

Mathematics Challenge

GRADE 4 FINAL ROUND

12 OCTOBER 2005

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

12 OKTOBER 2005

LET OP:

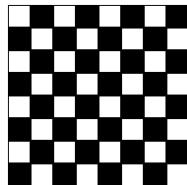
- Beantwoord die vrae volgens die instruksies op die antwoordblad.
- Jy mag 'n sakrekenaar gebruik.
- Die vrae toets insig. Omslagtige berekening is dus onnodig en tydrowend.
- Ons hoop jy geniet dit!

1. Which pair of dice does not fit with the others?



2. How many white tiles are there on an 8 by 8 chessboard?

1. Watter paar dobbelstene pas nie by die ander nie?



(A) 64

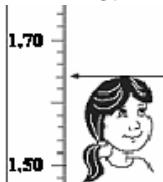
(B) 32

(C) 24

(D) 56

(E) 72

3. How tall is Jackie?



(A) 1,64 m

(B) 1,57 m

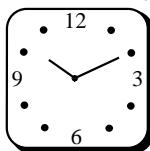
(C) 1,73 m

(D) 1,62 m

(E) 1,67 m

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

2. Hoeveel wit vierkante is daar op 'n 8 by 8 skaakbord?



(A) 10:02

(B) 10:10

(C) 10:12

(D) 22:02

(E) 22:10

5. R35 is shared equally amongst four children. How much does each child receive?

3. How lank is Jackie?

(A) R8,25

(B) R8,50

(C) R8,75

(D) R8,00

(E) R8,57



6. What number is the mouse covering?



- (A) 41 (B) 42 (C) 43 (D) 44 (E) 45

7. Nkosi has $\frac{3}{4}$ of a metre of string which he wants to cut into pieces, each $\frac{1}{8}$ of a metre long. How many pieces will he have?

- (A) 3 (B) 7 (C) 4 (D) 6 (E) 8

8. Which one of the cards below is a reflection (mirror-image) of the top card?



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

9. A figure is turned (but not flipped over) and shown below in different positions. Which figure does not fit with the others?

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

10. It takes Mlamlili 20 minutes to cycle to school. He wants to be at school on Saturday morning 15 minutes before a soccer match which begins at 08:30. When must he set out?

- (A) 08:10 (B) 07:55 (C) 08:25 (D) 08:50 (E) 08:00

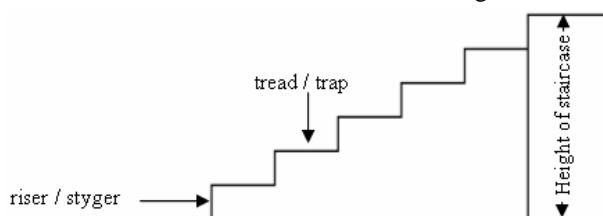
11. How many 350 millilitre orange juice bottles can be filled from a container holding 35 litres of orange juice?



- (A) 35 (B) 10 (C) 70 (D) 100 (E) 60

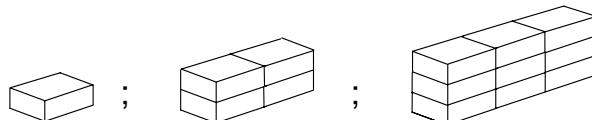
12. Each step in a staircase consists of two parts, a tread and a riser. In the five-step staircase below, the riser measures 180 mm and the tread 300 mm. What is the height of the staircase?

12. Elke trap van 'n stel trappe bestaan uit twee dele: 'n trap en 'n styger. In die vyf-trap stel trappe hieronder is elke styger 180 mm hoog en elke styger 300 mm breed. Wat is die hoogte van die stel trappe?



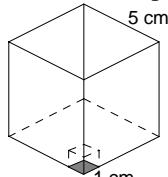
- (A) 0,900 m (B) 1,000 m (C) 1,050 m (D) 1,080 m (E) 1,100 m

13. 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 (C) 48 (D) 64 (E) 81

14. How many of the small cubes (side length 1 cm) fit exactly into the big cube (side length 5 cm)?

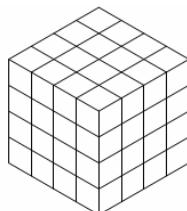


- (A) 5 (B) 15 (C) 25 (D) 150 (E) 125

15. Halima is reading a book. Chapter 7 begins on page 246 and ends on page 274. How many pages are there in chapter 7?

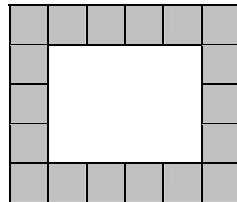
- (A) 274 (B) 28 (C) 15 (D) 29 (E) 30

16. 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?



- (A) 8 (B) 12 (C) 24 (D) 28 (E) 16

17. You want to put a frame of one row of small square tiles round the bathroom mirror as shown here. The size of the mirror is 80 cm by 50 cm and the side of a square tile is 10 cm long. How many tiles do you need?

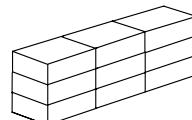


- (A) 40 (B) 26 (C) 30 (D) 80 (E) 18

18. Susan got into an elevator. The elevator first went down 4 floors, then up 5 floors and then down 6 floors. She was then on the third floor. On which floor did she get into the elevator?

