

Mathematics Challenge

GRADE 4 FIRST ROUND

SEPTEMBER 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

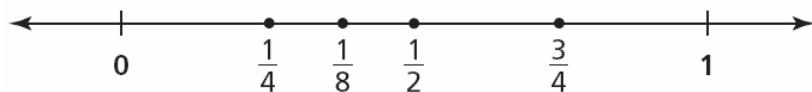
GRAAD 4 EERSTE RONDE

SEPTEMBER 2007

LET OP:

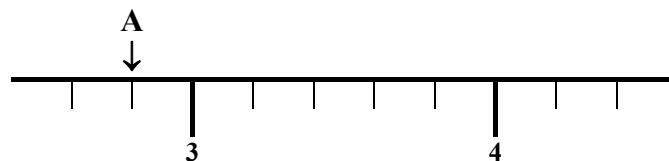
- Beantwoord die vrae volgens die instruksies op die antwoordblad.
- Jy mag 'n sakrekenaar gebruik.
- Die vrae toets insig. Omslagtige berekeninge is dus onnodig en tydrowend.
- Ons hoop jy geniet dit!

1. Which fraction on the number line below is in the *wrong* place?



- (A) $\frac{1}{4}$ (B) $\frac{1}{8}$ (C) $\frac{1}{2}$ (D) $\frac{3}{4}$ (E) None of these
Nie een hiervan nie

2. What is the number indicated by A on the ruler?



- (A) 2,9 (B) 2,8 (C) 2,95 (D) 2,6 (E) 2

3. About how long is this string?



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

4. A movie on television is 2 hours 55 minutes long and ends at 16:45. At what time did it start?

- (A) 13:40 (B) 14:10 (C) 13:50

4. 'n Film op televisie is 2 uur 55 minute lank en eindig om 16:45. Hoe laat het die film begin?

- (D) 13:10 (E) 14:25

5. A watch gains 30 seconds every six hours. How many minutes will it gain in a week?

- (A) 10

- (B) 2

- (C) 7

- (D) 14

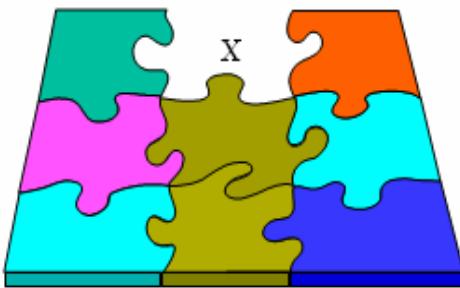
- (E) 21



5. 'n Horlosie wen 30 sekondes elke ses uur. Hoeveel minute sal dit in 'n week wen?

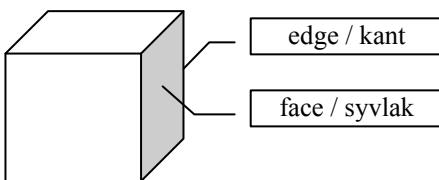
6. Which puzzle piece fits into the opening X?

6. Watter stuk pas in die legkaart in spasie X?



7. This sketch shows a cube with one edge marked. How many edges does the cube have all together?

7. Hierdie skets wys 'n kubus met een kant gemerk. Hoeveel kante het die kubus altesaam?



(A) 8

(B) 12

(C) 6

(D) 24

(E) 9

8. In question 7: How many faces does the cube have all together?

8. In vraag 7: Hoeveel syvlakke het die kubus altesaam?

(A) 8

(B) 12

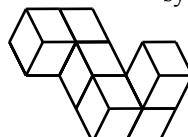
(C) 6

(D) 24

(E) 9

9. This object is made by gluing together six wooden cubes. If you now paint the object, how many faces must you paint?

9. Hierdie voorwerp word gemaak deur ses houtblokkies aan mekaar te lym. As jy nou die voorwerp verf, hoeveel syvlakke moet jy verf?



(A) 30

(B) 27

(C) 26

(D) 25

(E) 24

10. What number goes in the \square to make this sentence true?

$$2000 + \square + 30 + 9 = 2739$$

(A) 7000

(B) 700

(C) 70

10. Watter getal in \square maak hierdie getalsin waar?

$$2000 + \square + 30 + 9 = 2739$$

(D) 7

(E) 0,7

11. Zinkle has 15 marbles less than Zuki. Together they have 95 marbles. How many marbles does Zuki have?

11. Zinkle het 15 albasters minder as Zuki. Saam het hulle 95 albasters. Hoeveel albasters het Zuki?

(A) 80

(B) 40

(C) 55

(D) 50

(E) 110

12. 826×243 is more than 824×243 . How much more?

12. 826×243 is meer as 824×243 . Hoeveel meer?

