

# Mathematics Challenge

## GRADE 4 FINAL ROUND

10 OCTOBER 2007

### 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!

# Wiskunde-uitdaging

## GRAAD 4 FINALE RONDE

10 OKTOBER 2007

### LET OP:

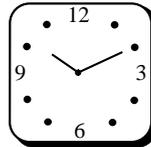
- Beantwoord die vrae volgens die instruksies op die antwoordblad.
- Jy mag 'n sakrekenaar gebruik.
- Die vrae toets insig. Omslagtige berekening is dus onnodig en tydrowend.
- Ons hoop jy geniet dit!

1. At a party each child gets  $\frac{1}{3}$  of a pizza. There were 12 pizzas altogether. How many children were at the party?



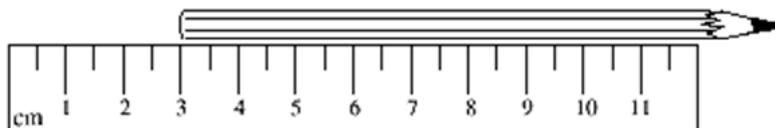
- (A) 4                      (B) 36                      (C) 48                      (D) 24                      (E) 12

2. This analogue watch shows the time after sunset on a particular day. What will a digital watch show for the same time?



- (A) 10:02                      (B) 10:10                      (C) 10:12                      (D) 22:02                      (E) 22:10

3. Which measurement is closest to the length of the pencil?



- (A) 9 cm                      (B) 10,5 cm                      (C) 12 cm                      (D) 13 cm                      (E) 13,5 cm

4. Which one of the following numbers will appear in the sequence  
6; 12; 18; 24; ...?

- (A) 2733                      (B) 3526                      (C) 4182

1. By 'n partytjie kry elke kind  $\frac{1}{3}$  van 'n pizza. Daar was altesaam 12 pizzas. Hoeveel kinders was daar by die partytjie?

2. Hierdie analoog horlosie toon die tyd na sononder op 'n sekere dag. Wat sal 'n digitale horlosie vir dieselfde tyd toon?

3. Watter mate is die naaste aan die lengte van die potlood?

4. Watter een van die volgende getalle sal voorkom in die getalry  
6; 12; 18; 24; ...?

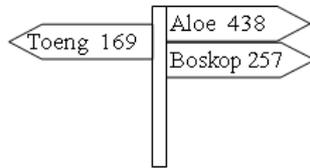
- (D) 4526                      (E) 5344

5. Only one of these calculations is correct. Which one? 5. Slegs een van hierdie berekeninge is korrek. Watter een?  
 (A)  $54 \times 65 = 3512$  (B)  $78 \times 19 = 1486$  (C)  $33 \times 58 = 1914$  (D)  $69 \times 10 = 695$  (E)  $82 \times 15 = 1235$

6. A train departs from Bellville station at 09:47 and arrives in Cape Town at 10:18. Another train on the same route leaves Bellville at 12:30. At what time does it arrive in Cape Town? 6. 'n Trein vertrek om 09:47 van Bellville-stasie en kom om 10:18 in Kaapstad aan. 'n Ander trein op dieselfde roete vertrek om 12:30 van Bellville. Hoe laat kom dit in Kaapstad aan?  
 (A) 13:18 (B) 13:01 (C) 01:01 (D) 13:12 (E) 12:51

7. Jason and Mary together have 96 stamps. If Jason has twice as many stamps as Mary, how many stamps does Mary have? 7. Jason en Mary het saam 96 seëls. As Jason tweekeer soveel seëls as Mary het, hoeveel seëls het Mary?  
 (A) 48 (B) 46 (C) 32 (D) 16 (E) 44

8. This road sign at a T-junction shows the distance, in kilometres, to three towns. What is the distance between Aloe and Boskop? 8. Hierdie padteken by 'n T-aansluiting gee die afstande, in kilometer, na drie dorpe. Wat is die afstand tussen Aloe en Boskop?

