

Mathematics Challenge

GRADE 4 FIRST ROUND
18 SEPTEMBER 2002

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!

Wiskunde-uitdaging

GRAAD 4 EERSTE RONDE
18 SEPTEMBER 2002

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!

Umceli-mngeni Ngezibalo

GRADE 4 UMJIKELO WOKUQALA
18 SEPTEMBER 2002

QAPHELA:

- Phendula imibuzo ngokwemigaqo ekwiphepha olinikiweyo.
- Ungayisebenzisa I-Calculator.
- Imibuzo ivavanya ukuqonda kwakho. Izibalo ezide, ezixhakaxhaka aziyomfuneko.
- Siyathemba uyakulonwabela!

1. Which number is exactly halfway between 64 and 96?

(A) 79

(B) 81

1. Watter getal is presies halfpad tussen 64 en 96?

(C) 82

(D) 80

1. Leliphi inani elilelona liphakathi kwama 64 nama 96?

(E) 78

2. What mass is indicated on the scale?

(A) 42 kg

(B) 40,2 kg

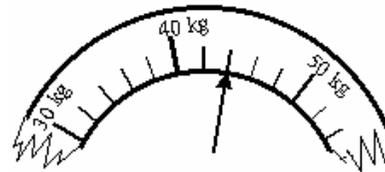
2. Watter massa word op die skaal aangedui?

(C) 44 kg

(D) 40,4 kg

2. Ingaba bungakanani ubunzima ngee kilogram obukhonjiswa kwesi sikali?

(E) 47 kg



In cooperation with the
Western Cape Education Department
Gauteng Education Department

Nasou Via Afrika



CASIO

RUMEUS

Research Unit for Mathematics Education
of the University of Stellenbosch

3. What number in the place of ∇ will make the following sentence true?

$$8 - 3 = \nabla - 8$$

- (A) 3 (B) 5

3. Watter getal in die plek van ∇ sal die volgende sin waar maak?

$$8 - 3 = \nabla - 8$$

- (C) 11 (D) 12

3. Leliphi inani elinokubekwa endaweni ka ∇ elinokuthi lenze esi sivakalisi samanani sibe yinyani?

$$8 - 3 = \nabla - 8$$

- (E) 13

4. If 3 apples cost 72c, how much will 12 apples cost?

- (A) R3,00 (B) R2,88

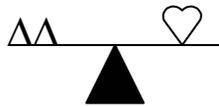
4. As 3 appels 72c kos, wat sal 12 appels kos?

- (C) R2,44 (D) R2,12

4. Ukuba ama apile ama 3 axabisa ama 72c, ingaba ama apile ali 12 axabisa malini?

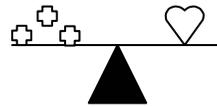
- (E) R2,10

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



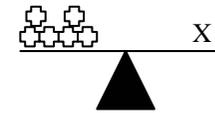
- (A) 3 (B) 4

5. Die skale wat hier onder gewys word, is in balans. Hoeveel Δ e moet in die plek van X kom?



- (C) 5 (D) 6

5. Ezi zikali ziboniswe ngezantsi zinomlinganiselo olinganayo. Zingaphi ii Δ ezinokubekwa endaweni ka X?



- (E) 7

6. 102 marbles are divided among 7 boys. How many more marbles are still needed so that each boy will receive the same number of marbles and there are none left over?

- (A) 1 (B) 2

6. 102 albasters word tussen 7 seuns verdeel. Hoeveel albasters is nog nodig sodat elke seun dieselfde getal albasters sal hê en daar niks sal oorbly nie?

- (C) 3 (D) 4

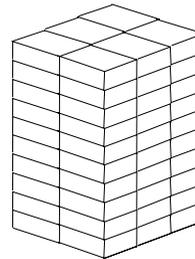
6. Amabhastile ali 102 ahlulelwe amakhwenkwe asi 7.. Mangaphi amabhastile afunekayo ngaphezulu kweli nani ukuze inkwenkwe nganye izuze amabhastile alinganayo kungabikho asalayo?

