

## Bylaag A Wiskundelesse Lesreeks 1

**LESSON SERIES 1 WORKSHEET LESSON 1**  
**GOOGOL MATHEMATICAL GAMES****1. ASSIGNMENT:**

Find the correct answer to the problem.

**1.1 Loading the program:**

- ◆ Switch the computer on and wait for menu.
- ◆ Choose "**GOOGOL**" on the menu (**enter**).
- ◆ Press **enter**.
- ◆ Press **spacebar** in order to start.

**1.2 Alter the options for the game as follows:**

- ◆ Choose **Googol climber**
- ◆ Press **ENTER**
- ◆ Type in your name (**ENTER**)
- ◆ Read instructions
- ◆ Choose slow (**ENTER**) ---- speed
- ◆ Play the game

1.3 In the course of the game the "H" may be pressed in help is needed.

1.4 In the course of the game "Esc" may be pressed if you wish to escape from the program.

1.5 Enter your score on the score card.

**SCORE CARD LESSON 1 MATHEMATICS: GRADE 6**

Score for GOOGOL GAMES

<b>GAMES</b>	<b>CLIMBER</b>	<b>PEDE</b>	<b>VADERS</b>	<b>REVIEW</b>
First effort				
Second				
Third				
Fourth				

**LESSON SERIES 1 WORKSHEET LESSON 2**1. Objective:

Adding of big numbers - vertical transfer method.

2. Assignment:

## 2.1 Loading the program.

- ◆ Switch computer on and wait for menu.
- ◆ Choose "Cairoo" on menu (**enter**).
- ◆ Choose no 2 Mathematics-Open System
- ◆ Click, using mouse, on "**Next**"
- ◆ Enter your name (**enter**)
- ◆ Choose: **Mathematics for standard 4**
- ◆ Choose: **Addition with large numbers (vertical method)**

## 2.2 To choose a section, press any number or use up / down arrows, and then press enter.

- ◆ Choose no 4 or Revision

## 2.3 Complete the example.

2.4 Choose no 1 **Easier exercises**

Number of questions completed       Percentage

2.5 Choose no 2 = **More difficult exercises**

Number of questions completed       Percentage

2.6 Choose no 3 = **Exercise for enrichment**

Number of questions       Percentage

**LESSON SERIES 1 WORKSHEET LESSON 3**1. Objective:

Reading, understanding and solving story-sum problems

2. Assignment:

## 2.1 Loading the program.

- ◆ Switch computer on and wait for menu.
- ◆ Choose "**Cairoo**" on menu (**enter**)
- ◆ Choose no 2 **Mathematics-Open System**
- ◆ Click, using mouse, on "**Next**"
- ◆ Enter your name (**enter**)
- ◆ Choose: **Solving story-sums**

## 2.2 In order to choose a section, press any number or use up / down arrows, and then press enter.

- ◆ Choose no 4 or **Revision**

## 2.3 Complete the example.

Choose no 1 = **easy exercises.**

2.4 Choose no 1 **Easy exercises**

Number of questions completed       Percentage

2.5 Choose no 2 = **More difficult exercises**

Number of questions completed       Percentage

2.6 Choose no 3 = **Exercise for enrichment**

Number of questions completed       Percentage

**LESSON SERIES 1: PRETEST**

NAME: \_\_\_\_\_

**1. ANSWER THE FOLLOWING QUESTIONS:**

1.1 Have you used a computer before? YES NO

1.2 Do you like Mathematics? YES NO

1.3 Does a computer make you nervous? YES NO

1.4 Can you operate a mouse? YES NO

1.5 Can you operate a keyboard? YES NO

1.6 Calculate the following:

1.6.1 The sum of 524 and 359

---



---



---

1.6.2 The product of 76 and 5

---



---



---

1.6.3 The sum of 524 and 359

---



---



---

1.6.4 The quotient of 49 and 7

---



---



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1.7 Mike lives 11 km from work. How far does he travel to work and back over a period of 5 days?

---

**LESSON SERIES 1: POST-TEST**

NAME: \_\_\_\_\_

**1. ANSWER THE FOLLOWING QUESTIONS:**

1.1 Have you enjoyed working with a computer? YES NO

1.2 Have you enjoyed the mathematics lessons  
with the computer? YES NO

1.3 Does a computer make you nervous? YES NO

1.4 Can you operate a mouse? YES NO

1.5 Can you operate a keyboard? YES NO

1.6 Calculate the following:

1.6.1 The sum of 524 and 359

---



---



---

1.6.2 The product of 76 and 5

---



---



---

1.6.3 The sum of 524 and 359

---



---



---

1.6.4 The quotient of 49 and 7

---



---



---

1.7 Mike lives 11 km from work. How far does he travel to work and back over a period of 5 days?

Bylaag B      Wiskundelesse      Lesreeks 2

(Slegs 'n paar voorbeelde word hier gegee. Die hele lesreeks kom op CD-ROM voor.)









## Bylaag C Wiskundelesse Lesreeks 3

**LESSON SERIES 3 WORKSHEET 1 LESSON 1**

**Aim:** Gathering, organizing and presenting of data  
**SMARTIES**

**Instructions:**

1. Take the Smartie box that has been handed to you. After you have looked at the contents, answer the following questions:  
Can you **immediately** say which colour is the most?

YES	NO
-----	----

**Gathering and organizing of information:**

- 1.1 Sort the colours.  
1.2 Put it in rows.

Is it now easier to say which colour is the most?

YES	NO
-----	----

- 1.3 Complete the following:

Colours:	Number:
Green	
Yellow	
Brown	
Purple	
Orange	
Blue	
Red	
Pink	

**Presenting information:**

1.4 Present the data with a graph (Bar)

Type the following:

1	Enter the colours (X-range)	
2	Enter the number of each colour (A-range)	
3	?/	
4	Select " <b>Graphics</b> " (Move with arrows)	Enter
5	Select " <b>Type</b> " for the correct graph	Enter
6	Select " <b>Bar</b> "	Enter
7	Select " <b>X</b> " Mark colours with red using . and arrows.	Enter
8	Select " <b>A</b> " Mark colours with red using . and arrows.	Enter
9	" <b>View</b> "	Enter

1.5 Compare the number of each colour. Do you think it is now easier to tell which colour is the most?

YES	NO
-----	----

**Bar charts** are used to compare information (data).

- 1.6 Compare your graph with your friend next to you.
- ◆ Are all the graphs the same? .....
  - ◆ Are the contents of all the Smartie boxes the same? .....

**Save** your information:

?/
"File"
"Store" Store as "data"

**Presenting Data - Alternatives**

You have presented the data with a **Bar chart**, we are going to try alternatives now. (**Line graph, Pie chart, Area graph**)

Present the data with a <b>LINE</b> graph.	
?/	
Type	Enter
Select " <b>line</b> "	Enter
View	Enter
Exc	

Present the data with a <b>PIE</b> graph. (Circle graph).	
?/	
Type	Enter
Select " <b>line</b> "	Enter
View	Enter
Exc	

Present the data with <b>AREA-</b> or <b>RADAR</b> graphs.	
?/	
Type	Enter
Select the graph of your choice	
View	Enter

Which graph did you like best? .....

**LESSON SERIES 3 WORKSHEET 2 LESSON 2**

**Theme:** Statistics  
**Aim:** Organising and presenting data.  
 Obtaining information from graphic presentation.

Organise the following information, enter it into the computer and present the data with a **pie chart**.

*"Peter needs 12 hours a day to fit in all his activities. He watches TV - 3 hours, attends school - 5 hours, plays - 2 hours, does homework - 1 hour and does other things for 1 hour."*

Complete the table: (Organise the data)

Activities	Hours
TV	
school	
play	
homework	
other	

**Present the data with a Pie chart:**

Type in the activities as in the previous table
Type in the hours needed for each activity
?/
"Graphics" Enter
"Type" Enter - Select "Pie" Enter
"X" Enter. Define the activities (. and arrows)
"A" Enter. Define the hours (. and arrows)
View Enter

**Use the graph to answer the questions**

- ◆ Which activity takes the most of his time?

TV	school	homework
----	--------	----------

- ◆ TV-time combined with playing time equals the "attended school"-time.

True	False
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- ◆ Which two activities, when put together, equals half of the day's activities?

TV and other	
school and other	
TV and play time	
school and TV	

- ◆ Why do you think this is called a "pie" chart?

.....

.....

**LESSON SERIES 3 WORKSHEET 3 LESSON 3****Theme:** Statistics**Aims:** Interpreting and analysing information.

Present the following information by means of a Bar chart. Answer the questions.

*Sipho saved his money. He saved R9.00 during January, and kept on saving during the following months - February - R12,00; March - R15,00; April - R18,00; May - R21,00 and R24,00 during June.*

Organise the data:

Month	Amount saved
Jan.	R 9,00
Feb.	R12,00
Mar.	R15,00
Apr.	R18,00
May.	R21,00
Jun.	R24,00

You may present the data by means of a bar- or linechart. Use the graph to answer the questions.

Type in the months	
Type in the saved amount	
?	
<b>"Graphics"</b>	Enter
<b>"Type"</b>	Enter
Bar or line	Enter
<b>"X"</b> Define the months	Enter
<b>"A"</b> Define the amounts	Enter
<b>View</b>	Enter

LESKEK 3 VOOR EN WATTOETS

**Questions:**

3.1 Can you see a pattern in the way the money is saved every month?

YES	NO
-----	----

Why do you think so? Give a reason for your answer.

.....

.....

3.2 How much money did he save more every month?

R2,00	R3,00	R4,00	R5,00
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3.3 Can you estimate how much Siphon will probably save in July?

R25,00	R27,00	R30,00	R33,00
--------	--------	--------	--------

3.4 Do you think his financial growth is positive or negative?

Positive growth	Negative growth
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Why?

.....

.....

3.5 How much money would he save during October at the current rate?

R27,00	R30,00	R33,00	R36,00
--------	--------	--------	--------

**LESREEKS 3: VOOR- EN NATOETS****NAAM:** \_\_\_\_\_

Al drie lesse word voorafgegaan deur 'n voortoets. Dieselfde toets word weer herhaal aan die einde van die les om te kyk of leer wel plaasgevind het. Vyf vrae word gestel - twee punte elk. 'n Punt uit tien is vir elke leerling toegeken vir die voor- en natoets. So kan vasgestel word of die lesse suksesvol was of nie. Die lesse in nie soseer gemik op toepassing en sintese nie, maar hoofsaaklik op kennis en begrip.

