

miMathematics Challenge

GRADE 4 FIRST ROUND
6-10 SEPTEMBER 2004

NOTE:

- Answer the questions according to the instructions on the answer sheet.
- You may use a calculator.
- The questions test insight. Complex calculations are therefore unnecessary and time consuming.
- We hope you enjoy it!

1. Altogether, how many triangles are there in the figure below?

(A) 4

(B) 5

(C) 6

(D) 7

(E) 8

2. What number in the place of ∇ makes this sentence true?

$$12 - 3 = \nabla - 12$$

(A) 3

(B) 9

(C) 21

(D) 15

(E) 18



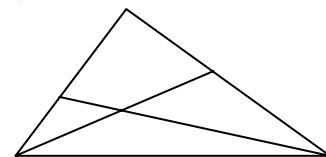
In cooperation with the
Western Cape Education Department
Gauteng Education Department

Wiskunde-uitdaging

GRAAD 4 EERSTE RONDE
6-10 SEPTEMBER 2004

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 tydwend.
- Ons hoop jy geniet dit!



1. Hoeveel driehoede is daar altesaam in die figuur hieronder?

1. Bebonke bangaphi oonxantathu abakulo mzobo ungezantsi?

(D) 7

(E) 8

2. Watter getal in die plek van ∇ maak hierdie sin waar?

$$12 - 3 = \nabla - 12$$

2. Leliph iinani elinokubekwa endaweni ka ∇ elinokuthi lenze esi sivakalisi samananani sibe yinyani?

$$12 - 3 = \nabla - 12$$

(C) 21

(D) 15

(E) 18



Nasou Via Afrika

CASIO

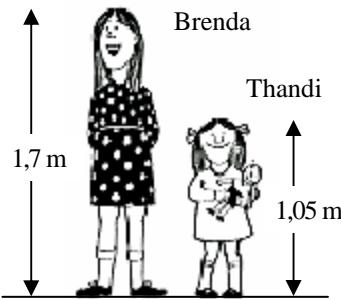
RUMEUS

Research Unit for Mathematics Education
of the University of Stellenbosch

3. How much taller is Brenda than Thandi?

3. Hoeveel is Brenda langer as Thandi?

3. Ingaba u Brenda mde kangskanani kuno Thandi?



(A) 0,065 m

(B) 0,65 m

(C) 65 m

(D) 0,88 m

(E) 1,65 m

4. $0 + 37 + 37 + \dots + 37 = 629$

How many 37s must be added to 0 to get 629?

4. $0 + 37 + 37 + \dots + 37 = 629$

Hoeveel 37's moet by 0 getel word om 629 te kry?

4. $0 + 37 + 37 + \dots + 37 = 629$

U-37 adityaniswe amathuba angakanani ku-0 ukuze enze u-629?

(A) 13

(B) 15

(C) 17

(D) 19

(E) 23

5. Which of the following is a good indication of how many millilitres there are in a full can of Coke?

5. Watter van die volgende is 'n goeie aanduiding van die hoeveelheid milliliter in 'n vol blikkie Coke?

5. Yeyiphi kwezi zilandelayo ebonisa kakuhle ukuba zingaphi na i-millilitres kwitoti ezeleyo ye Coke?



(A) 25

(B) 80

(C) 340

(D) 750

(E) 1250

6. Mary has to be at school by 08:00. It takes her 15 minutes to get dressed, 20 minutes to eat and 35 minutes to walk to school. What is the latest that she should get up?

6. Mary moet om 08:00 by die skool wees. Dit neem haar 15 minute om aan te trek, 20 minute om te eet en 35 minute om skool toe te loop. Wat is die laatste wat sy moet opstaan?

6. U Mary kufuneka esesikolweni ngentsimbi yesi 08:00. Kuthi kumthathe I 15 lemizuzu ukunxiba, kuphinde kumthathe ama 20 emizuzu ukutya kuze kumthathe ama 35 emizuzu ukuhamba ngenyawo esiya esikolweni. Kuxa evuke mva kanganani apho anokufika ngexesha esikolweni?