- (E) 5

7. How many blocks did Peter use to build this shape?

- (A) 36 (B) 60

7. Hoeveel blokkies het Peter gebruik om hierdie vorm te bou?



- (C) 30 (D) 40

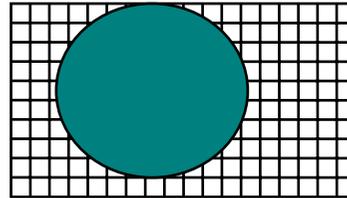
7. Zingaphi iibhokisi ezisetyenziswe ngu-Peter ukwakha esi sakhawo?

- None of these
(E) Nie een hiervan nie
Ayikho kwezi

8. A carpet is thrown over a tile floor as shown below. How many tiles were used to tile the floor?

8. 'n Mat word oor 'n teëlvloer gegooi soos hieronder getoon. Hoeveel teëls is gebruik om die vloer te teël?

8. I methi iphoswe phezu komgangatho we tayile njengokuba kuboniswe ngezantsi. Zingaphi ii tayile ezasetyenziswa okugquma lomgangatho?



(A) 28

(B) 180

(C) 90

(D) 200

(E) One cannot say
Jy kan nie sê nie
Ubani akanakho ukuchaza

9. What fraction of the whole figure is shaded?

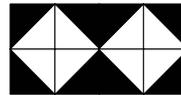
9. Watter breuk van die hele figuur hieronder is ingekleur?

9. Liqhezu elingakanani lalo mzobo elithe lenziwe mnyama?

(A) $\frac{1}{2}$

(B) $\frac{6}{16}$

(C) $\frac{7}{16}$



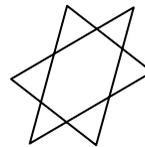
(D) $\frac{9}{16}$

(E) $\frac{2}{5}$

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

10. Hoeveel driehoeke is daar altesaam in die figuur hieronder?

10. Bebonke bangaphi oonxantathu abakulo mzobo ungezantsi?



(A) 10

(B) 8

(C) 6

(D) 4

(E) 2

11. A greengrocer charges 75c for a bunch of carrots, but at the market they cost R2 for 3 bunches. Your mother needs 6 bunches of carrots. How much would she save if she bought them at the market?

11. 'n Groentehandelaar vra 75c vir 'n bossie wortels, maar by die mark kos dit R2 vir 3 bossies. Jou ma het 6 bossies wortels nodig. Hoeveel sal sy spaar as sy dit by die mark koop?

11. Ivenkile yemifuno ibiza 75c ngexesha leminqathe kodwa emarikeni kuthengiswa izixa ezi 3 nge R2 Umama wakho ufuna izixa ez 6 ukulungiselela ithoko. Yimalini enokumbuyela ngokuthenga iminqathe emarikeni anganokuyithenga kwivenkile yemifuno?

(A) 25c

(B) 48c

(C) 50c

(D) 60c

(E) 75c

12. 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?

(A) 07:00

(B) 06:50

12. 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?

(C) 07:10

(D) 07:50

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

(E) 07:25



13. At school A a bell rings every half hour and at school B a bell rings every 35 minutes. If the two bells ring together at 08:00, when will they ring together again?

(A) 10:30

(B) 10:55

13. By skool A lui 'n klok elke half uur en by skool B lui 'n klok elke 35 minute. As die twee klokke gelyktydig om 08:00 lui, wanneer sal hulle weer gelyktydig lui?

(C) 11:30

(D) 12:00

13. Kwisikolo U A intsimbi ikhala qho emva kwesiqingatha se yure kwaye kwiskolo B intsimbi ikhala emva kwemizuzu engama 35. Ukuba zithi ezintsimbi zimbini zithi zikhale ngexesha elinye ngentsimbi yesi 08:00, ziyakukhala nini kwakhona ngexesha elinye?

(E) 12:05

14. Jason and Mary together have 96 stamps. If Jason has twice as many stamps as Mary, how many stamps does Mary have?

(A) 48

(B) 46

14. Jason en Mary het saam 96 seëls. As Jason tweekeer soveel seëls as Mary het, hoeveel seëls het Mary?

(C) 32

(D) 16

14. U Jason no Mary bebobabini banezitampu ezingama 96. Ukuba izitampu zika Jason ziziphindaphinda kabini ezika Mary, zingaphi izi tampu zika Mary?

(E) 44

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

(A) 90 km

(B) 60 km

15. 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

15. Umgama phakathi kwedolophu u-A no B ungama 75 km. Phakathi ko A no B kukho ivenkilana yemveliso zasefama ekumgama oli 15 km ukusuka ku A. Kukude kangakanani ukusuka kule venkilana ukuya ku B?