Beantwoord die volgende vrae:

1. Wat is grafieke: (2)

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2. Waarvoor word grafieke gebruik? (2)

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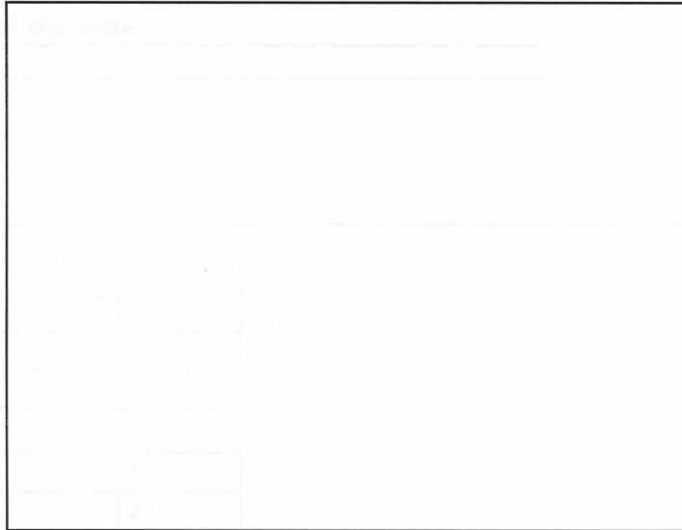
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3. Maak sketse van die volgende:

a] 'n Kolomgrafiek



b) 'n Lyngrafiek



c) 'n Sirkelgrafiek



## Bylaag D Vraelys aan leerlinge - Afrikaanse en Engelse weergawe

Vraelys aan Leerlinge

Beantwoord asseblief al die vrae.

Vir kantoor gebruik

1. Naam _____	V1 <input type="checkbox"/> <input type="checkbox"/>	1-2																				
2. Kaartnommer _____	V2 <input type="checkbox"/>	3																				
3. Herhalingsnommer _____	V3 <input type="checkbox"/>	4																				
4. Ouderdom	V4 <input type="checkbox"/>	5																				
<table border="1"> <tr><td>11 jaar en jonger</td><td>1</td></tr> <tr><td>12 jaar</td><td>2</td></tr> <tr><td>13 jaar</td><td>3</td></tr> <tr><td>14 jaar en ouer</td><td>4</td></tr> </table>	11 jaar en jonger	1	12 jaar	2	13 jaar	3	14 jaar en ouer	4														
11 jaar en jonger	1																					
12 jaar	2																					
13 jaar	3																					
14 jaar en ouer	4																					
5. Geslag	V5 <input type="checkbox"/>	6																				
<table border="1"> <tr><td>Manlik</td><td>1</td></tr> <tr><td>Vroulik</td><td>2</td></tr> </table>	Manlik	1	Vroulik	2																		
Manlik	1																					
Vroulik	2																					
6. Huistaal.	V6 <input type="checkbox"/> <input type="checkbox"/>	7-8																				
<table border="1"> <tr><td>Afrikaans</td><td>1</td></tr> <tr><td>Engels</td><td>2</td></tr> <tr><td>Zoeloe</td><td>3</td></tr> <tr><td>Sotho</td><td>4</td></tr> <tr><td>Tsonga</td><td>5</td></tr> <tr><td>Tswana</td><td>6</td></tr> <tr><td>Ndebele</td><td>7</td></tr> <tr><td>Swazi</td><td>8</td></tr> <tr><td>Venda</td><td>9</td></tr> <tr><td>Ander (Spesifiseer)</td><td>10</td></tr> </table>	Afrikaans	1	Engels	2	Zoeloe	3	Sotho	4	Tsonga	5	Tswana	6	Ndebele	7	Swazi	8	Venda	9	Ander (Spesifiseer)	10		
Afrikaans	1																					
Engels	2																					
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Ndebele	7																					
Swazi	8																					
Venda	9																					
Ander (Spesifiseer)	10																					
7. Is daar lopende water in julle huis?	V7 <input type="checkbox"/>	9																				
<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2																		
Ja	1																					
Nee	2																					
8. Is daar elektrisiteit in julle huis?	V8 <input type="checkbox"/>	10																				
<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2																		
Ja	1																					
Nee	2																					
9. By wie bly jy?	V9 <input type="checkbox"/>	11																				
<table border="1"> <tr><td>Albei my ouers</td><td>1</td></tr> <tr><td>Slegs my ma</td><td>2</td></tr> <tr><td>Slegs my pa</td><td>3</td></tr> <tr><td>Ouma / Oupa</td><td>4</td></tr> <tr><td>Ander</td><td>5</td></tr> </table>	Albei my ouers	1	Slegs my ma	2	Slegs my pa	3	Ouma / Oupa	4	Ander	5												
Albei my ouers	1																					
Slegs my ma	2																					
Slegs my pa	3																					
Ouma / Oupa	4																					
Ander	5																					
10. Werk jou ouers?	V10 <input type="checkbox"/>	12																				
<table border="1"> <tr><td>Slegs my pa werk</td><td>1</td></tr> <tr><td>Slegs my ma werk</td><td>2</td></tr> <tr><td>Albei my ouers werk</td><td>3</td></tr> <tr><td>Albei my ouers is werkloos</td><td>4</td></tr> <tr><td>My ouers leef glad nie meer nie</td><td>5</td></tr> </table>	Slegs my pa werk	1	Slegs my ma werk	2	Albei my ouers werk	3	Albei my ouers is werkloos	4	My ouers leef glad nie meer nie	5												
Slegs my pa werk	1																					
Slegs my ma werk	2																					
Albei my ouers werk	3																					
Albei my ouers is werkloos	4																					
My ouers leef glad nie meer nie	5																					

11.	Wat eet en drink jy ten minste een maal per dag?															
	<table border="1"><tr><td>Pap</td><td>1</td></tr><tr><td>Brood</td><td>2</td></tr><tr><td>Melk</td><td>3</td></tr><tr><td>Groente</td><td>4</td></tr><tr><td>Vrugte</td><td>5</td></tr><tr><td>Vleis / Vis</td><td>6</td></tr></table>	Pap	1	Brood	2	Melk	3	Groente	4	Vrugte	5	Vleis / Vis	6		V11 <input type="checkbox"/>	13
Pap	1															
Brood	2															
Melk	3															
Groente	4															
Vrugte	5															
Vleis / Vis	6															
			V12 <input type="checkbox"/>	14												
			V13 <input type="checkbox"/>	15												
			V14 <input type="checkbox"/>	16												
			V15 <input type="checkbox"/>	17												
			V16 <input type="checkbox"/>	18												
12.	Wie kyk na jou na skool?															
	<table border="1"><tr><td>My ma / pa</td><td>1</td></tr><tr><td>My ouma / oupa</td><td>2</td></tr><tr><td>My broer / suster</td><td>3</td></tr><tr><td>Ek is alleen by die huis</td><td>4</td></tr></table>	My ma / pa	1	My ouma / oupa	2	My broer / suster	3	Ek is alleen by die huis	4		V17 <input type="checkbox"/>	19				
My ma / pa	1															
My ouma / oupa	2															
My broer / suster	3															
Ek is alleen by die huis	4															
13.	Het jy al voorheen met 'n rekenaar gewerk?															
	<table border="1"><tr><td>Ja</td><td>1</td></tr><tr><td>Nee</td><td>2</td></tr></table>	Ja	1	Nee	2		V18 <input type="checkbox"/>	20								
Ja	1															
Nee	2															
<b>Na Lesreeks 1</b>																
14.	Was dit maklik om die instruksies op die skerm te volg?															
	<table border="1"><tr><td>Altyd</td><td>1</td></tr><tr><td>Soms</td><td>2</td></tr><tr><td>Nooit</td><td>3</td></tr></table>	Altyd	1	Soms	2	Nooit	3		V19 <input type="checkbox"/>	21						
Altyd	1															
Soms	2															
Nooit	3															
15.	Ek moes gedink het om die korrekte antwoorde te kry.															
	<table border="1"><tr><td>Altyd</td><td>1</td></tr><tr><td>Soms</td><td>2</td></tr><tr><td>Nooit</td><td>3</td></tr></table>	Altyd	1	Soms	2	Nooit	3		V20 <input type="checkbox"/>	22						
Altyd	1															
Soms	2															
Nooit	3															
16.	Ek sal graag meer soortgelyke lesse met die rekenaar wil doen.															
	<table border="1"><tr><td>Ja</td><td>1</td></tr><tr><td>Nee</td><td>2</td></tr></table>	Ja	1	Nee	2		V21 <input type="checkbox"/>	23								
Ja	1															
Nee	2															
17.	Die rekenaar maak die les oor woordsomme interessanter.															
	<table border="1"><tr><td>Ja</td><td>1</td></tr><tr><td>Nee</td><td>2</td></tr></table>	Ja	1	Nee	2		V22 <input type="checkbox"/>	24								
Ja	1															
Nee	2															
18.	Die rekenaar laat my bang voel.															
	<table border="1"><tr><td>Altyd</td><td>1</td></tr><tr><td>Soms</td><td>2</td></tr><tr><td>Nooit</td><td>3</td></tr></table>	Altyd	1	Soms	2	Nooit	3		V23 <input type="checkbox"/>	25						
Altyd	1															
Soms	2															
Nooit	3															
19.	Ek het die antwoorde geraai.															
	<table border="1"><tr><td>Altyd</td><td>1</td></tr><tr><td>Soms</td><td>2</td></tr><tr><td>Nooit</td><td>3</td></tr></table>	Altyd	1	Soms	2	Nooit	3		V24 <input type="checkbox"/>	26						
Altyd	1															
Soms	2															
Nooit	3															
20.	Het jy die wiskundelesse oor woordsomme geniet?															
	<table border="1"><tr><td>Ja</td><td>1</td></tr><tr><td>Soms</td><td>2</td></tr><tr><td>Nee</td><td>3</td></tr></table>	Ja	1	Soms	2	Nee	3		V25 <input type="checkbox"/>	27						
Ja	1															
Soms	2															
Nee	3															

21.	Die lesse was:			
	Te maklik	1		
	Te moeilik	2		
	Net reg	3		
22.	Ek het probleme ervaar met die:			
	Toetsbord	1		
	Muis	2		
	Taal	3		
	Bewerkings (+ - x ÷)	4		
23.	Na die lesse verstaan ek die <b>bewerkings</b> beter.			
	Ja	1		
	Nee	2		
24.	Na die lesse verstaan ek <b>woordsomme</b> beter.			
	Ja	1		
	Nee	2		
25.	Waarvan het jy die <b>meeste</b> gehou?			
	Speletjie (Funnels and buckets)	1		
	Bewerkings (+ - x ÷)	2		
	Woordsomme	3		
	Om met die muis te werk	4		
26.	Waarvan het jy die <b>minste</b> gehou?			
	Speletjie (Funnels and buckets)	1		
	Bewerkings (+ - x ÷)	2		
	Woordsomme	3		
	Om met die muis te werk	4		
27.	Ek verkies om wiskundelesse te doen:			
	Slegs met die onderwyser sonder die rekenaar	1		
	Saam met die onderwyser en die rekenaar	2		
28.	Hoe kan die lesse verbeter word?			
	Meer probleme	1		
	Minder probleme	2		
	Ek wil saam met 'n maat werk	3		
	Meer oefeninge met die muis	4		
	Meer oefeninge met die toetsbord	5		
<b>Na Lesreeks 2</b>				
14.	Was dit maklik om die instruksies op die skerm te volg?			
	Altyd	1		
	Soms	2		
	Nooit	3		
15.	Ek moes gedink het om die korrekte antwoorde te kry.			
	Altyd	1		
	Soms	2		
	Nooit	3		
			V26 <input type="checkbox"/>	28
			V27 <input type="checkbox"/>	29
			V28 <input type="checkbox"/>	30
			V29 <input type="checkbox"/>	31
			V30 <input type="checkbox"/>	32
			V31 <input type="checkbox"/>	33
			V32 <input type="checkbox"/>	34
			V33 <input type="checkbox"/>	35
			V34 <input type="checkbox"/>	36
			V35 <input type="checkbox"/>	37
			V36 <input type="checkbox"/>	38
			V37 <input type="checkbox"/>	39
			V38 <input type="checkbox"/>	40
			V39 <input type="checkbox"/>	41
			V40 <input type="checkbox"/>	42
			V41 <input type="checkbox"/>	43
			V42 <input type="checkbox"/>	44

