

# SA Mathematics Challenge 2016

## GRADE 5 FIRST ROUND

# SA Wiskunde-uitdaging 2016

## GRAAD 5 EERSTE RONDE

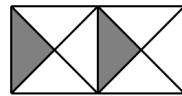
### NOTE:

- Answer the questions according to the instructions on the answer sheet.
- You may use a calculator.
- The questions test insight. Complex calculations will therefore not be necessary.
- We hope you enjoy it!

### LET OP:

- Beantwoord die vrae volgens die instruksies op die antwoordblad.
- Jy mag 'n sakrekenaar gebruik.
- Die vrae toets insig. Omslagtige berekeninge is dus onnodig en tydrowend.
- Ons hoop jy geniet dit!

1. How many more small triangles must be shaded so that half of this figure is shaded?



- (A) 1                      (B) 3                      (C) 2                      (D) 4                      (E) 6

2. Who plays tennis with Ben?

Ben said: "I will only play if Ali or Lara are playing."

Ali said: "I will only play if Holly plays."

Holly and Zintle said: "I won't play if Ben is playing."

- (A) Ali                      (B) Zintle                      (C) Holly

2. Wie speel tennis met Ben?

Ben sê: "Ek sal net speel as Ali of Lara ook speel."

Ali sê: "Ek sal net speel as Holly ook speel."

Holly en Zintle sê: "Ek sal nie speel as Ben speel nie."

- (D) Lara                      (E) Ben

3. To roast a chicken takes  $1\frac{1}{2}$  hours. If Judy puts a chicken into the oven at 15:15, at what time will the chicken be ready?

- (A) 16:00                      (B) 16:30                      (C) 16:45

3. Dit neem  $1\frac{1}{2}$  uur om 'n hoender gaar te maak. As Judy om 15:15 'n hoender in die oond sit, hoe laat sal die hoender gaar wees?

- (D) 17:45                      (E) 08:00

4. Which number below is a multiple of both 2 and 7?

- (A) 16                      (B) 21                      (C) 24

4. Watter van hierdie getalle is 'n veelvoud van beide 2 en 7?

- (D) 28                      (E) 32

5. Consecutive numbers follow after each other. For example 2, 3 and 4 are three consecutive numbers. Which of the following can be written as the sum of three consecutive numbers?

- (A) 10                      (B) 15                      (C) 11

5. Ons noem getalle wat op mekaar volg opeenvolgende getalle. Byvoorbeeld, 2, 3 en 4 is drie opeenvolgende getalle. Watter van hierdie getalle kan geskryf word as die som van drie opeenvolgende getalle?

- (D) 13                      (E) 20

6. What number must be in the box to make the statement true?


$$108 \times 99 = 100 \times 99 + 10 \times 99 - \square \times 99$$


- (A) 2                      (B) 4                      (C) 6

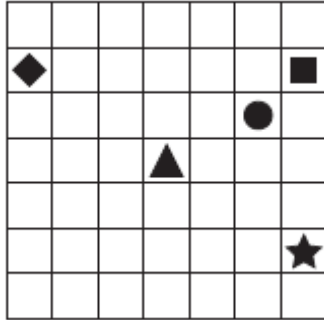
6. Water getal kom in die plek van die boksie sodat die sin waar is?





$$108 \times 99 = 100 \times 99 + 10 \times 99 - \square \times 99$$

- (D) 12                      (E) 16

7. Joe started at . He moved three squares to the right. Then he moved two squares up. Where is he now?

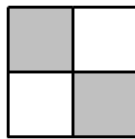
7. Joe begin by . Hy beweeg drie vierkante regs en daarna twee vierkante opwaarts. Waar is hy nou?



- (A)                       (B)                       (C)                       (D)                       (E) 

8. In how many different ways can two quarter squares be shaded in this 2 by 2 square? The sketch shows one way.

8. Op hoeveel verskillende maniere kan twee kwarte in hierdie 2 by 2 vierkant verdonker word? Die skets toon een manier.



- (A) 2                      (B) 6                      (C) 7                      (D) 8                      (E) 10

9. Which answer best represents ?

$$49 \times 104 = ?$$

- (A) 4 500                      (B) 5 000                      (C) 5 500

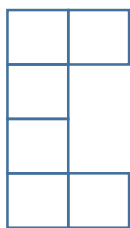
9. Watter antwoord is die naaste aan ?

$$49 \times 104 = ?$$

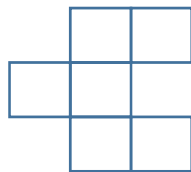
- (D) 5 250                      (E) 4 750

10. Which of the following is the net of a cube?

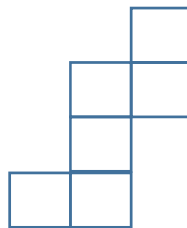
10. Watter van die volgende is die net van 'n kubus?