(E) 45 km

16. This string of beads was made according to a certain pattern. How many beads are hidden inside the box?

(A) 16

(B) 17

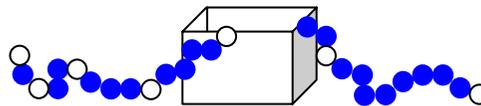
16. Die string krale is volgens 'n sekere patroon gemaak. Hoeveel krale is in die doos versteek?

(C) 18

(D) 19

16. Kumzobo ongezantsi wamaso (beads). Amaso abekwe ngohlobo oluthile ukuze enze umzobo (pattern) othile. Mangaphi amaso (beads) ase bhokisini?

(E) 26



17. 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 will the candle be after 7 hours?



17. Die wetenskapklas het 'n eksperiment uitgevoer om uit te vind hoe vinnig 'n sekere soort kers brand. Hulle dui hul afmetings in die volgende tabel aan. Hoe hoog sal die kers na 7 ure wees?

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

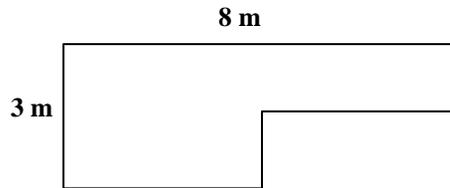
(D) 12 cm

17. I klasi yabenza ezenzululwanzi yenza ufaniso kuba ifuna ukuphanda ukuba ikhandlela elithile lithatha ixesha elingakanani ukutsha liphele. Iziphumo zophando lwabo bazibhala kuletafile yoluhlu ibonisiweyo. Ngokwale tafile lizakube lilide kangakanani elikhandlela emva kweyure ezi7?

(E) Not one of these
Nie een van hierdie
Abukho kwezi

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

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



(A) 11 m

(B) 19 m

(C) 22 m

(D) 24 m

18. Imbovane ihamba iwujikeleza kanye lomzobo woxande ungezantsi, ilandela imigca ebhaliweyo. Ingaba lembovane yahamba umgama ongakanani?

(E) Not enough information
Nie genoeg inligting nie
Ayonelanga inkcazelo

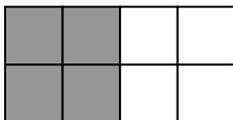
19. Which rectangle has almost the same part shaded as the circle?

19. Watter reghoek het omtrent dieselfde verdonkerde deel as die sirkel?

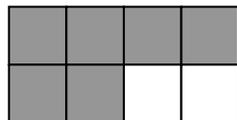


19. Loluphi uxande olunenxalenye eyenziwe mnyama ephanze ifane nenxalenye eyenziwe mnyama yesangqa ?

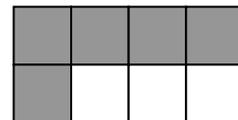
(A)



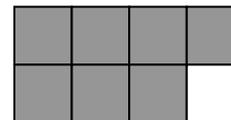
(B)



(C)



(D)



(E) None of these
Nie een hiervan nie
Ayikho kwezi

20. Thabo drove 10 km east, then 5 km north, then 3 km east, then 11 km south, then 13 km west. How far is he now from his starting place?

(A) 11 km

(B) 6 km

20. Thabo reis 10 km oos, toe 5 km noord, toe 3 km oos, toe 11 km suid en daarna 13 km wes. Hoe ver is hy nou van waar hy begin het?

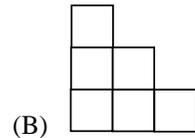
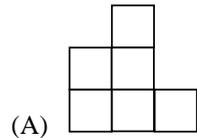
(C) 3 km

(D) 5 km

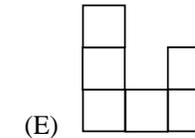
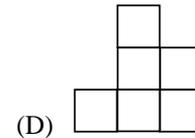
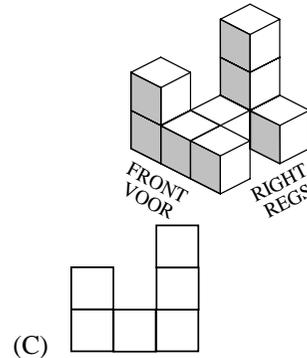
20. U Thabo i 10 km ukuya empuma, waze waqhuba i 5 km ukuya emantla, waze waqhuba i 3 km ukuya empuma, waze waqhuba i 11 km ukuya emazantsi, waze waqhuba i 13 km ukuya entshona. Ingaba ukude kangakanani ngoku ukusukela apho aqale khona?