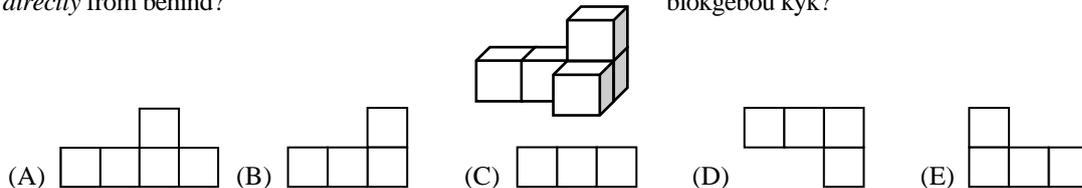


- (A) 607 km (B) 181 km (C) 222 km (D) 269 km (E) 665 km

9. In the previous question: What is the distance between Aloe and Toeng? 9. In die vorige vraag: Wat is die afstand tussen Aloe en Toeng?  
 (A) 607 km (B) 181 km (C) 222 km (D) 269 km (E) 665 km

10. Thabo and Peter buy a case of 12 cooldrinks and pay R30 for it. Thabo takes 4 bottles and Peter takes the other 8. How much must Thabo pay for his share? 10. Thabo en Peter koop 'n kis met 12 koeldranke en betaal R30 daarvoor. Thabo neem 4 bottels en Peter neem die ander 8. Hoeveel moet Thabo vir sy deel betaal?  
 (A) R12 (B) R9 (C) R15 (D) R8 (E) R10

11. What will you see if you look at this block building directly from behind? 11. Wat sal jy sien as jy *presies* van agter na hierdie blokgebou kyk?



12. What is the next number in this pattern? 6,8; 3,4; 1,7; ... 12. Wat is die volgende getal in hierdie getalpatroon? 6,8; 3,4; 1,7; ...  
 (A) 0,85 (B) 8,5 (C) 1,35 (D) 0,9 (E) 0,535

13. Voyo has 24 marbles more than Bingo and Thandi has 24 less than Bingo. If Bingo has 71 marbles, how many do they have altogether? 13. Voya het 24 albasters meer as Bingo en Thandi het 24 minder as Bingo. As Bingo 71 albasters het, hoeveel het hulle altesaam?  
 (A) 211 (B) 213 (C) 215 (D) 217 (E) 219

14. The sketch shows how houses are numbered in Albury Street.

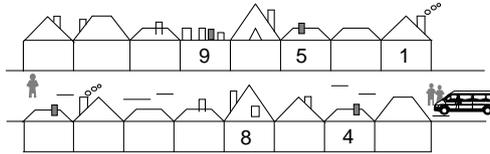
Caroline lives at number 36  
 Con lives at number 37  
 Luke lives at number 38  
 Maria lives at number 39  
 Angelo lives at number 40

Who lives opposite Luke?

14. Die skets toon hoe huise in Alburystraat genommer word.

Caroline woon in nommer 36  
 Con woon in nommer 37  
 Luke woon in nommer 38  
 Maria woon in nommer 39  
 Angelo woon in nommer 40

Wie woon direk oorkant Luke?



- (A) Caroline      (B) Con      (C) Maria      (D) Angelo      (E) Marc

15. A shop sells potatoes in big bags with 40 potatoes for R35,60. If they want to sell smaller bags of 15 potatoes for the same price, what should the price of the smaller bag be?

(A) R10,68

(B) R13,35

(C) R17,80

(D) R16,40

(E) R15,65

15. 'n Winkel verkoop groot sakke met 40 aartappels vir R35,60. As hulle kleiner sakkies met 15 aartappels teen dieselfde prys wil verkoop, wat moet die prys van die kleiner sakkie wees?

16. One number in this pattern is incorrect. What should the number be?

7; 9; 12; 16; 21; 28

(A) 20

(B) 27

(C) 15

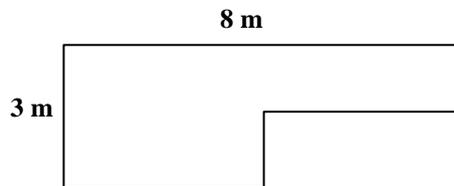
(D) 12

(E) 10

16. Een getal in die patroon hieronder is verkeerd. Wat moet die getal wees?

7; 9; 12; 16; 21; 28

17. An ant walks once around the rectangular figure below, all along the lines. How far did the ant walk?



(A) 11 m

(B) 19 m

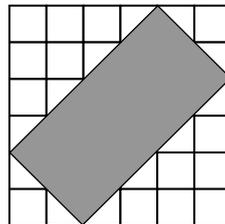
(C) 22 m

(D) 24 m

(E) Not enough information  
 Nie genoeg inligting nie

17. 'n Mier stap al op die lyne, een keer om hierdie reghoekige figuur. Hoe ver het die mier gestap?