16.	Ek sal graag meer soortgelyke lesse met die rekenaar wil doen.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V43	<input type="checkbox"/>	45				
Ja	1												
Nee	2												
17.	Die rekenaar maak die les oor woordsomme interessanter.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V44	<input type="checkbox"/>	46				
Ja	1												
Nee	2												
18.	Die rekenaar laat my bang voel.	<table border="1"> <tr><td>Altyd</td><td>1</td></tr> <tr><td>Soms</td><td>2</td></tr> <tr><td>Nooit</td><td>3</td></tr> </table>	Altyd	1	Soms	2	Nooit	3	V45	<input type="checkbox"/>	47		
Altyd	1												
Soms	2												
Nooit	3												
19.	Ek het die antwoorde geraai.	<table border="1"> <tr><td>Altyd</td><td>1</td></tr> <tr><td>Soms</td><td>2</td></tr> <tr><td>Nooit</td><td>3</td></tr> </table>	Altyd	1	Soms	2	Nooit	3	V46	<input type="checkbox"/>	48		
Altyd	1												
Soms	2												
Nooit	3												
20.	Het jy die wiskundelesse oor woordsomme geniet?	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Soms</td><td>2</td></tr> <tr><td>Nee</td><td>3</td></tr> </table>	Ja	1	Soms	2	Nee	3	V47	<input type="checkbox"/>	49		
Ja	1												
Soms	2												
Nee	3												
21.	Die lesse was:	<table border="1"> <tr><td>Te maklik</td><td>1</td></tr> <tr><td>Te moeilik</td><td>2</td></tr> <tr><td>Net reg</td><td>3</td></tr> </table>	Te maklik	1	Te moeilik	2	Net reg	3	V48	<input type="checkbox"/>	50		
Te maklik	1												
Te moeilik	2												
Net reg	3												
22.	Ek het probleme ervaar met die:	<table border="1"> <tr><td>Toetsbord</td><td>1</td></tr> <tr><td>Muis</td><td>2</td></tr> <tr><td>Taal</td><td>3</td></tr> <tr><td>Bewerkings (+ - x ÷)</td><td>4</td></tr> </table>	Toetsbord	1	Muis	2	Taal	3	Bewerkings (+ - x ÷)	4	V49	<input type="checkbox"/>	51
Toetsbord	1												
Muis	2												
Taal	3												
Bewerkings (+ - x ÷)	4												
			V50	<input type="checkbox"/>	52								
			V51	<input type="checkbox"/>	53								
			V52	<input type="checkbox"/>	54								
23.	Na die lesse verstaan ek die <b>bewerkings</b> beter.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V53	<input type="checkbox"/>	55				
Ja	1												
Nee	2												
24.	Na die lesse verstaan ek <b>woordsomme</b> beter.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V54	<input type="checkbox"/>	56				
Ja	1												
Nee	2												
25.	Na die lesse verstaan ek die <b>kwosiënt</b> beter.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V55	<input type="checkbox"/>	57				
Ja	1												
Nee	2												
26.	Na die lesse verstaan ek die <b>som van</b> beter.	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2	V56	<input type="checkbox"/>	58				
Ja	1												
Nee	2												

27. Na die lesse verstaan ek <b>produk</b> beter.	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V57 <input type="checkbox"/>	59								
Ja	1														
Nee	2														
28. Waarvan het jy die <b>meeste</b> gehou?	<table border="1"> <tr> <td>Bewerkings (+ - x ÷)</td> <td>1</td> </tr> <tr> <td>Woordsomme</td> <td>2</td> </tr> <tr> <td>Om met die muis te werk</td> <td>3</td> </tr> <tr> <td>Wiskundige terminologie (woorde)</td> <td>4</td> </tr> <tr> <td>Animasies (beweging)</td> <td>5</td> </tr> <tr> <td>Om met die "windows" sakrekenaar te werk</td> <td>6</td> </tr> </table>	Bewerkings (+ - x ÷)	1	Woordsomme	2	Om met die muis te werk	3	Wiskundige terminologie (woorde)	4	Animasies (beweging)	5	Om met die "windows" sakrekenaar te werk	6	V58 <input type="checkbox"/>	60
Bewerkings (+ - x ÷)	1														
Woordsomme	2														
Om met die muis te werk	3														
Wiskundige terminologie (woorde)	4														
Animasies (beweging)	5														
Om met die "windows" sakrekenaar te werk	6														
29. Waarvan het jy die <b>minste</b> gehou?	<table border="1"> <tr> <td>Bewerkings (+ - x ÷)</td> <td>1</td> </tr> <tr> <td>Woordsomme</td> <td>2</td> </tr> <tr> <td>Om met die muis te werk</td> <td>3</td> </tr> <tr> <td>Wiskundige terminologie (woorde)</td> <td>4</td> </tr> <tr> <td>Animasies (beweging)</td> <td>5</td> </tr> <tr> <td>Om met die "windows" sakrekenaar te werk</td> <td>6</td> </tr> </table>	Bewerkings (+ - x ÷)	1	Woordsomme	2	Om met die muis te werk	3	Wiskundige terminologie (woorde)	4	Animasies (beweging)	5	Om met die "windows" sakrekenaar te werk	6	V59 <input type="checkbox"/>	61
Bewerkings (+ - x ÷)	1														
Woordsomme	2														
Om met die muis te werk	3														
Wiskundige terminologie (woorde)	4														
Animasies (beweging)	5														
Om met die "windows" sakrekenaar te werk	6														
30. Ek verkies om wiskundelesse te doen:	<table border="1"> <tr> <td>Slegs met die onderwyser sonder die rekenaar</td> <td>1</td> </tr> <tr> <td>Saam met die onderwyser en die rekenaar</td> <td>2</td> </tr> </table>	Slegs met die onderwyser sonder die rekenaar	1	Saam met die onderwyser en die rekenaar	2	V60 <input type="checkbox"/>	62								
Slegs met die onderwyser sonder die rekenaar	1														
Saam met die onderwyser en die rekenaar	2														
31. Hoe kan die lesse verbeter word?	<table border="1"> <tr> <td>Meer probleme</td> <td>1</td> </tr> <tr> <td>Minder probleme</td> <td>2</td> </tr> <tr> <td>Ek wil saam met 'n maat werk</td> <td>3</td> </tr> <tr> <td>Meer oefeninge met die muis</td> <td>4</td> </tr> <tr> <td>Meer oefeninge met die toetsbord</td> <td>5</td> </tr> <tr> <td>Gebruik ander animasies</td> <td>6</td> </tr> </table>	Meer probleme	1	Minder probleme	2	Ek wil saam met 'n maat werk	3	Meer oefeninge met die muis	4	Meer oefeninge met die toetsbord	5	Gebruik ander animasies	6	V61 <input type="checkbox"/> V62 <input type="checkbox"/> V63 <input type="checkbox"/> V64 <input type="checkbox"/> V65 <input type="checkbox"/> V66 <input type="checkbox"/>	63 64 65 66 67 68
Meer probleme	1														
Minder probleme	2														
Ek wil saam met 'n maat werk	3														
Meer oefeninge met die muis	4														
Meer oefeninge met die toetsbord	5														
Gebruik ander animasies	6														
Naam _____		V67 <input type="checkbox"/>	1-2												
Kaartnommer _____		V68 <input type="checkbox"/>	3												
Herhalingsnommer _____		V69 <input type="checkbox"/>	4												
<b>Na Lesreeks 3</b>															
14. Was dit maklik om die instruksies op die skerm te volg?	<table border="1"> <tr> <td>Altyd</td> <td>1</td> </tr> <tr> <td>Soms</td> <td>2</td> </tr> <tr> <td>Nooit</td> <td>3</td> </tr> </table>	Altyd	1	Soms	2	Nooit	3	V70 <input type="checkbox"/>	5						
Altyd	1														
Soms	2														
Nooit	3														
15. Ek moes gedink het om die korrekte antwoorde te kry.	<table border="1"> <tr> <td>Altyd</td> <td>1</td> </tr> <tr> <td>Soms</td> <td>2</td> </tr> <tr> <td>Nooit</td> <td>3</td> </tr> </table>	Altyd	1	Soms	2	Nooit	3	V71 <input type="checkbox"/>	6						
Altyd	1														
Soms	2														
Nooit	3														
16. Ek sal graag meer soortgelyke lesse met die rekenaar wil doen.	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V72 <input type="checkbox"/>	7								
Ja	1														
Nee	2														

17.	Die rekenaar maak die les oor grafieke interessanter.	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V73	<input type="checkbox"/>	8				
Ja	1												
Nee	2												
18.	Die rekenaar laat my bang voel.	<table border="1"> <tr> <td>Altyd</td> <td>1</td> </tr> <tr> <td>Soms</td> <td>2</td> </tr> <tr> <td>Nooit</td> <td>3</td> </tr> </table>	Altyd	1	Soms	2	Nooit	3	V74	<input type="checkbox"/>	9		
Altyd	1												
Soms	2												
Nooit	3												
19.	Ek het die antwoorde geraai.	<table border="1"> <tr> <td>Altyd</td> <td>1</td> </tr> <tr> <td>Soms</td> <td>2</td> </tr> <tr> <td>Nooit</td> <td>3</td> </tr> </table>	Altyd	1	Soms	2	Nooit	3	V75	<input type="checkbox"/>	10		
Altyd	1												
Soms	2												
Nooit	3												
20.	Het jy die wiskundelesse oor grafieke geniet?	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Soms</td> <td>2</td> </tr> <tr> <td>Nee</td> <td>3</td> </tr> </table>	Ja	1	Soms	2	Nee	3	V76	<input type="checkbox"/>	11		
Ja	1												
Soms	2												
Nee	3												
21.	Die lesse was:	<table border="1"> <tr> <td>Te maklik</td> <td>1</td> </tr> <tr> <td>Te moeilik</td> <td>2</td> </tr> <tr> <td>Net reg</td> <td>3</td> </tr> </table>	Te maklik	1	Te moeilik	2	Net reg	3	V77	<input type="checkbox"/>	12		
Te maklik	1												
Te moeilik	2												
Net reg	3												
22.	Ek het probleme ervaar met die:	<table border="1"> <tr> <td>Toetsbord</td> <td>1</td> </tr> <tr> <td>Inligting insameling</td> <td>2</td> </tr> <tr> <td>Inligting verwerking</td> <td>3</td> </tr> <tr> <td>Grafieke</td> <td>4</td> </tr> </table>	Toetsbord	1	Inligting insameling	2	Inligting verwerking	3	Grafieke	4	V78	<input type="checkbox"/>	13
Toetsbord	1												
Inligting insameling	2												
Inligting verwerking	3												
Grafieke	4												
			V79	<input type="checkbox"/>	14								
			V80	<input type="checkbox"/>	15								
			V81	<input type="checkbox"/>	16								
23.	Na die lesse verstaan ek die <b>inligting insameling</b> beter.	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V82	<input type="checkbox"/>	17				
Ja	1												
Nee	2												
24.	Na die lesse verstaan ek <b>inligting verwerking</b> beter.	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V83	<input type="checkbox"/>	18				
Ja	1												
Nee	2												
25.	Na die lesse kan ek <b>grafieke trek</b> .	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V84	<input type="checkbox"/>	19				
Ja	1												
Nee	2												
26.	Na die lesse kan ek <b>grafieke interpreteer</b> .	<table border="1"> <tr> <td>Ja</td> <td>1</td> </tr> <tr> <td>Nee</td> <td>2</td> </tr> </table>	Ja	1	Nee	2	V85	<input type="checkbox"/>	20				
Ja	1												
Nee	2												
27.	Waarvan het jy die <b>meeste</b> gehou?	<table border="1"> <tr> <td>Inligting insameling</td> <td>1</td> </tr> <tr> <td>Grafieke teken</td> <td>2</td> </tr> <tr> <td>Grafiek interpretasie</td> <td>3</td> </tr> </table>	Inligting insameling	1	Grafieke teken	2	Grafiek interpretasie	3	V86	<input type="checkbox"/>	21		
Inligting insameling	1												
Grafieke teken	2												
Grafiek interpretasie	3												