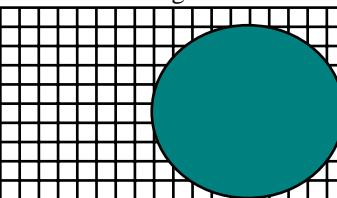
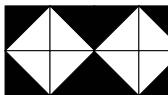
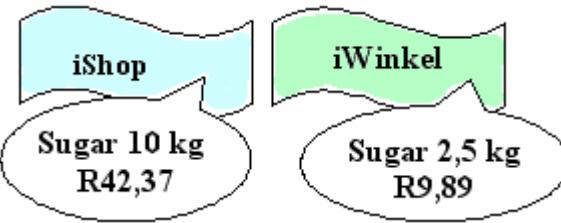
(A) 07:00

(B) 06:50

(C) 07:10

(D) 07:50

(E) 07:25

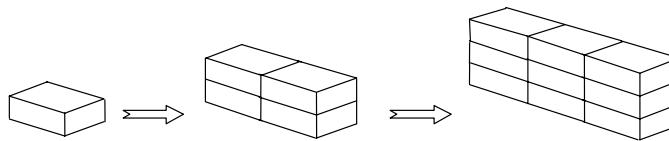
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- | | | |
|---|---|---|
| <p>7. On which date is the hundredth day of the year 2004?</p> <p>(A) 10 Mei
10 May</p> | <p>7. Op watter datum is die honderdste dag van die jaar 2004?</p> <p>(C) 30 April
30 April</p> | <p>7. Ngowuphi umhla ozakuba lusuku lwe 100 kunyaka wama 2004?</p> <p>(E) Nie een van hierdie Awukho kule</p> |
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|--|--|--|
| <p>8. A carpet is thrown over a tile floor as shown below. How many tiles were used to tile the floor?</p> <p>(A) 28</p> | <p>8. 'n Mat word oor 'n teël vloer gegooi soos hieronder getoon. Hoeveel teëls is gebruik om die vloer te teël?</p>  <p>(B) 180</p> | <p>8. I methi iphoswe phezu komgangatho we tayile njengokuba kuboniswe ngezantsi. Zingaphi ii tayile ezasetyenziswa okugquma lomgangatho?</p> <p>(D) 200</p> |
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| <p>9. What fraction of the whole figure is shaded?</p> <p>(A) $\frac{1}{2}$</p> | <p>9. Watter breuk van die hele figuur hieronder is verdonker?</p>  <p>(B) $\frac{6}{16}$</p> | <p>9. Liqhezu elingakanani lalo mzobo elithe lenziwe mnyama?</p> <p>(C) $\frac{7}{16}$</p> |
|--|---|---|
-
- | | | |
|--|--|---|
| <p>10. Mother needs to buy 10 kg of sugar. How much will she save if she buys the sugar at iWinkel instead of at iShop?</p> <p>(A) R2,18</p> | <p>10. Ma moet 10 kg suiker koop. Hoeveel sal sy spaar as sy die suiker by iWinkel in plaas van by iShop koop?</p>  <p>(B) R2,81</p> | <p>10. U mama kufuneka athenge i 10 kg yeswekile. Uyakuthi onge malini ukuba uthethathenga iswekile kwisitolo sakwa Wenkil endaweni yesitolo sakwa Shop?</p> <p>(C) R3,81</p> |
|--|--|---|
-

11. Blocks are stacked according to the pattern shown below. If this pattern is continued, how many blocks will be in the eighth stack?

(A) 24

(B) 36

- 11 Blokkies word soos hieronder volgens 'n patroon gestapel. Hoeveel blokkies sal in die agtste stapel wees indien hierdie patroon voortgesit word?



(C) 48

(D) 64

(E) 81

12. It is 75 km from town A to town B. There is a farm stall between A and B, 15 km from A. How far is it from the farm stall to B?

(A) 90 km

(B) 60 km

- 12 Van dorp A na dorp B is 75 km. Tussen A en B, 15 km vanaf A, is 'n plaasstal. Hoe ver is dit van die plaasstal na B?

(C) 75 km

(D) 37,5 km

(E) 45 km

13. You and 10 other people get into a lift on the ground floor. On the first floor 3 people get off and 1 gets in. On the second floor 5 people get off and 3 get in. On the third floor 6 people get off. How many people are in the lift now?

(A) 0

(B) 1

- 13 Jy en 10 ander persone klim op die grondvloer in 'n hysbak. Op die eerste vloer klim 3 mense uit en 1 klim in. Op die tweede vloer klim 5 mense uit en 3 klim in. Op die derde vloer klim 6 mense uit. Hoeveel mense is nou in die hysbak?

(C) 2

(D) 3

- 13 Wena nabanye abantu abali 10 niye nakhwela I lifti kumgangatho osemhlaben. Kumgangatho wokuqala kuye kwehla abantu aba 3 kwangena omnye. Kumgangatho wsibini kuye kwehla abantu aba 5 kwaze kwangena aba 3. Kumgangatho wesithathu kuye kwehla abantu aba 6. Bangaphi abantu abaseleyo ngoku?

