60                      (D) 80                      (E) 100

3. What number is halfway between 89 and 227?

3. Watter getal is halfpad tussen 89 en 227?

- A) 104                      (B) 117                      (C) 125                      (D) 158                      (E) 167

4. Together, Floefsie and his ball have a mass of 35kg. Floefsie's mass is 29kg. How much more is Floefsie's mass than his ball?

4. Floefsie en sy bal se massa is saam 35 kg. Floefsie se massa is 29 kg. Hoeveel is Floefsie se massa meer as sy bal se massa ?

- (A) 6 kg                      (B) 23kg                      (C) 16kg                      (D) 64 kg                      (E) 9 kg

5. A shop has a mixture of 7 bicycles and tricycles. If there were 19 wheels altogether, how many bicycles are in the shop ?

5. 'n Winkel het 'n mengsel van 7 fietse en driewielse. As daar altesaam 19 wiele is, hoeveel fietse is daar in die winkel?

- (A) 2                      (B) 3                      (C) 4                      (D) 5                      (E) 6

6. What is the next number in the pattern below?

**0,45; 0,57; 0,69; 0,82; 0,95; .....**

6. Wat is die volgende getal in die patroon hieronder?

**0,45; 0,57; 0,69; 0,82; 0,95; .....**

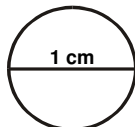
- (A) 0,103                      (B) 0,031                      (C) 1,03                      (D) 10,3                      (E)

7. A sandwich and a drink cost R7.00 together. If the sandwich costs R4.00 more than the drink, how much does the drink cost ?

- (A) R3.00      (B) R2.50      (C) R2.00      (D) R1.50      (E) R1.00

7. 'n Toebroodjie en 'n koeldrank kos saam R7.00. As die toebroodjie R4.00 meer kos as die koeldrank, hoeveel kos die koeldrank?

8. The distance through the middle of a marble is 1cm. 10 such marbles are arranged in a straight line, touching each other. What is the distance from the middle of the first marble to the middle of the last one?



- (A) 10      (B) 9      (C) 11      (D) 12      (E) 8

8. Die afstand deur die middle van 'n albaster is 1cm. 10 sulke albasters word in 'n reguit ry gepak, sodat hulle aan mekaar raak. Wat is die afstand vanaf die middle van die eerste albaster tot die middle van die laaste albaster?

9. How much taller is Orit than Benny?



- (A) 1,50 m      (B) 15 cm      (C) 0,73 m      (D) 1,77 cm      (E) 77 cm

9. Hoeveel langer is Orit as Benny?



10. If today is a Thursday, what day of the week will it be 77 days from today?

- (A) Tuesday      (B) Wednesday      (C) Thursday      (D) Friday      (E) Saturday  
 (A) Dinsdag      (B) Woensdag      (C) Donderdag      (D) Vrydag      (E) Saterdag

10. As vandag Donderdag is, watter dag sal dit oor 77 dae wees?

11. If  $3^1 = 3$   
 $3^2 = 3 \times 3 = 9$   
 $3^3 = 3 \times 3 \times 3 = 27$

Calculate:  $2^3$  ?

- (A) 2      (B) 4      (C) 6      (D) 8      (E) 10

11. As  $3^1 = 3$   
 $3^2 = 3 \times 3 = 9$   
 $3^3 = 3 \times 3 \times 3 = 27$

Bepaal:  $2^3$  ?

12. A book is opened. The numbers of the two pages where it is opened are multiplied and the answer is 132. What is the number of the page on the left?

- (A) 65      (B) 66      (C) 11      (D) 12      (E) 131

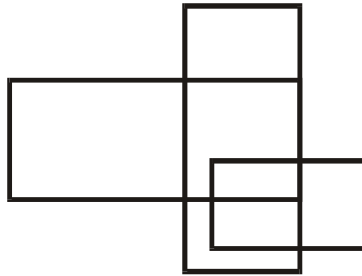
12. 'n Boek word oopgemaak. Die produk van die twee bladsynommers waar die boek oopgemaak is, is 132. Wat is die bladsynommer aan die linkerkant?

13. Ameer drinks 5 glasses of water everyday. Each glass holds 250 ml, How much water in total does she drink everyday?

- (A) 1000 ml      (B) 1 l      (C) 1,250 l      (D) 1500 ml      (E) 12,5 l

13. Ameer drink elke dag 5 glase water van 250 ml elk. Hoeveel water drink sy altesam op 'n dag?

14. How many blocks of different sizes are there in the figure below?



- (A) 8      (B) 9      (C) 10      (D) 11      (E) 12

14. Hoeveel reghoeke van verskillende groottes is daar altesam in hierdie figuur?

15. Jan is cycling at 10 km per hour to visit his wife Felix. At this rate, how long would it take to cycle 1 km?



- (A) 6 min      (B) 15 min      (C) 60 min      (D) 10 min      (E) 0,6 min

15. Jan ry op sy fiets teen 10 km per uur om sy vrou Felix te kuier. Hoe lank neem dit om 1 km te ry teen hierdie spoed?

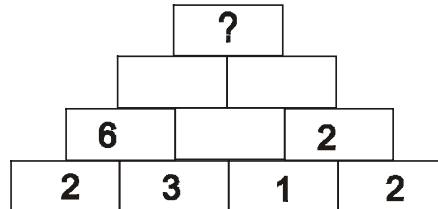
16. Rael spent  $\frac{2}{5}$  of his pocket money. He has R1,20 left. How much pocket money did he receive to start with?