28. Waarvan het jy die **minste** gehou?

Inligting insameling	1
Grafieke teken	2
Grafiek interpretasie	3

V87  22

29. Ek verkies om wiskundelesse te doen:

Slegs met die onderwyser sonder die rekenaar	1
Saam met die onderwyser en die rekenaar	2

V88  23

30. Hoe kan die lesse verbeter word?

Meer grafieke	1
Minder grafieke	2
Leerlinge moet in groepe werk	3
Meer oefeninge met die sigblad	4

V89  24V90  25V91  26V92  27



**Questionnaire to Pupils****Please answer all the questions.**

For office use

1.	Name _____	V1	<input type="checkbox"/>	<input type="checkbox"/>	1-2																				
2.	Card number	V2	<input type="checkbox"/>		3																				
3.	Repetition number	V3	<input type="checkbox"/>		4																				
4.	Age	V4	<input type="checkbox"/>		5																				
	<table border="1"> <tbody> <tr><td>11 years and younger</td><td>1</td></tr> <tr><td>12 years</td><td>2</td></tr> <tr><td>13 years</td><td>3</td></tr> <tr><td>14 years and older</td><td>4</td></tr> </tbody> </table>	11 years and younger	1	12 years	2	13 years	3	14 years and older	4																
11 years and younger	1																								
12 years	2																								
13 years	3																								
14 years and older	4																								
5.	Gender	V5	<input type="checkbox"/>		6																				
	<table border="1"> <tbody> <tr><td>Male</td><td>1</td></tr> <tr><td>Female</td><td>2</td></tr> </tbody> </table>	Male	1	Female	2																				
Male	1																								
Female	2																								
6.	Home language	V6	<input type="checkbox"/>	<input type="checkbox"/>	7-8																				
	<table border="1"> <tbody> <tr><td>Afrikaans</td><td>1</td></tr> <tr><td>English</td><td>2</td></tr> <tr><td>Zulu</td><td>3</td></tr> <tr><td>Sesotho</td><td>4</td></tr> <tr><td>Xitsonga</td><td>5</td></tr> <tr><td>Setswana</td><td>6</td></tr> <tr><td>isiNdebele</td><td>7</td></tr> <tr><td>siSwazi</td><td>8</td></tr> <tr><td>Tshivenda</td><td>9</td></tr> <tr><td>Other (Specify)</td><td>10</td></tr> </tbody> </table>	Afrikaans	1	English	2	Zulu	3	Sesotho	4	Xitsonga	5	Setswana	6	isiNdebele	7	siSwazi	8	Tshivenda	9	Other (Specify)	10				
Afrikaans	1																								
English	2																								
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Xitsonga	5																								
Setswana	6																								
isiNdebele	7																								
siSwazi	8																								
Tshivenda	9																								
Other (Specify)	10																								
7.	Is there running water in your house?	V7	<input type="checkbox"/>		9																				
	<table border="1"> <tbody> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </tbody> </table>	Yes	1	No	2																				
Yes	1																								
No	2																								
8.	Is there electricity in your house?	V8	<input type="checkbox"/>		10																				
	<table border="1"> <tbody> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </tbody> </table>	Yes	1	No	2																				
Yes	1																								
No	2																								
9.	Who do you live with?	V9	<input type="checkbox"/>		11																				
	<table border="1"> <tbody> <tr><td>Both my parents</td><td>1</td></tr> <tr><td>Only my mother</td><td>2</td></tr> <tr><td>Only my father</td><td>3</td></tr> <tr><td>Grandparents</td><td>4</td></tr> <tr><td>Other</td><td>5</td></tr> </tbody> </table>	Both my parents	1	Only my mother	2	Only my father	3	Grandparents	4	Other	5														
Both my parents	1																								
Only my mother	2																								
Only my father	3																								
Grandparents	4																								
Other	5																								
10.	Do your parents work?	V10	<input type="checkbox"/>		12																				
	<table border="1"> <tbody> <tr><td>Only my father works</td><td>1</td></tr> <tr><td>Only my mother works</td><td>2</td></tr> <tr><td>Both my parents work</td><td>3</td></tr> <tr><td>My parents are without jobs</td><td>4</td></tr> <tr><td>My parents are both deceased</td><td>5</td></tr> </tbody> </table>	Only my father works	1	Only my mother works	2	Both my parents work	3	My parents are without jobs	4	My parents are both deceased	5														
Only my father works	1																								
Only my mother works	2																								
Both my parents work	3																								
My parents are without jobs	4																								
My parents are both deceased	5																								

11.	What do you eat and drink at least once a day?															
	<table border="1"><tr><td>Porridge</td><td>1</td></tr><tr><td>Bread</td><td>2</td></tr><tr><td>Milk</td><td>3</td></tr><tr><td>Vegetables</td><td>4</td></tr><tr><td>Fruit</td><td>5</td></tr><tr><td>Meat / Fish</td><td>6</td></tr></table>	Porridge	1	Bread	2	Milk	3	Vegetables	4	Fruit	5	Meat / Fish	6		V11 <input type="checkbox"/>	13
Porridge	1															
Bread	2															
Milk	3															
Vegetables	4															
Fruit	5															
Meat / Fish	6															
			V12 <input type="checkbox"/>	14												
			V13 <input type="checkbox"/>	15												
			V14 <input type="checkbox"/>	16												
			V15 <input type="checkbox"/>	17												
			V16 <input type="checkbox"/>	18												
12.	With whom do you stay after school?															
	<table border="1"><tr><td>My mother / father</td><td>1</td></tr><tr><td>My grandparents</td><td>2</td></tr><tr><td>My brother / sister</td><td>3</td></tr><tr><td>I am alone at home</td><td>4</td></tr></table>	My mother / father	1	My grandparents	2	My brother / sister	3	I am alone at home	4		V17 <input type="checkbox"/>	19				
My mother / father	1															
My grandparents	2															
My brother / sister	3															
I am alone at home	4															
13.	Have you worked with a computer before?															
	<table border="1"><tr><td>Yes</td><td>1</td></tr><tr><td>No</td><td>2</td></tr></table>	Yes	1	No	2		V18 <input type="checkbox"/>	20								
Yes	1															
No	2															
<b>After lesson series 1</b>																
14.	Was it easy to follow the instructions on the screen?															
	<table border="1"><tr><td>Always</td><td>1</td></tr><tr><td>Sometimes</td><td>2</td></tr><tr><td>Never</td><td>3</td></tr></table>	Always	1	Sometimes	2	Never	3		V19 <input type="checkbox"/>	21						
Always	1															
Sometimes	2															
Never	3															
15.	I had to think to get the correct answers.															
	<table border="1"><tr><td>Always</td><td>1</td></tr><tr><td>Sometimes</td><td>2</td></tr><tr><td>Never</td><td>3</td></tr></table>	Always	1	Sometimes	2	Never	3		V20 <input type="checkbox"/>	22						
Always	1															
Sometimes	2															
Never	3															
16.	I would like to do similar lessons on the computer.															
	<table border="1"><tr><td>Yes</td><td>1</td></tr><tr><td>No</td><td>2</td></tr></table>	Yes	1	No	2		V21 <input type="checkbox"/>	23								
Yes	1															
No	2															
17.	The computer makes the lesson on word sums more interesting.															
	<table border="1"><tr><td>Yes</td><td>1</td></tr><tr><td>No</td><td>2</td></tr></table>	Yes	1	No	2		V22 <input type="checkbox"/>	24								
Yes	1															
No	2															
18.	The computer scares me.															
	<table border="1"><tr><td>Always</td><td>1</td></tr><tr><td>Sometimes</td><td>2</td></tr><tr><td>Never</td><td>3</td></tr></table>	Always	1	Sometimes	2	Never	3		V23 <input type="checkbox"/>	25						
Always	1															
Sometimes	2															
Never	3															
19.	I guessed the answers.															
	<table border="1"><tr><td>Always</td><td>1</td></tr><tr><td>Sometimes</td><td>2</td></tr><tr><td>Never</td><td>3</td></tr></table>	Always	1	Sometimes	2	Never	3		V24 <input type="checkbox"/>	26						
Always	1															
Sometimes	2															
Never	3															
20.	Have you enjoyed the mathematic lessons on word sums?															
	<table border="1"><tr><td>Yes</td><td>1</td></tr><tr><td>Sometimes</td><td>2</td></tr><tr><td>No</td><td>3</td></tr></table>	Yes	1	Sometimes	2	No	3		V25 <input type="checkbox"/>	27						
Yes	1															
Sometimes	2															
No	3															

21.	The lessons were:			
	Too easy	1		
	Too difficult	2		
	Just right	3		
			V26	<input type="checkbox"/>
				28
22.	I experienced problems with the:			
	Keyboard	1		
	Mouse	2		
	Language	3		
	Operation symbols (+ - x ÷)	4		
			V27	<input type="checkbox"/>
			V28	<input type="checkbox"/>
			V29	<input type="checkbox"/>
			V30	<input type="checkbox"/>
				29
				30
				31
				32
23.	After completion of the lesson I understand the operation symbols better.			
	Yes	1		
	No	2		
			V31	<input type="checkbox"/>
				33
24.	After completion of the lesson I understand the word sums better.			
	Yes	1		
	No	2		
			V32	<input type="checkbox"/>
				34
25.	What did you like the most?			
	Game (Funnels and buckets)	1		
	Operation symbols (+ - x ÷)	2		
	Word sums	3		
	To work with the mouse	4		
			V33	<input type="checkbox"/>
				35
26.	What did you like the least?			
	Game (Funnels and buckets)	1		
	Operation symbols (+ - x ÷)	2		
	Word sums	3		
	To work with the mouse	4		
			V34	<input type="checkbox"/>
				36
27.	I prefer to do mathematics lessons:			
	With the teacher and without the computer	1		
	With the teacher and the computer	2		
			V35	<input type="checkbox"/>
				37
28.	How can the lessons be improved?			
	More problems	1		
	Fewer problems	2		
	I want to work with a friend	3		
	More exercises with the mouse	4		
	More exercises with the keyboard	5		
			V36	<input type="checkbox"/>
			V37	<input type="checkbox"/>
			V38	<input type="checkbox"/>
			V39	<input type="checkbox"/>
			V40	<input type="checkbox"/>
				38
				39
				40
				41
				42
<b>After Lesson series 2</b>				
14.	Was it easy to follow the instructions on the screen?			
	Always	1		
	Sometimes	2		
	Never	3		
			V41	<input type="checkbox"/>
				43
15.	I had to think to get the correct answers.			
	Always	1		
	Sometimes	2		
	Never	3		
			V42	<input type="checkbox"/>
				44