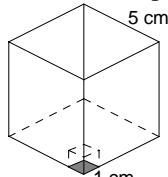
- (A) 5 th (B) 6 th (C) 7 th (D) 8 th (E) 9 th

13. Blokkies word soos hieronder volgens 'n patroon gestapel. As hierdie patroon voortgesit word, hoeveel blokkies sal in die agtste stapel wees?



- (A) 24 (B) 36 (C) 48 (D) 64 (E) 81

14. Hoeveel van die klein kubusse (sylengte 1 cm) pas presies in die groot kubus (sylengte 5 cm) in?

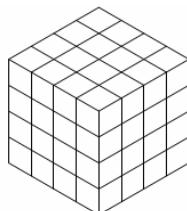


- (A) 5 (B) 15 (C) 25 (D) 150 (E) 125

15. Halima lees 'n boek. Hoofstuk 7 begin op bladsy 246 en eindig op bladsy 274. Hoeveel bladsye is daar in hoofstuk 7?

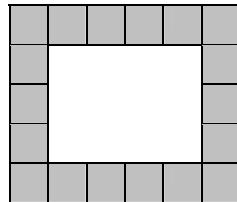
- (A) 274 (B) 28 (C) 15 (D) 29 (E) 30

16. '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) 28 (E) 16

17. Jy wil soos hieronder 'n raam van een ry klein teëltjies om die badkamerspieël sit. Die spieël is 80 cm by 50 cm groot en die sy van 'n teël is 10 cm lank. Hoeveel teëls het jy nodig?

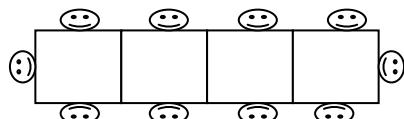


- (A) 40 (B) 26 (C) 30 (D) 80 (E) 18

18. Susan het in 'n hysbak geklim. Die hysbak het eers 4 vloere afgegaan, toe 5 vloere op en toe 6 vloere af. Sy was toe op die derde vloer. Op watter vloer het sy in die hysbak geklim?

- (A) 5 th (B) 6 th (C) 7 th (D) 8 th (E) 9 th

19. You need seats for 38 people at your party. You make one long table by joining a number of small tables as shown. Each small table can seat two persons, plus one at each end of the long table. How many small tables do you need?



- (A) 18 (B) 19 (C) 20 (D) 17 (E) 16
20. You leave home at 10:00 travelling by car to Towntown, which is 200 km away. If you travel at a constant speed of 120 kilometres per hour, at what time will you arrive at Towntown?
- (A) 10:20 (B) 11:00 (C) 11:40 (D) 12:00 (E) 12:30

21. Manual must number the 100 room doors in a new hotel with plastic digits, from room 1 to room 100. How many digits 7 does he need?

(A) 18 (B) 19 (C) 20

19. Vir jou partyjie het jy sitplek vir 38 persone nodig. Jy maak een lang tafel deur 'n aantal klein tafeltjies teen mekaar te stoot soos getoon. By elke klein tafeltjie kan twee persone sit, plus een aan elke kop van die lang tafel. Hoeveel klein tafeltjies het jy nodig?

20. Julle vertrek om 10:00 per motor van die huis af op pad na Towntown, wat 200 km ver is. As julle teen 'n konstante spoed van 120 kilometer per uur ry, hoe laat arriveer julle in Towntown?

(D) 12:00 (E) 12:30

22. Monde's mother weighs 30 kg more than him. Together they weigh 114 kg. How much does Monde weigh?

(A) 84 kg (B) 30 kg (C) 72 kg

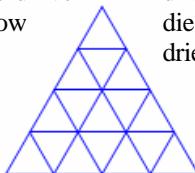
21. Manual moet die 100 kamerdeure in 'n nuwe hotel met plastiek syfers nommer, van kamer 1 tot kamer 100. Hoeveel syfers 7 het hy nodig?

(D) 10 (E) 11

22. Monde se ma weeg 30 kg meer as hy. Saam weeg hulle 114 kg. Hoeveel weeg Monde?

(D) 42 kg (E) Not one of these
Nie een hiervan nie

23. This big triangle has four rows. There is one small triangle in the first row, three in the second row and five in the third row. If such a triangle has 50 rows, how many small triangles are there in the 50th row?



(A) 99 (B) 101 (C) 51 (D) 151 (E) 150

23. Die groot driehoek het vier rye. Daar is een klein driehoekie in die eerste ry, drie in die tweede ry en vyf in die derde ry. As so 'n driehoek 50 rye het, hoeveel driehoekies is in die 50ste ry?

24. In question 23. In such a big triangle with 50 rows, how many small triangles are there all together?

(A) 2450 (B) 2550 (C) 2500

24. In vraag 23: Hoeveel klein driehoekies is daar altesaam in so 'n driehoek met 50 rye?

(D) 2000 (E) Not one of these
Nie een hiervan nie

25. The diagram below shows the distance the wheel of a toy car covers when it makes one complete turn. How many turns does the wheel make when it travels a distance of 22 m?

(A) 40 (B) 44 (C) 45 (D) 50 (E) 22

25. Die diagram hieronder toon die afstand wat die wiel van 'n speelmotortjie aflê wanneer dit een hele draai maak. Hoeveel draaie maak die wiel as dit 'n afstand van 22 m ry?