- (A) R2,00      (B) R2,40      (C) R3,00      (D) R6,00      (E) R4,20

16. Rael spandeer  $\frac{2}{5}$  van sy sakgeld. Hy het R1,20 oor. Hoeveel sakgeld het hy ontvang?

17. In the Pyramid below, each number is found by multiplying the two numbers below it, for example, 6 = 2 x 3. Calculate the number in the top block.

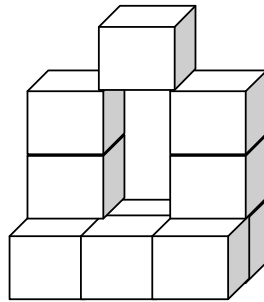
17. In die piramide hieronder, is elke getal die produk van die twee getalle onder die getal, byvoorbeeld 6 = 2 x 3. Bepaal die boonste getal.



- (A) 16      (B) 24      (C) 84      (D) 108      (E) 96

18. How many blocks were used to build this structure?

18. Hoeveel blokkies is gebruik om die struktuur in die skets hieronder te bou?



- (A) 8                      (B) 9                      (C) 10                      (D) 11                      (E) 12

19. A rope hangs over the side of a ship. At low tide 10m of rope is visible. The tide rises at a rate of 1,5 m per hour. After 2 hours, how much rope is still visible?

19. 'n Tou hang oor die kant van 'n boot. Met laagwater is 10m van die tou sigbaar. Die gety styg teen 1,5 m per uur. Hoeveel tou is nog sigbaar na 2 ure?



- (A) 10m                      (B) 7m                      (C) 8,5m                      (D) 6,5m                      (E) 13m

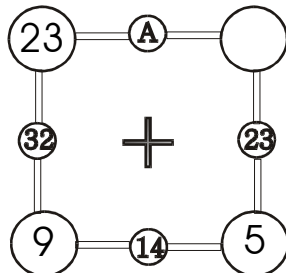
20. The President of Mathsville is elected every 5 years and the prime minister is elected every 3 years. They are both elected in 2002. Which is the next year in which they will both be elected?

20. Die President van Mathsville word elke 5 jaar verkies en die Eersteminister word elke 3 jaar verkies. Albei is in 2002 verkies. In watter jaar sal hulle albei weer verkies word?

- (A) 2006                      (B) 2009                      (C) 2012                      (D) 2017                      (E) 2025

21. On each side of the picture below, the middle number is equal to the sum of the other two numbers at each corner. E.g.  $32 = 23 + 9$ . What number does A represent?

21. Aan elke kant van die diagram hieronder is die middelste getal gelyk aan die som van die twee getalle op die hoeke, bv.  $32 = 23 + 9$ . Watter getal word deur A verteenwoordig?



- (A) 32                      (B) 41                      (C) 5                      (D) 9                      (E) 23

<p>22. If you write the digits 4, 5 and 8 in every possible order to form a 3-digit number (eg. 854), how many of these numbers will be exactly divisible by 2 ?</p>	<p>22. As jy die syfers 4, 5 en 8 in alle moontlike volgordes skryf om 'n 3-syfer getal te vorm (bv. 854), hoeveel van hierdie getalle is presies deelbaar deur 2?</p>
<p>(A) 6                      (B) 5                      (C) 4                      (D) 3                      (E) 2</p>	<p>(A) 6                      (B) 5                      (C) 4                      (D) 3                      (E) 2</p>
<p>23. Donovan's bucket is filled with sand and it weighs 17kg. After pouring out <math>\frac{1}{4}</math> of the sand, the bucket now weighs 13 kg. What is the mass of the bucket on its own?</p>	<p>23. Donovan se emmer is vol sand en dit weeg 17kg. Nadat <math>\frac{1}{4}</math> van die sand uitgegooi is weeg dit 13kg. Hoeveel weeg die emmer op sy eie?</p>
<p>(A) 1kg                      (B) 1,5 kg                      (C) 2kg                      (D) 2,5 kg                      (E) 3 kg</p>	<p>(A) 1kg                      (B) 1,5 kg                      (C) 2kg                      (D) 2,5 kg                      (E) 3 kg</p>
<p>24. A large wooden cube is painted black and then cut into 27 smaller cubes. How many of these smaller cubes will have only one side painted black?</p>	<p>24. 'n Groot hout kubus is swart geverf en daarna in 27 kleiner kubusse gesaag. Hoeveel van die kleiner kubusse het net een sykant wat swart geverf is?</p>
<p>(A) 4                      (B) 6                      (C) 8                      (D) 10                      (E) 12</p>	<p>(A) 4                      (B) 6                      (C) 8                      (D) 10                      (E) 12</p>
<p>25. Rita has a 3-digit combination, which controls her alarm. She remembers that the digits are 2, 6 and 8 but she can't remember the correct order. What is the maximum number of different combinations that she can try to switch the alarm on?</p>	<p>25. Rita het 'n 3-syfer kombinasie wat haar alarm beheer. Sy onthou dat die syfers 2, 6, 8 is, maar sy kan nie die regte volgorde onthou nie. Wat is die maksimum aantal verskillende kombinasies wat sy kan probeer om die alarm aan te skakel?</p>
<p>(A) 862                      (B) 22                      (C) 999                      (D) 12                      (E) 6</p>	<p>(A) 862                      (B) 22                      (C) 999                      (D) 12                      (E) 6</p>

Papers set by Steve Sherman and translated by Wilhelm Jonker