16.	I would like to do similar lessons on the computer.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V43 <input type="checkbox"/>	45				
Yes	1											
No	2											
17.	The computer makes the lesson on word sums more interesting.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V44 <input type="checkbox"/>	46				
Yes	1											
No	2											
18.	The computer scares me.	<table border="1"> <tr><td>Always</td><td>1</td></tr> <tr><td>Sometimes</td><td>2</td></tr> <tr><td>Never</td><td>3</td></tr> </table>	Always	1	Sometimes	2	Never	3	V45 <input type="checkbox"/>	47		
Always	1											
Sometimes	2											
Never	3											
19.	I guessed the answers.	<table border="1"> <tr><td>Always</td><td>1</td></tr> <tr><td>Sometimes</td><td>2</td></tr> <tr><td>Never</td><td>3</td></tr> </table>	Always	1	Sometimes	2	Never	3	V46 <input type="checkbox"/>	48		
Always	1											
Sometimes	2											
Never	3											
20.	Have you enjoyed the mathematic lessons on word sums?	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>Sometimes</td><td>2</td></tr> <tr><td>No</td><td>3</td></tr> </table>	Yes	1	Sometimes	2	No	3	V47 <input type="checkbox"/>	49		
Yes	1											
Sometimes	2											
No	3											
21.	The lessons were:	<table border="1"> <tr><td>Too easy</td><td>1</td></tr> <tr><td>Too difficult</td><td>2</td></tr> <tr><td>Just right</td><td>3</td></tr> </table>	Too easy	1	Too difficult	2	Just right	3	V48 <input type="checkbox"/>	50		
Too easy	1											
Too difficult	2											
Just right	3											
22.	I experienced problems with the:	<table border="1"> <tr><td>Keyboard</td><td>1</td></tr> <tr><td>Mouse</td><td>2</td></tr> <tr><td>Language</td><td>3</td></tr> <tr><td>Operation symbols (+ - x ÷)</td><td>4</td></tr> </table>	Keyboard	1	Mouse	2	Language	3	Operation symbols (+ - x ÷)	4	V49 <input type="checkbox"/>	51
Keyboard	1											
Mouse	2											
Language	3											
Operation symbols (+ - x ÷)	4											
			V50 <input type="checkbox"/>	52								
			V51 <input type="checkbox"/>	53								
			V52 <input type="checkbox"/>	54								
23.	After the lesson I understand the operation symbols better.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V53 <input type="checkbox"/>	55				
Yes	1											
No	2											
24.	After the lesson I understand the word sums better.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V54 <input type="checkbox"/>	56				
Yes	1											
No	2											
25.	After the lesson I understand the quotient better.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V55 <input type="checkbox"/>	57				
Yes	1											
No	2											
26.	After the lesson I understand the sum of better.	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2	V56 <input type="checkbox"/>	58				
Yes	1											
No	2											

<p>27. After the lesson I understand <b>product</b> better.</p> <table border="1" data-bbox="142 126 606 205"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	<p>V57 <input type="checkbox"/> 59</p>								
Yes	1												
No	2												
<p>28. What did you like the <b>most</b>?</p> <table border="1" data-bbox="142 279 902 504"> <tr> <td>Operation symbols (+ - x ÷)</td> <td>1</td> </tr> <tr> <td>Word sums</td> <td>2</td> </tr> <tr> <td>To work with the mouse</td> <td>3</td> </tr> <tr> <td>Mathematical terminology (words)</td> <td>4</td> </tr> <tr> <td>Animations (movement)</td> <td>5</td> </tr> <tr> <td>To work with the "windows" calculator</td> <td>6</td> </tr> </table>	Operation symbols (+ - x ÷)	1	Word sums	2	To work with the mouse	3	Mathematical terminology (words)	4	Animations (movement)	5	To work with the "windows" calculator	6	<p>V58 <input type="checkbox"/> 60</p>
Operation symbols (+ - x ÷)	1												
Word sums	2												
To work with the mouse	3												
Mathematical terminology (words)	4												
Animations (movement)	5												
To work with the "windows" calculator	6												
<p>29. What did you like the <b>least</b>?</p> <table border="1" data-bbox="142 563 902 788"> <tr> <td>Operation symbols (+ - x ÷)</td> <td>1</td> </tr> <tr> <td>Word sums</td> <td>2</td> </tr> <tr> <td>To work with the mouse</td> <td>3</td> </tr> <tr> <td>Mathematical terminology (words)</td> <td>4</td> </tr> <tr> <td>Animations (movement)</td> <td>5</td> </tr> <tr> <td>To work with the "windows" calculator</td> <td>6</td> </tr> </table>	Operation symbols (+ - x ÷)	1	Word sums	2	To work with the mouse	3	Mathematical terminology (words)	4	Animations (movement)	5	To work with the "windows" calculator	6	<p>V59 <input type="checkbox"/> 61</p>
Operation symbols (+ - x ÷)	1												
Word sums	2												
To work with the mouse	3												
Mathematical terminology (words)	4												
Animations (movement)	5												
To work with the "windows" calculator	6												
<p>30. I prefer doing mathematics lessons:</p> <table border="1" data-bbox="142 847 902 926"> <tr> <td>Only with the teacher and without the computer</td> <td>1</td> </tr> <tr> <td>With the teacher and the computer</td> <td>2</td> </tr> </table>	Only with the teacher and without the computer	1	With the teacher and the computer	2	<p>V60 <input type="checkbox"/> 62</p>								
Only with the teacher and without the computer	1												
With the teacher and the computer	2												
<p>31. How can the lessons be improved?</p> <table border="1" data-bbox="142 984 902 1209"> <tr> <td>More problems</td> <td>1</td> </tr> <tr> <td>Fewer problems</td> <td>2</td> </tr> <tr> <td>I want to work with a friend</td> <td>3</td> </tr> <tr> <td>More exercises with the mouse</td> <td>4</td> </tr> <tr> <td>More exercises with the keyboard</td> <td>5</td> </tr> <tr> <td>Using other animations</td> <td>6</td> </tr> </table>	More problems	1	Fewer problems	2	I want to work with a friend	3	More exercises with the mouse	4	More exercises with the keyboard	5	Using other animations	6	<p>V61 <input type="checkbox"/> 63  V62 <input type="checkbox"/> 64  V63 <input type="checkbox"/> 65  V64 <input type="checkbox"/> 66  V65 <input type="checkbox"/> 67  V66 <input type="checkbox"/> 68</p>
More problems	1												
Fewer problems	2												
I want to work with a friend	3												
More exercises with the mouse	4												
More exercises with the keyboard	5												
Using other animations	6												
<p>Name _____</p> <p>Card number _____</p> <p>Repetition number _____</p>	<p>V67 <input type="checkbox"/> <input type="checkbox"/> 1-2  V68 <input type="checkbox"/> 3  V69 <input type="checkbox"/> 4</p>												
<b>After lesson series 3</b>													
<p>14. Was it easy to follow the instruction on the screen?</p> <table border="1" data-bbox="142 1524 614 1646"> <tr> <td>Always</td> <td>1</td> </tr> <tr> <td>Sometimes</td> <td>2</td> </tr> <tr> <td>Never</td> <td>3</td> </tr> </table>	Always	1	Sometimes	2	Never	3	<p>V70 <input type="checkbox"/> 5</p>						
Always	1												
Sometimes	2												
Never	3												
<p>15. I had to think to get the correct answers.</p> <table border="1" data-bbox="142 1705 614 1828"> <tr> <td>Always</td> <td>1</td> </tr> <tr> <td>Sometimes</td> <td>2</td> </tr> <tr> <td>Never</td> <td>3</td> </tr> </table>	Always	1	Sometimes	2	Never	3	<p>V71 <input type="checkbox"/> 6</p>						
Always	1												
Sometimes	2												
Never	3												
<p>16. I would like to do similar lessons on the computer.</p> <table border="1" data-bbox="142 1886 614 1965"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	<p>V72 <input type="checkbox"/> 7</p>								
Yes	1												
No	2												

17.	The computer makes the lesson on graphics more interesting.	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	V73	<input type="checkbox"/>	8				
Yes	1												
No	2												
18.	The computer scares me.	<table border="1"> <tr> <td>Always</td> <td>1</td> </tr> <tr> <td>Sometimes</td> <td>2</td> </tr> <tr> <td>Never</td> <td>3</td> </tr> </table>	Always	1	Sometimes	2	Never	3	V74	<input type="checkbox"/>	9		
Always	1												
Sometimes	2												
Never	3												
19.	I guessed the answers.	<table border="1"> <tr> <td>Always</td> <td>1</td> </tr> <tr> <td>Sometimes</td> <td>2</td> </tr> <tr> <td>Never</td> <td>3</td> </tr> </table>	Always	1	Sometimes	2	Never	3	V75	<input type="checkbox"/>	10		
Always	1												
Sometimes	2												
Never	3												
20.	Did you enjoy the mathematic lessons on graphics?	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>Sometimes</td> <td>2</td> </tr> <tr> <td>No</td> <td>3</td> </tr> </table>	Yes	1	Sometimes	2	No	3	V76	<input type="checkbox"/>	11		
Yes	1												
Sometimes	2												
No	3												
21.	The lessons were:	<table border="1"> <tr> <td>Too easy</td> <td>1</td> </tr> <tr> <td>Too difficult</td> <td>2</td> </tr> <tr> <td>Just right</td> <td>3</td> </tr> </table>	Too easy	1	Too difficult	2	Just right	3	V77	<input type="checkbox"/>	12		
Too easy	1												
Too difficult	2												
Just right	3												
22.	I experienced problems with the:	<table border="1"> <tr> <td>Keyboard</td> <td>1</td> </tr> <tr> <td>Collection of information</td> <td>2</td> </tr> <tr> <td>Processing of information</td> <td>3</td> </tr> <tr> <td>Graphics</td> <td>4</td> </tr> </table>	Keyboard	1	Collection of information	2	Processing of information	3	Graphics	4	V78	<input type="checkbox"/>	13
Keyboard	1												
Collection of information	2												
Processing of information	3												
Graphics	4												
			V79	<input type="checkbox"/>	14								
			V80	<input type="checkbox"/>	15								
			V81	<input type="checkbox"/>	16								
23.	After the lessons I understand <b>collecting</b> of information better.	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	V82	<input type="checkbox"/>	17				
Yes	1												
No	2												
24.	After the lessons I understand <b>processing</b> of data better.	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	V83	<input type="checkbox"/>	18				
Yes	1												
No	2												
25.	After the lessons I am able to <b>draw</b> graphs.	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	V84	<input type="checkbox"/>	19				
Yes	1												
No	2												
26.	After the lessons I am able to <b>interpret</b> graphs.	<table border="1"> <tr> <td>Yes</td> <td>1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	V85	<input type="checkbox"/>	20				
Yes	1												
No	2												
27.	What did you enjoy the <b>most</b> ?	<table border="1"> <tr> <td>Collection of information</td> <td>1</td> </tr> <tr> <td>Drawing of graphs</td> <td>2</td> </tr> <tr> <td>Graph interpretation</td> <td>3</td> </tr> </table>	Collection of information	1	Drawing of graphs	2	Graph interpretation	3	V86	<input type="checkbox"/>	21		
Collection of information	1												
Drawing of graphs	2												
Graph interpretation	3												