18. The sketch shows a carpet on a tile floor. What fraction of the floor is *not* covered by the carpet?



(A)  $\frac{16}{36}$

(B)  $\frac{5}{9}$

(C)  $\frac{11}{36}$

(D)  $\frac{22}{30}$

(E)  $\frac{22}{36}$

18. Die skets toon 'n mat op 'n blokkiesvloer. Watter breuk van die vloer word *nie* deur die mat bedek nie?

19. In Townville the park is 3 km west of the school. The library is 1 km west of the church. The church is 4 km east of the school. How far is the library from the park?

(A) 6 km

(B) 4 km

(C) 5 km

(D) 7 km

(E) 8 km

19. In Townville is die park 3 km wes van die skool. Die biblioteek is 1 km wes van die kerk. Die kerk is 4 km oos van die skool. Hoe ver is die biblioteek vanaf die park?

20. A vat contains 120 litres of wine. How many 1,5 litre bottles can be filled from this vat?

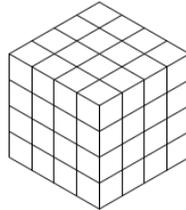
- (A) 180                      (B) 60                      (C) 72

20. 'n Vaatjie bevat 120 liter wyn. Hoeveel 1,5-liter bottels kan uit hierdie vaatjie volgemaak word?

- (D) 80                      (E) 96

21. A 4 by 4 by 4 cube is made of 1 cm cubes. The outside of the big cube is then painted red. How many of the small cubes will now have two sides painted red?

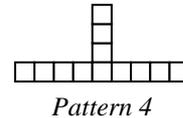
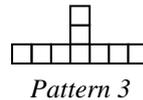
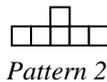
21. 'n 4 by 4 by 4 kubus word met klein 1 cm kubusse gemaak. Die buitekant van die groot kubus word dan rooi geverf. Hoeveel van die klein kubusse het nou twee kante wat rooi geverf is?



- (A) 8                      (B) 12                      (C) 24                      (D) 48                      (E) 16

22. If the pattern below is continued, how many squares will *Pattern 100* have?

22. As die patroon hieronder voortgaan, hoeveel vierkantjies sal in *Patroon 100* wees?



- (A) 301                      (B) 302                      (C) 300                      (D) 298                      (E) 299

23. Siva is shorter than Temba. Eby is taller than Ram and Temba. Siva is also shorter than Ram but taller than Oscar. Who is the shortest of them all?

23. Siva is korter as Temba. Eby is langer as Ram en Temba. Siva is ook korter as Ram, maar langer as Oscar. Wie is die kortste van almal?

- (A) Oscar                      (B) Siva                      (C) Temba                      (D) Ram                      (E) Eby

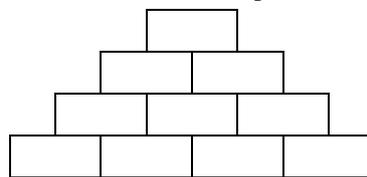
24. You have three 10c coins, two 5c coins and two 20c coins. In how many different ways can you give a person 35c?

24. Jy het drie 10c muntstukke, twee 5c muntstukke en twee 20c muntstukke. Op hoeveel verskillende maniere kan jy 'n persoon 35c gee?

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

25. Siphon builds "pyramids" with blocks as shown in the sketch below. To build a pyramid 4 blocks high he needs 10 blocks. How many blocks does he need to build a pyramid 50 blocks high?

25. Siphon bou "piramides" met blokke soos in die skets getoon. Om 'n piramide 4 blokke hoog te bou, het hy 10 blokke nodig. Hoeveel blokke het hy nodig om 'n piramide 50 blokke hoog te bou?



- (A) 2500                      (B) 1275                      (C) 2401                      (D) 2550                      (E) 2601