(E) 10 km

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 tekening wys die gebou soos van links gesien?

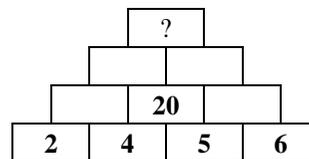


22. In this number wall you multiply the two numbers next to each other and write the product in the brick directly above the two numbers e.g. $4 \times 5 = 20$. Which number will be written in the top brick?

(A) 960

(B) 9 600

22. In hierdie getal-muur vermenigvuldig jy die twee getalle langs mekaar en skryf die produk in die blok direk bo die twee getalle bv. $4 \times 5 = 20$. Watter getal sal in die boonste blok geskryf word?



(C) 960 000

(D) 96

22. Kolu donga lwamanani inani ngalinye lisisiphumo sokuphindaphindwa kwamanani amabini angezantsi kwalo umz. $4 \times 5 = 20$. Lingubani inani elinobhalwa kwesona sitena singaphezulu?

(E) 96 000

23. You want to use Maggie's recipe below to bake some milktarts. How many cups of milk do you need to bake 8 milktarts?

MAGGIE'S MILKTART
(Makes 6 milktarts)

8 cups of milk
 4 cups of sugar
 $2\frac{1}{2}$ cups of flour
 3 table spoons butter
 9 eggs
 $1\frac{1}{4}$ teaspoons salt

- (A) $8\frac{1}{3}$ (B) 10

23. Jy wil melktert bak met Maggie se resep hieronder. Hoeveel koppies melk het jy nodig om 8 melkterte te bak?

MAGGIE SE MELKTERT
(Maak 6 melkterte)

8 koppies melk
 4 koppies suiker
 $2\frac{1}{2}$ koppies meel
 3 eetlepels botter
 9 eiers
 $1\frac{1}{4}$ teelepels sout salt

- (C) $10\frac{1}{3}$ (D) $10\frac{1}{2}$

23. Ufuna ukusebenzisa le ndlela yokupheka ebizwa ngokuba yi recipe kaMaggie.ebhalwe ngezantsi ukuze ubhake izimungumenye zobisi ezibizwa ngokuba zii milktarts. Ingaba zingaphi iikomityi zobisi ozifunayo ukubhaka ii milktarts ezi 8?

MAGGIE'S MILKTART
(Yenza ii milktarts ezi 6)

Isi 8 sekomityi zobisi
 Isi 4 sekomityi zeswekile
 Isi $2\frac{1}{2}$ sekomityi zomgubo
 Isi 3 samacephe ebhotolo
 Isi 9 samaqanda
 Isi $1\frac{1}{4}$ se tispuni zetyuwa

- (E) $10\frac{2}{3}$

24. In the previous question: If you only have 15 eggs (and enough of all the other ingredients), how many milktarts can you bake using Maggie's recipe?

- (A) 8 (B) 9

24. In die vorige vraag: As jy net 15 eiers het (maar genoeg van die ander bestanddele), hoeveel melkterte kan jy bak met Maggie se resep?

- (C) 10 (D) 11

24. Jonga umbuzo ongentla.: Ukuba unamaqanda ali 15 kuphela (kodwa unazo zonke ezinye izityo ngokupheleleyo), zingaphi iimilkartars onokuzibhaka usebenzisa le recipe ka Maggie?

- (E) 12

25. Jackie has four cards (see below). How many different two-digit numbers can she make with these cards?

- (A) 9 (B) 12

25. Jackie het vier kaarte (sien hieronder). Hoeveel verskillende tweesyfer getalle kan sy met hierdie kaarte maak?

3	2	4	1
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- (C) 16 (D) 4

25. U Jackie unamakhasi okudlala amane(bona ngesantsi). Mangaphi amanani anemivo emibini awahlukileyo anokuwenza ngala makhasi?

- 'n Oneindige getal
 (E) An infinite number
 Inani elingenasiphelo