28. What did you enjoy the least?

Collection of information	1
Drawing of graphs	2
Graph interpretation	3

V87  22

29. I prefer doing mathematics lessons:

Only with the teacher and without the computer	1
With the teacher and the computer	2

V88  23

30. How can the lessons be improved?

More graphics	1
Less graphics	2
Pupils must work in groups	3
More exercises with a spreadsheet	4

V89  24V90  25V91  26V92  27

## Bylaag E Vraelys aan vakkundiges - Afrikaanse en Engelse weergawe

Vraelys aan Vakkundiges

Beantwoord asseblief al die vrae.

Vir kantoor gebruik

1.	Respondentnommer _____	V1	<input type="text"/>	<input type="text"/>	1-2										
2.	Kaartnommer _____	V2	<input type="text"/>		3										
3.	Herhalingsnommer _____	V3	<input type="text"/>		4										
4.	Huidige beroep	V4	<input type="text"/>		5										
	<table border="1"> <tr><td>Onderwyser</td><td>1</td></tr> <tr><td>Departementshoof</td><td>2</td></tr> <tr><td>Adjunkhoof</td><td>3</td></tr> <tr><td>Hoof</td><td>4</td></tr> <tr><td>Ander (Spesifiseer)</td><td>5</td></tr> </table>	Onderwyser	1	Departementshoof	2	Adjunkhoof	3	Hoof	4	Ander (Spesifiseer)	5				
Onderwyser	1														
Departementshoof	2														
Adjunkhoof	3														
Hoof	4														
Ander (Spesifiseer)	5														
5.	Hoogste kwalifikasie	V5	<input type="text"/>		6										
	<table border="1"> <tr><td>Diploma (3 of 4 jaar)</td><td>1</td></tr> <tr><td>Graad</td><td>2</td></tr> <tr><td>Honneurs</td><td>3</td></tr> <tr><td>Magister</td><td>4</td></tr> </table>	Diploma (3 of 4 jaar)	1	Graad	2	Honneurs	3	Magister	4						
Diploma (3 of 4 jaar)	1														
Graad	2														
Honneurs	3														
Magister	4														
6.	Ervaring in die onderwys _____ jaar	V6	<input type="text"/>	<input type="text"/>	7-8										
7.	Is u rekenaargeletterd?	V7	<input type="text"/>		9										
	<table border="1"> <tr><td>Baie</td><td>1</td></tr> <tr><td>Redelik</td><td>2</td></tr> <tr><td>Glad nie</td><td>3</td></tr> </table>	Baie	1	Redelik	2	Glad nie	3								
Baie	1														
Redelik	2														
Glad nie	3														
8.	Gebruik u rekenaars vir onderrigdoeleindes?	V8	<input type="text"/>		10										
	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2										
Ja	1														
Nee	2														
9.	Het u enige formele opleiding in rekenaargesteurde onderwys?	V9	<input type="text"/>		11										
	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2										
Ja	1														
Nee	2														
10.	Het onderwysers genoeg tyd om basiese rekenaarvaardighede vir die leerlinge aan te leer?	V10	<input type="text"/>		12										
	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Nee</td><td>2</td></tr> </table>	Ja	1	Nee	2										
Ja	1														
Nee	2														
11.	Is die inhoud van hierdie lesse volgens die wiskundesillabus?	V11	<input type="text"/>		13										
	<table border="1"> <tr><td>In die geheel</td><td>1</td></tr> <tr><td>Gedeeltelik</td><td>2</td></tr> <tr><td>Glad nie</td><td>3</td></tr> </table>	In die geheel	1	Gedeeltelik	2	Glad nie	3								
In die geheel	1														
Gedeeltelik	2														
Glad nie	3														
12.	Is die werkkaarte sinvol?	V12	<input type="text"/>		14										
	<table border="1"> <tr><td>Ja</td><td>1</td></tr> <tr><td>Soms</td><td>2</td></tr> <tr><td>Nee</td><td>3</td></tr> </table>	Ja	1	Soms	2	Nee	3								
Ja	1														
Soms	2														
Nee	3														
13.	Sal u hierdie lesse wil gebruik vir u leerlinge?	V13	<input type="text"/>		15										
	<table border="1"> <tr><td>Beslis</td><td>1</td></tr> <tr><td>Moontlik</td><td>2</td></tr> <tr><td>Glad nie</td><td>3</td></tr> </table>	Beslis	1	Moontlik	2	Glad nie	3								
Beslis	1														
Moontlik	2														
Glad nie	3														



14.	Is die lesinhoud logies uiteengesit?			
	Deurgaans	1		
	Soms	2		
	Glad nie	3		
			V14	<input type="checkbox"/>
				16
15.	Dink u die lesse stimuleer die leerlinge om te dink op 'n:			
	Lesreeks 1			
	Lae kognitiewe vlak (oproep van feite)	1		
	Medium kognitiewe vlak (analise)	2		
	Hoë kognitiewe vlak (probleemoplossing)	3		
			V15	<input type="checkbox"/>
				17
			V16	<input type="checkbox"/>
				18
			V17	<input type="checkbox"/>
				19
	Lesreeks 2			
	Lae kognitiewe vlak (oproep van feite)	1		
	Medium kognitiewe vlak (analise)	2		
	Hoë kognitiewe vlak (probleemoplossing)	3		
			V18	<input type="checkbox"/>
				20
			V19	<input type="checkbox"/>
				21
			V20	<input type="checkbox"/>
				22
	Lesreeks 3			
	Lae kognitiewe vlak (oproep van feite)	1		
	Medium kognitiewe vlak (analise)	2		
	Hoë kognitiewe vlak (probleemoplossing)	3		
			V21	<input type="checkbox"/>
				23
			V22	<input type="checkbox"/>
				24
			V23	<input type="checkbox"/>
				25
16.	Kan die lesse uitgevoer word sonder die hulp van die onderwyser?			
	Deurgaans	1		
	Soms	2		
	Glad nie	3		
			V24	<input type="checkbox"/>
				26
17.	Dink u dit is sinvol om hierdie wiskundelesse met behulp van die rekenaar aan te bied?			
	Ja	1		
	Nee	2		
			V25	<input type="checkbox"/>
				27
	Motiveer:	_____		
		_____		
		_____		
		_____		
		_____		
18.	Die rekenaar maak die onderwerp interessanter?			
	Altyd	1		
	Soms	2		
	Nooit	3		
			V26	<input type="checkbox"/>
				28
	Motiveer:	_____		
		_____		
		_____		
		_____		
19.	Is die lesdoelwitte bereik?			
	Lesreeks 1			
	Ja	1		
	Nee	2		
			V27	<input type="checkbox"/>
				29

<p>Lesreeks 2</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Ja</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Nee</td> <td style="text-align: center;">2</td> </tr> </table> <p>Lesreeks 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Ja</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Nee</td> <td style="text-align: center;">2</td> </tr> </table> <p>20. Is die leerdoelwitte bereik?</p> <p>Lesreeks 1</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Ja</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Nee</td> <td style="text-align: center;">2</td> </tr> </table> <p>Lesreeks 2</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Ja</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Nee</td> <td style="text-align: center;">2</td> </tr> </table> <p>Lesreeks 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Ja</td> <td style="width: 20%; text-align: center;">1</td> </tr> <tr> <td>Nee</td> <td style="text-align: center;">2</td> </tr> </table>	Ja	1	Nee	2	Ja	1	Nee	2	Ja	1	Nee	2	Ja	1	Nee	2	Ja	1	Nee	2	<p>V28 <input type="checkbox"/> 30</p> <p>V29 <input type="checkbox"/> 31</p> <p>V30 <input type="checkbox"/> 32</p> <p>V32 <input type="checkbox"/> 33</p> <p>V33 <input type="checkbox"/> 34</p>
Ja	1																				
Nee	2																				
Ja	1																				
Nee	2																				
Ja	1																				
Nee	2																				
Ja	1																				
Nee	2																				
Ja	1																				
Nee	2																				
<p>21. Noem positiewe aspekte met betrekking tot hierdie lesse:</p> <hr/> <hr/> <hr/> <hr/>																					
<p>22. Noem negatiewe aspekte met betrekking tot hierdie lesse:</p> <hr/> <hr/> <hr/> <hr/>																					
<p>23. Hoe kan die lesse verbeter word?</p> <hr/> <hr/> <hr/> <hr/>																					

**Questionnaire to Subject Experts****Please answer all the questions.**

For office use

1.	Respondent number _____	V1	<input type="checkbox"/>	<input type="checkbox"/>	1-2										
2.	Card number _____	V2	<input type="checkbox"/>		3										
3.	Repetition number _____	V3	<input type="checkbox"/>		4										
4.	Current occupation	V4	<input type="checkbox"/>		5										
	<table border="1"> <tr><td>Teacher</td><td>1</td></tr> <tr><td>Head of Department</td><td>2</td></tr> <tr><td>Deputy Principal</td><td>3</td></tr> <tr><td>Principal</td><td>4</td></tr> <tr><td>Other (Specify)</td><td>5</td></tr> </table>	Teacher	1	Head of Department	2	Deputy Principal	3	Principal	4	Other (Specify)	5				
Teacher	1														
Head of Department	2														
Deputy Principal	3														
Principal	4														
Other (Specify)	5														
5.	Highest qualification	V5	<input type="checkbox"/>		6										
	<table border="1"> <tr><td>Diploma (3 of 4 years)</td><td>1</td></tr> <tr><td>Degree</td><td>2</td></tr> <tr><td>Honours</td><td>3</td></tr> <tr><td>Master</td><td>4</td></tr> </table>	Diploma (3 of 4 years)	1	Degree	2	Honours	3	Master	4						
Diploma (3 of 4 years)	1														
Degree	2														
Honours	3														
Master	4														
6.	Teaching experience _____ years	V6	<input type="checkbox"/>	<input type="checkbox"/>	7-8										
7.	Are you computer literate?	V7	<input type="checkbox"/>		9										
	<table border="1"> <tr><td>Very</td><td>1</td></tr> <tr><td>Moderate</td><td>2</td></tr> <tr><td>Not at all</td><td>3</td></tr> </table>	Very	1	Moderate	2	Not at all	3								
Very	1														
Moderate	2														
Not at all	3														
8.	Are you using the computer for teaching purposes?	V8	<input type="checkbox"/>		10										
	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2										
Yes	1														
No	2														
9.	Do you have any formal training in computer-based education?	V9	<input type="checkbox"/>		11										
	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2										
Yes	1														
No	2														
10.	Do teachers have enough time to teach pupils basic computer skills?	V10	<input type="checkbox"/>		12										
	<table border="1"> <tr><td>Yes</td><td>1</td></tr> <tr><td>No</td><td>2</td></tr> </table>	Yes	1	No	2										
Yes	1														
No	2														
11.	Is the content of these lessons in accordance with the mathematics syllabus?	V11	<input type="checkbox"/>		13										
	<table border="1"> <tr><td>In totality</td><td>1</td></tr> <tr><td>Partially</td><td>2</td></tr> <tr><td>Not at all</td><td>3</td></tr> </table>	In totality	1	Partially	2	Not at all	3								
In totality	1														
Partially	2														
Not at all	3														
12.	Are the worksheets significant?	V12	<input type="checkbox"/>		14										
	<table border="1"> <tr><td>Usually</td><td>1</td></tr> <tr><td>Seldom</td><td>2</td></tr> <tr><td>No</td><td>3</td></tr> </table>	Usually	1	Seldom	2	No	3								
Usually	1														
Seldom	2														
No	3														