None of these

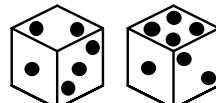
(E) Nie een hiervan nie
Ayikho kwezi

14. If you roll two dice and add the two scores, how many different answers are possible?

(A) 10

(B) 11

- 14 As jy twee dobbelsteenjies rol en jy tel die twee getalle op, hoeveel verskillende antwoorde is moontlik?



(C) 12

(D) 13

(E) 36

14. Ukuba udovola amadayisi uze izikoro zozibini uzidibanise zingangaphi iziphumo zokokudibanisa kwakho onokuzifumana?

15. 2003 If the number 5 is put into the number machine below, the output (answer) is 18. If the output is 36, what was the input?

(A) 10

(B) 23

(C) 13

(D) 14

(E) 11

16. On this dart board you can score 3; 5 or 7 with each dart. A boy hits the board with three darts. Which of the following total scores is impossible to obtain?

(A) 19

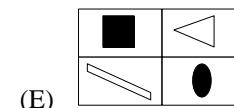
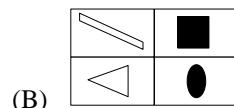
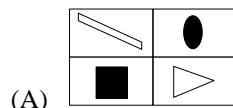
(B) 17

(C) 18

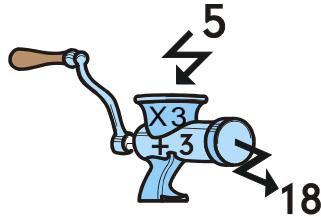
(D) 13

(E) 15

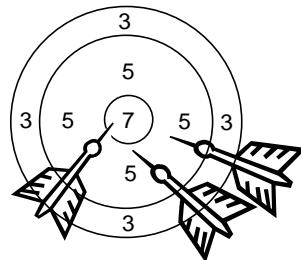
17. Which diagram fits in the empty space to complete the pattern?



15. As die getal 5 in hierdie getalmasjien ingevoer word, is die uitvoergetal (antwoord) 18. As die uitvoergetal 36 is, was was die invoertal?

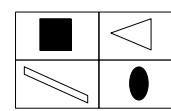
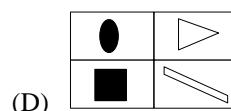
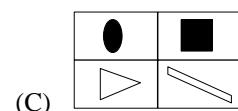
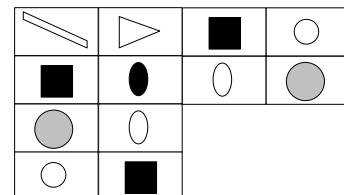


16. Op hierdie veerpyltjie-bord kan jy tellings van 3; 5 of 7 met elke pyltjie behaal. 'n Seun tref die teiken met 3 pyltjies. Watter van hierdie totale tellings is onmoontlik?

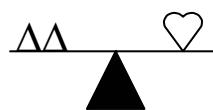


15. Ukuba u-5 ufanekiso ongena gingci kwesi elingu-18. Ukuba kophume u-36 ngubani ebefakwe ekuqaleni?

16. Umntu angabetha u 3; 5 okanye u 7 kwiqonga lwedathi eliboniswe ngasezantsi. Inkwenkwana ithi igibisele kweli qonga ngeedathi ezi 3. Sesiphi isikoro esingenakufumaneka kwezi zilandelayo?



18. The scales shown below are balanced. How many Δ s must be in the place of X?

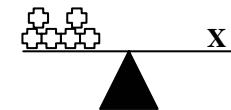


(A) 3

(B) 4



(C) 5



(D) 6

(E) 7

19. Delshe has 29 marbles more than Bingo and Therine has 29 less than Bingo. If Bingo has 71 marbles, how many do they have all together?

(A) 211

(B) 213

19. Delshe het 29 albasters meer as Bingo en Therine het 29 minder as Bingo. As Bingo 71 albasters het, hoeveel het hulle altesaam?

(C) 215

(D) 217

19. Udelshe unamabhasstile angama-29 ngaphezu kunaka Bingo yena uTherine unama-29 ngaphantsi kunaka Bingo. Ukuba uBingo unama-71 amabhasatile, mangaphi ewonke amabhasatile abanawo?

(E) 219

20. I have the following coins in my pocket: one 50c coin, one 20c coin, one 10c coin and one 2c coin. Which of the following amounts can I *not* give someone without making change?