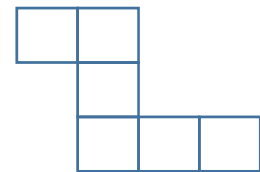
Net 1



Net 2



Net 3



Net 4

- (A) Net 1                      (B) Net 2                      (C) Net 3                      (D) Net 4                      (E) All of them  
Almal

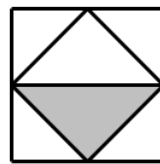
11. Malusi receives a packet of sweets from his dad. He gives 9 sweets to his little brother. He shares the rest equally between himself and 5 friends. He now has 7 sweets for himself. How many sweets were in the packet originally?

- (A) 47                      (B) 51                      (C) 56                      (D) 60                      (E) 67

12. The chairs in a room are arranged in straight rows with the same number of chairs in each row. I am sitting in the 5<sup>th</sup> chair from the left in the 10<sup>th</sup> row from the front. There are 5 chairs to my right and 12 chairs behind me. How many chairs are there in the room?

- (A) 198                      (B) 110                      (C) 210                      (D) 220                      (E) 189

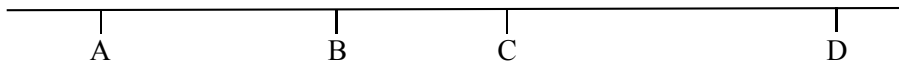
13. What fraction of this figure is shaded?



13. Watter breuk van hierdie figuur is verdonker?

- (A)  $\frac{1}{2}$                       (B)  $\frac{1}{4}$                       (C)  $\frac{1}{3}$                       (D)  $\frac{1}{6}$                       (E)  $\frac{1}{8}$

14. In the picture the distance AC = 10 m, BD = 15 m and AD = 22 m. What is the distance BC?



14. In hierdie skets is die afstand AC = 10 m, BD = 15 m en AD = 22 m. Wat is die afstand BC?

- (A) 1 m                      (B) 2 m                      (C) 3 m                      (D) 4 m                      (E) 5 m

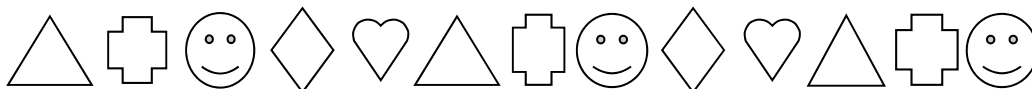
15. Mr Molefe's height is 180 cm. His oldest son is  $\frac{1}{2}$  of his height and his youngest daughter is  $\frac{3}{5}$  of his eldest son's height. What is his youngest daughter's height?

- (A) 18 cm                      (B) 27 cm                      (C) 45 cm                      (D) 54 cm                      (E) 72 cm

16. Caroline celebrates her birthday on the 95<sup>th</sup> day of 2016. On what date is her birthday?

- (A) 31 April                      (B) 6 April                      (C) 5 April                      (D) 4 April                      (E) 7 April

17. If this geometric pattern is continued, what figure will be in the 2016<sup>th</sup> position?



17. As hierdie meetkundige patroon voortgesit word, watter figuur sal in die 2016<sup>de</sup> posisie wees?

- (A)                      (B)                      (C)                      (D)                      (E)

18. What is the missing number in this number pattern?

1 437, 1 337, 1 137, \_\_\_\_\_, 437

- (A) 1037      (B) 937      (C) 837

18. Wat is die ontbrekende getal in hierdie getalpatroon?

1 437, 1 337, 1 137, \_\_\_\_\_, 437

- (D) 137      (E) 637

19. Sam has some marbles.  $\frac{1}{7}$  of them are blue,  $\frac{2}{7}$  of them are green and the rest are white. There are 48 more white marbles than green marbles. How many marbles does Sam have altogether?

- (A) 80      (B) 84      (C) 48

19. Sam het 'n aantal albasters.  $\frac{1}{7}$  van hulle is blou,  $\frac{2}{7}$  van hulle is groen en die res is wit. Daar is 48 meer wit albasters as groen albasters. Hoeveel albasters het Sam altesaam?

- (D) 168      (E) 112

20. In this alpha puzzle, each letter stands for a unique digit so that the calculation is correct.

$$\begin{array}{r} A D \\ A D \\ + A D \\ \hline 7 A \end{array}$$

What is the value of A + D?

- (A) 6      (B) 9      (C) 11

20. In hierdie alfa-raaisel staan elke letter vir 'n unieke syfer sodat die berekening korrek is.

$$\begin{array}{r} A D \\ A D \\ + A D \\ \hline 7 A \end{array}$$

Wat is die waarde van A + D?

- (D) 10      (E) 4