(A) 2

(B) 243

(C) 824

(D) 486

(E) None of these
Nie een hiervan nie

13. Pete adds three different two-digit numbers (e.g. 58). What is the highest possible total?

13. Pete tel drie verskillende twee-syfergetalle (bv. 58) op. Wat is die grootste moontlike totaal?

(A) 294

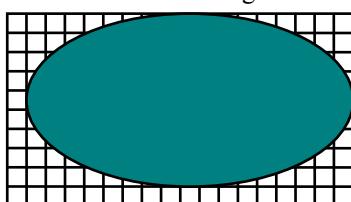
(B) 297

(C) 267

(D) 579

(E) None of these
Nie een hiervan nie

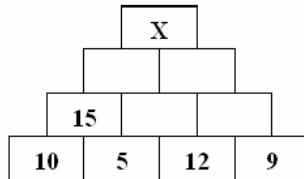
14. A carpet is thrown over a tiled floor as shown below.
How many tiles were used to tile the floor?



- (A) 28 (B) 190 (C) 90 (D) 200 (E) None of these
Nie een hiervan nie
15. The 21st of a month is a Monday. On what day of the week was the 1st of that month?

- (A) Monday Maandag (B) Tuesday Dinsdag (C) Wednesday Woensdag (D) Sunday Sondag (E) Friday Vrydag

16. In this number wall you add the two numbers next to each other and write the sum in the brick directly above the two numbers, e.g. $10 + 5 = 15$. What number will be written in X?



- (A) 70 (B) 68 (C) 72 (D) 78 (E) 80
17. Bella uses $\frac{3}{4}$ of a metre of material to make a skirt. If she has 5 m of material, how many skirts can she make?

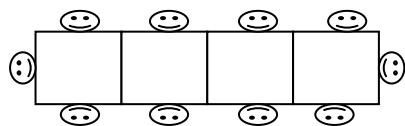
- (A) 7 (B) 6 (C) $6\frac{2}{3}$ (D) $3\frac{3}{4}$ (E) None of these
Nie een hiervan nie

18. If you begin with a certain number, multiply it by 3, then add 8, then divide by 2 and then subtract 6, you will get the original number back. What is the number?

- (A) 20 (B) 13 (C) 8 (D) 6 (E) 4

19. You need seats for 58 people at your party. You make one long table by joining a number of small tables. Each small table can seat two persons, plus one at each end of the long table, e.g. the 4 small tables below can seat 10 people. How many small tables do you need?

19. Vir jou partyjie het jy sitplek vir 58 persone nodig. Jy maak een lang tafel deur klein tafeltjies teen mekaar te stoot. By elke klein tafeltjie kan twee persone sit, plus een aan elke kop van die lang tafel, bv. met 4 klein tafeltjies kan 10 persone sit. Hoeveel klein tafeltjies het jy nodig?



- (A) 28 (B) 29 (C) 30 (D) 32 (E) 34
20. Arnold 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 (C) 3 km (D) 5 km (E) 10 km

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

21. Which fraction is between $\frac{1}{5}$ and $\frac{1}{4}$?

(A) $\frac{1}{3}$

(B) $\frac{9}{40}$

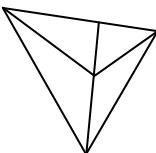
(C) $\frac{3}{20}$

21. Watter breuk is tussen $\frac{1}{5}$ en $\frac{1}{4}$?

(D) $\frac{1}{6}$

(E) Not one of these
Nie een hiervan nie

22. How many triangles are there all together in this figure?



(A) 9

(B) 6

(C) 7

(D) 8

(E) Not one of these
Nie een hiervan nie

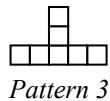
23. If the pattern below is continued, how many squares will Pattern 100 have?



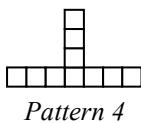
Pattern 1



Pattern 2



Pattern 3



Pattern 4

(A) 301

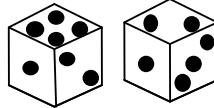
(B) 302

(C) 300

(D) 298

(E) 299

24. If you roll two dice and add the two top numbers, how many different answers are possible?



(A) 10

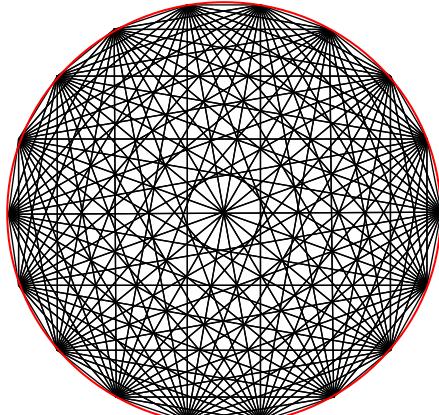
(B) 11

(C) 12

(D) 21

(E) 36

25. In this figure there are 18 points on the circle, and every point is connected to every other point on the circle. How many connecting lines are there all together?



(A) 153

(B) 324

(C) 162

(D) 306

(E) 289