13. Would you like to use these lessons for the pupils you teach?

Definitely	1
Probably	2
No	3

V13  15

14. Has the lesson content been laid out logically?

Always	1
Sometimes	2
No	3

V14  16

15. Do you think the lessons stimulate the pupils to think on a:

Lesson series 1

Low cognitive level (recall)	1
Medium cognitive level (analyse)	2
High cognitive level (problem solving)	3

V15  17  
V16  18  
V17  19

Lesson series 2

Low cognitive level (recall)	1
Medium cognitive level (analyse)	2
High cognitive level (problem solving)	3

V18  20  
V19  21  
V20  22

Lesson series 3

Low cognitive level (recall)	1
Medium cognitive level (analyse)	2
High cognitive level (problem solving)	3

V21  23  
V22  24  
V23  25

16. Can these lessons be done without the teacher's assistance?

Usually	1
Seldom	2
No	3

V24  26

17. Do you think it is meaningful to use the computer to present these mathematic lessons?

Yes	1
No	2

V25  27

Motivate: \_\_\_\_\_  
\_\_\_\_\_

<p>18. The computer makes the topic more interesting?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Always</td> <td style="width: 20%;">1</td> </tr> <tr> <td>Seldom</td> <td>2</td> </tr> <tr> <td>Never</td> <td>3</td> </tr> </table> <p>Motivate: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	Always	1	Seldom	2	Never	3	<p>V26 <input type="checkbox"/> 28</p>						
Always	1												
Seldom	2												
Never	3												
<p>19. Have the lesson objectives been reached? Lesson series 1</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	<p>V27 <input type="checkbox"/> 29</p>								
Yes	1												
No	2												
<p>Lesson series 2</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table> <p>Lesson series 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	Yes	1	No	2	<p>V28 <input type="checkbox"/> 30</p> <p>V29 <input type="checkbox"/> 31</p>				
Yes	1												
No	2												
Yes	1												
No	2												
<p>20. Have the learning objectives been reached? Lesson series 1</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table> <p>Lesson series 2</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table> <p>Lesson series 3</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Yes</td> <td style="width: 20%;">1</td> </tr> <tr> <td>No</td> <td>2</td> </tr> </table>	Yes	1	No	2	Yes	1	No	2	Yes	1	No	2	<p>V30 <input type="checkbox"/> 32</p> <p>V31 <input type="checkbox"/> 33</p> <p>V32 <input type="checkbox"/> 34</p>
Yes	1												
No	2												
Yes	1												
No	2												
Yes	1												
No	2												
<p>21. Supply positive aspects regarding the lessons:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>													

22. Supply negative aspects regarding the lessons:

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23. How can the lessons be improved?

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## Bylaag F Vraelys aan waarnemers - Afrikaans en Engelse weergawe

## WAARNEMERSVRAELYS

Beantwoord asseblief al die vrae.

NAAM: \_\_\_\_\_

Leerlinge wat waargeneem word:

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1. Is die leerlinge bang om die rekenaars te gebruik?

In die begin	
Deurgaans	
Soms	
Nooit	

Kommentaar:

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2. Geniet die leerlinge die lesse?

Die meeste van die tyd	
Soms	
Selde	
Nooit	

Kommentaar:

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3. Is daar onderlinge kommunikasie tussen die leerlinge tydens die lesse?

Ja	
Soms	
Nee	

Kommentaar:

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## OBSERVATION QUESTIONNAIRE

4. Waaroor praat hulle?

\_\_\_\_\_

\_\_\_\_\_

5. Die leerlinge ondervind probleme met die:

Rekenaar	Gereeld		Soms		Selde	
Werkkaarte / program	Gereeld		Soms		Selde	
Taal	Gereeld		Soms		Selde	
Toetsbord	Gereeld		Soms		Selde	
Muis	Gereeld		Soms		Selde	
Grafieke	Gereeld		Soms		Selde	
Ander: spesifiseer						
_____						

6. Word die onderwyser deur die leerlinge geraadpleeg gedurende die les?

Ja	
Soms	
Nee	

7. Hoe kan die lesse verbeter word?

\_\_\_\_\_

\_\_\_\_\_

8. Kommentaar en ander waarnemings:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## OBSERVATION QUESTIONNAIRE

**Please answer all the questions.**

NAME: \_\_\_\_\_

Pupils being observed:

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1. Are the pupils afraid of using the computers?

When starting	
Continuously	
Sometimes	
Never	

Comments:

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2. Do the pupils enjoy the lessons?

Most of the time	
Sometimes	
Seldom	
Never	

Comments:

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3. Do the pupils communicate with each other during the lesson?

Yes	
Sometimes	
No	

Comments:

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4. What do the pupils talk about?

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5. The pupils experience problems with:

Computer	Regularly	Sometimes	Seldom	
Work cards / program	Regularly	Sometimes	Seldom	
Language	Regularly	Sometimes	Seldom	
Keyboard	Regularly	Sometimes	Seldom	
Mouse	Regularly	Sometimes	Seldom	
Graphics	Regularly	Sometimes	Seldom	
Other: specify				

6. Is the teacher consulted by the pupils during the lesson?

Yes	
Sometimes	
No	

7. How can the lessons be improved?

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8. Comments and other observations:

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## Bylaag G Leerlinginligting (Milieubenadeelde groep)

NAAM (Skuilname)	GRAAD	OUDERDOM IN JARE *	GESLAG	WISKUNDEPUNT TWEEDETERMYN %
1. Brian	6	13	Manlik	59
2. Mathapelo	6	11-	Vroulik	47
3. Victor	6	14 +	Manlik	56
4. Obed	6	14 +	Manlik	49
5. Ivy	6	12	Vroulik	47
6. Rose	6	12	Vroulik	39
7. Chris	6	13	Manlik	25
8. Nicholas	6	14 +	Manlik	28
9. Prettyboy	6	14	Manlik	45
10. Brian	6	13	Manlik	50
11. Robert	6	12	Manlik	60
12. Alexcious	6	11-	Manlik	34
13. Samuel	6	14 +	Manlik	38
14. Tsepu	6	13	Manlik	52
15. Tom	6	12	Manlik	59
16. Seun	6	13	Manlik	62
17. Kenneth	6	13	Manlik	63
18. Zanele	6	11-	Vroulik	61
19. Beauty	6	11-	Vroulik	39
20. Dinah	6	12	Vroulik	36
21. Michael	6	12	Manlik	22
22. Joseph	6	12	Manlik	59
23. Elliot	6	12	Manlik	44
24. Richard	6	12	Manlik	21
25. Vernon	6	14 +	Manlik	54
26. Patricia	6	13	Vroulik	53
27. Petronella	6	12	Vroulik	65
28. Julia	6	13	Vroulik	36
29. Lebogang	6	14 +	Manlik	35
30. Trevor	6	13	Manlik	41

\* Dieselfde intervalle word gebruik as die wat op die vraelys voorkom: 11- dui op 11 jaar en jonger en 14 + dui op 14 jaar en ouer.

## Bylaag H Leerlinginligting (Vergelykende groep)

NAAM (Skuilname)		GRAAD	OUDERDOM IN JARE *	GESLAG	WISKUNDEPUNT TWEEDE TERMYN %
1.	Driekie	6	12	Vroulik	45
2.	Angelique	6	12	Vroulik	74
3.	Berndien	6	12	Vroulik	30
4.	Montsé	6	11-	Vroulik	85
5.	Desiré	6	12	Vroulik	91
6.	Aurelia	6	11-	Vroulik	96
7.	Nellie	6	12	Vroulik	71
8.	Natasha	6	12	Vroulik	30
9.	Leandrie	6	12	Vroulik	55
10.	Martin	6	12	Manlik	86
11.	Bernard	6	12	Manlik	42
12.	Rudy	6	12	Manlik	53
13.	Pieter	6	12	Manlik	70
14.	Herman	6	11-	Manlik	65
15.	Dorette	6	12	Vroulik	72
16.	Keith	6	12	Manlik	90
17.	Gerald	6	12	Manlik	83
18.	Erik	6	12	Manlik	86
19.	Japie	6	12	Manlik	35
20.	Igno	6	12	Manlik	73
21.	Johannes	6	13	Manlik	69
22.	Wynand	6	12	Manlik	64
23.	Winand	6	12	Manlik	73
24.	Adriaan	6	12	Manlik	68
25.	Hein	6	12	Manlik	40
26.	Heidenrigh	6	12	Manlik	40
27.	Reinier	6	12	Manlik	79
28.	Jaco	6	12	Manlik	82
29.	Carla	6	12	Vroulik	74
30.	Lilanie	6	12	Vroulik	95

\* Dieselfde intervalle word gebruik as die wat op die vraelys voorkom: 11- dui op 11 jaar en jonger en 14 + dui op 14 jaar en ouer.