(A) 80c

(B) 32c

20. Ek het die volgende munstukke in my sak: een 50c-stuk, een 20c-stuk, een 10c-stuk en een 2c-stuk. Watter een van die volgende bedrae kan ek *nie* aan iemand gee sonder om eers kleingeld te kry nie?

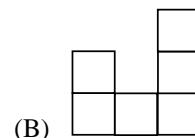
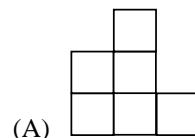
(C) 62c

(D) 52c

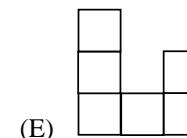
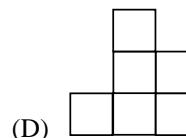
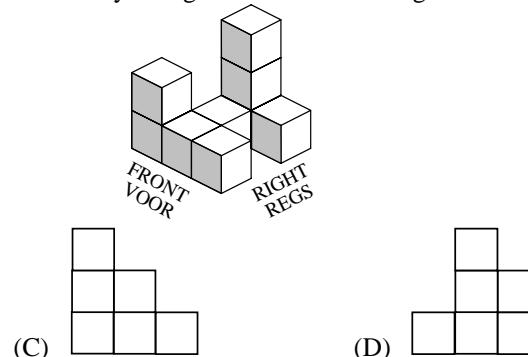
20. Ndinezinkozo zemali epokothweni yam: ukhozo olunye lwama 50c, ukhozo olunye lwama 20c, ukhozo olunye lwesi 10c kunye nokhozo olunye lwesi 2c. Kwezi mali zidweliswe ngezantsi yeypifi endinokuphisa ngayo kungabikho ntsalela?

(E) 42c

21. The sketch shows a building as seen from the front right corner. Which diagram shows the building as seen from the left side?



21. Die skets wys 'n gebou soos van regs-voor gesien. Watter skets wys die gebou soos van links gesien?



21. Lo mfanekiso ubonisa isakhiwo xa sijongwe kwikona engaphambili kwicala lasekunene. Ngowuphi umzobo obonisa isakhiwo xs sijongwe kwicala lasekhohlo?

22. Thabo and Peter buy a case of cooldrinks containing 12 bottles and pay R30 for it. Thabo takes 4 bottles and Peter takes the other 8. How much must Thabo pay for his share?
- (A) R12,00 (B) R9,00 (C) R15,00 (D) R8,00 (E) R10,00
23. The science class did an experiment on how fast a certain type of candle burns. They recorded their measurements in the following table. How high is the candle after 7 hours?
- | Time in hours | 0 | 1 | 2 | 3 | 4 |
|---------------|----|----|----|----|----|
| Height in cm | 32 | 28 | 24 | 20 | 16 |
- (A) 0 cm (B) 4 cm (C) 8 cm (D) 12 cm (E) Not one of these
Nie een van hierdie
Abukho kwezi
24. Every week Thembo saves R1,50 of his pocket money, while Sipho is able to save $1\frac{1}{2}$ times that amount. How much more would Sipho have saved than Thembo after 12 weeks?
- (A) R9 (B) R18 (C) R27 (D) R16 (E) R10
25. Vuyo must number the 100 room doors in a new hotel with plastic digits, from room 1 to room 100. How many digit 1s does he need?
- (A) 10 (B) 19 (C) 20 (D) 21 (E) 22
22. U-Thabo no-Peter bathenge ikasi yesiselo esibandayo enebhotile eziyi-12 baza babhatala I-R30. U-Thabo ufumana ibhotile ezi 4 aze u-Peter afumane ezi 8 eziseleyo. Ingaba u-Thabo ubhatele malini ngesakhe isabelo?
23. I klasi yabenza ezenzululwanzi yenza ufaniso kuba ifuna ukuphanda ukuba i-handlela elithile lithatha ixesha elingakanani ukutsha liphele. Iziphumo zophando lwabo bazibhala kuletafile yoluulu ibonisiweyo. Ngokwale tafile lizakube lilide kangakanani eli-handlela emva kweyure ezi?
24. Ngazo zonke iiveki uThembu ugcina i R1,50 kwimali yakhe abe Tsifo enokuyiphindaphinda ka $1\frac{1}{2}$ le mali. UTsifo angamogqitha ngamalini emva kweeveki eziyi 12?
25. U Vuyo kufuneka abhale iinombolo zamagumbi ehotele esebenzisa amanani akhiwe ngeedijiti ezenziwe nge plastiki, eqalela kwigumbi elinenombolo 1 ukuya kwigumbi elinembolo 100. Zingaphi iidijiti ezibhalwe isi 1 azidingayo?