## Bylaag I Response op houdingsvraelys (milieubenadeelde groep)

Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3	
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie
14. Was dit maklik om die instruksies op die skerm te volg?	Altyd	13	43,3	15	50,0	15	50,0
	Soms	17	56,7	13	43,3	14	46,7
	Nooit	0	0,0	2	6,7	1	3,3
15. Ek moes gedink het om die korrekte antwoorde te kry.	Altyd	17	56,7	16	53,3	10	33,3
	Soms	13	43,3	14	46,7	18	60,0
	Nooit	0	0,0	0	0	2	6,7
16. Ek sal graag meer soortgelyke lesse met die rekenaar wil doen.	Ja	25	83,3	26	86,7	29	96,7
	Nee	5	16,7	4	13,3	1	3,3
17. Die rekenaar maak die lesse oor woordsomme/grafieke interessanter.	Ja	30	100	27	90,0	29	96,7
	Nee	0	0	3	10,0	1	3,3
18. Die rekenaar laat my bang voel.	Altyd	1	3,3	4	13,3	1	3,3
	Soms	9	30,0	10	33,3	6	20,0
	Nooit	20	66,7	16	53,3	23	76,7
19. Ek het die antwoorde geraai.	Altyd	5	16,7	6	20,0	3	10,0
	Soms	16	53,3	16	53,3	22	73,3
	Nooit	9	30,0	8	26,7	5	16,7
20. Het jy die wiskundelesse oor woordsomme/grafieke geniet?	Ja	27	90,0	25	83,3	27	90,0
	Soms	2	6,7	2	6,7	2	6,7
	Nee	1	3,3	3	10,0	1	3,3
21. Die lesse was:	Te maklik	14	46,7	4	13,3	9	30,0
	Te moeilik	3	10,0	3	10,0	4	13,3
	Net reg	13	43,3	23	76,7	17	56,7

Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3		
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie	
22. Ek het probleme ervaar met die:	Toetsbord	11	36,6	10	33,3	12	40,0	
	Muis	4	13,3	5	16,7	-	-	
	Taal	3	10,0	9	30,0	-	-	
	Bewerkings	17	56,5	27	90,0	-	-	
	Inligting insameling	-	-	-	-	10	33,3	
	Inligting verwerking	-	-	-	-	9	30,0	
	Grafieke	-	-	-	-	11	36,6	
23-24 . Lesreeks 1	Na die lesse verstaan ek woordsomme / bewerkings / inligting insameling / inligting verwerking beter.						86,6	
23-27. Lesreeks 2		Ja	27	90,0	27	90,0	26	13,3
23-25. Lesreeks 3		Nee	3	10,0	3	10,0	4	
25. Lesreeks 1	Speletjie	19	63,3	-	-	-	-	
28. Lesreeks 2	Bewerkings	2	6,7	4	13,3	-	-	
	Woordsomme	2	6,7	4	13,3	-	-	
27. Lesreeks 3 Waarvan het jy die meeste gehou?	Om met die muis te werk	7	23,3	7	23,3	-	-	
	Wiskundige terminologie	-	-	4	13,3	-	-	
	Animasies	-	-	3	10,0	-	-	
	<b>Windows 3.1</b> sakrekenaar	-	-	8	26,7	-	-	
	Inligting insameling	-	-	-	-	5	16,7	
	Grafiek teken	-	-	-	-	20	66,7	
	Grafiek interpretasie	-	-	-	-	5	16,7	
26. Lesreeks 1	Speletjie	4	13,3	-	-	-	-	
29. Lesreeks 2	Bewerkings	12	40,0	12	40,0	-	-	
	Woordsomme	9	30,0	4	13,3	-	-	
28. Lesreeks 3 Waarvan het jy die minste gehou?	Om met die muis te werk	5	16,7	3	10,3	-	-	
	Wiskundige terminologie	-	-	0	0,0	-	-	
	Animasies	-	-	5	16,7	-	-	
	<b>Windows 3.1</b> sakrekenaar	-	-	6	20,0	-	-	
	Inligting insameling	-	-	-	-	9	30,0	
	Grafiek teken	-	-	-	-	6	20,0	
	Grafiek interpretasie	-	-	-	-	15	50,0	

## Bylaag 4 – Response op onderrigsmetodes / vergelykende tabel

Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3	
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie
27. Lesreeks 1	Slegs met die onderwyser sonder die rekenaar Saam met die onderwyser en die rekenaar	7	23,3	4	13,8	5	16,7
30. Lesreeks 2		23	76,6	26	86,2	25	83,3
29. Lesreeks 3		Ek verkies om wiskunde lesse te doen:					
28. Lesreeks 1	Meer probleme / grafieke Minder probleme / grafieke Ek wil saam met 'n maat in 'n groep werk Meer oefeninge met die muis Meer oefeninge met die toetsbord Gebruik ander animasies	3	10,0	5	16,7	14	46,7
31. Lesreeks 2		9	30,0	8	30,0	6	20,0
30. Lesreeks 3		18	60,0	5	16,7	3	10,0
Hoe kan die lesse verbeter word?		12	40,0	10	33,3	-	-
		25	83,3	17	56,6	-	-
		-	-	5	16,7	-	-

- = Nie van toepassing

## Bylaag J Response op houdingsvraelys (vergelykende groep)

Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3	
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie
14. Was dit maklik om die instruksies op die skerm te volg?	Altyd	21	70,0	23	76,7	23	76,7
	Soms	9	30,0	6	20,0	7	23,3
	Nooit	0	0,0	1	3,3	0	0,0
15. Ek moes gedink het om die korrekte antwoorde te kry.	Altyd	10	33,3	7	23,3	5	16,7
	Soms	20	66,7	19	63,3	16	53,3
	Nooit		0,0	4	13,3	9	30,3
16. Ek sal graag meer soortgelyke lesse met die rekenaar wil doen.	Ja	28	93,3	30	100,0	30	100,0
	Nee	2	6,7	0	0,0	0	0,0
17. Die rekenaar maak die lesse oor woordsomme/grafieke interessanter.	Ja	27	90,0	30	100,0	29	96,7
	Nee	3	10,0	0	0,0	1	3,3
18. Die rekenaar laat my bang voel.	Altyd	0	0,0	0	0	0	0,0
	Soms	2	6,7	3	10,0	4	13,3
	Nooit	28	93,3	27	90,0	26	86,7
19. Ek het die antwoorde geraai.	Altyd	1	3,3	3	10,0	0	0,0
	Soms	6	20,0	6	20,0	6	20,0
	Nooit	23	76,7	21	70,0	24	80,0
20. Het jy die wiskundelesse oor woord-somme/grafieke geniet?	Ja	25	83,3	26	86,7	27	90,0
	Soms	4	13,3	2	6,7	3	10,0
	Nee	1	3,3	2	6,7	0	0,0
21. Die lesse was:	Te maklik	9	30,0	11	36,7	13	43,3
	Te moeilik	1	3,3	1	3,3	1	3,3
	Net reg	20	66,7	18	60,0	16	53,3



Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3	
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie
22. Ek het probleme ervaar met die:	Toetsbord	6	20,0	6	20,0	9	30,3
	Muis	2	6,7	4	13,3	-	-
	Taal	5	16,7	3	10,0	-	-
	Bewerkings	12	40,0	13	43,3	-	-
	Inligting insameling	-	-	-	-	6	20,0
	Inligting verwerking	-	-	-	-	5	16,7
	Grafieke	-	-	-	-	4	13,3
23-24. Lesreeks 1							
23-27. Lesreeks 2							
23-26. Lesreeks 3							
Na die lesse verstaan ek woordsomme / bewerkings / inligting insameling / inligting verwerking beter.	Ja	29	96,7	29	96,7	29	96,7
	Nee	1	3,3	1	3,3	1	3,3
25. Lesreeks 1	Speletjie	15	50,0	-	-	-	-
28. Lesreeks 2	Bewerkings	5	16,7	3	10,0	-	-
	Woordsomme	5	16,7	10	33,3	-	-
27. Lesreeks 3	Om met die muis te werk	5	16,7	4	13,3	-	-
	Wiskundige terminologie	-	-	0	0,0	-	-
Waarvan het jy die meeste gehou?	Animasies	-	-	4	13,3	-	-
	Windows 3.1 sakrekenaar	-	-	9	30,0	-	-
	Inligting insameling	-	-	-	-	7	23,3
	Grafiek teken	-	-	-	-	19	63,3
	Grafiek interpretasie	-	-	-	-	4	13,3

Vraag / Stelling		Lesreeks 1		Lesreeks 2		Lesreeks 3	
		Frekwensie	Persentasie	Frekwensie	Persentasie	Frekwensie	Persentasie
26. Lesreeks 1	Speletjie	7	23,2	-	-	-	-
29. Lesreeks 2	Bewerkings	14	46,7	11	36,7	-	-
28. Lesreeks 3	Woordsomme	9	30,0	6	20,0	-	-
Waarvan het jy die minste gehou?	Om met die muis te werk	0	0,0	2	6,7	-	-
	Wiskundige terminologie	-	-	4	13,3	-	-
	Animasies	-	-	3	10,0	-	-
	Windows 3.1 sakrekenaar	-	-	4	13,3	-	-
	Inligting insameling	-	-	-	-	8	26,7
	Grafiek teken	-	-	-	-	6	20,0
	Grafiek interpretasie	-	-	-	-	16	53,3
27. Lesreeks 1	Slegs met die onderwyser sonder die rekenaar	5	16,7	6	20,0	6	20,0
30. Lesreeks 2	Saam met die onderwyser en die rekenaar	25	83,3	24	80,0	24	80,0
29. Lesreeks 3							
Ek verkies om wiskundelesse te doen:							
28. Lesreeks 1	Meer probleme / grafieke	12	40,0	16	53,3	21	70,0
31. Lesreeks 2	Minder probleme / grafieke	3	10,0	3	10,0	2	6,7
30. Lesreeks 3	Ek wil saam met 'n maat in 'n groep werk	4	13,3	4	13,3	6	20,0
Hoe kan die lesse verbeter word?	Meer oefeninge met die muis	7	23,3	3	10,0	-	-
	Meer oefeninge met die toetsbord	9	30,3	5	16,7	-	-
	Gebruik ander animasies	-	-	4	13,3	-	-

- = Nie van toepassing

## ADDENDUM Toestemmingsbriewe om navorsing te doen



# Clewer Primary School

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P O Box 20  
Clewer  
1036

4 Februarie 1996

Aan: Die Hoof  
Laerskool Taalfees

Van: Me H. M. Janse van Rensburg

Geagte Mnr Bredenkamp

### Toestemmingsbrief om navorsing te doen

Hiermee verlang ek u goedkeuring om navorsing by Laerskool Taalfees te onderneem, met die doel om my proefskrif getiteld: "Toepassingsmoontlikhede van Rekenaargesteunde Onderwys met milieubenadeelde leerders in Wiskunde in die senior primêre fase" te voltooi.

Om die nodige navorsingsgegewens in te win verlang ek u goedkeuring om onderhoude met personeel te voer, en vraelyste aan leerders uit te deel.

Verder verlang ek ook u toestemming om inligting oor Laerskool Taalfees by my proefskrif in te voeg.

Ek het reeds telefonies die saak met die Mpumalanga Onderwysdepartement uitgeklaar.

Ek dank u by voorbaat.

Die uwe

H. M. Janse van Rensburg



# LAERSKOOI TAALFEES



Alexanderstraat 6    Privaatsak X7251    Witbank 1035    Tel. (013) 656-1674/5    Faks (013) 690-2618    E-Pos: Taalfees@mweb.co.za

5 Maart 1996

Vir aandag : Me H.M. Janse van Rensburg

Geagte Mev Janse van Rensburg

## TOESTEMMING OM NAVORSING TE DOEN

U skrywe van 4 Februarie 1996 verwys.

Hiermee word toestemming aan u verleen om u beplande navorsingsprojek by Laerskool Taalfees te onderneem. Die gebruik van die rekenaarsentrum word tot u beskikking gestel.

Die uwe



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**P J BREDEKAMP**  
**HOOF**