

# *Spreadsheets*

*Original Tasks to Tackle*  
*Grade 10 - 12*

matllo

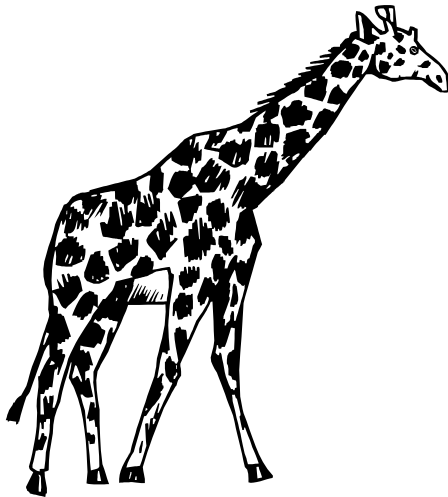
*Anne Matthews & Magda Loots*

## Grade 10/11

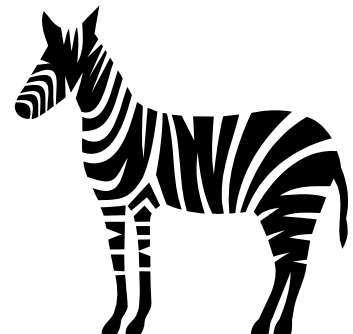
### Excel (calculations and formatting)

50 marks

Johnny works at Katanga Park Services. They manage and control access to the greater St Lucia Wetland Park. He has to key in the latest park fees into an Excel spreadsheet and do certain calculations for two families from Germany that plan to visit the Park. Help him with this task by following the instructions and using the data on the next page. Save the document as **Park Fees**.



1. Create an attractive heading by using WordArt. Choose a horizontal style and suitable font.
2. Use an existing Excel function to insert the current date in E2.
3. Merge the range A1:E1 for the heading and adapt the row height so that the heading fits neatly.
4. Frame the merged cell and add a pastel background colour that matches your choice of WordArt.
5. The column headings will be displayed neatly if you format the cells as follows:
  - ❖ Wrapped text
  - ❖ Horizontal and vertical centring
  - ❖ Bold
  - ❖ Font size 12 pt (Arial or Comic Sans).
  - ❖ Framing
6. Calculate the two German families' entrance fees at the various parks as indicated.
7. Mr and Mrs Dieter Behrens have four children – all of whom are older than 3 but younger than 12.
8. Mr and Mrs Heinrich Shültz have two children. Werner is 2 years old and Gisela 14 years.
9. The day they plan to visit False Bay, Mrs Shültz and Werner will not go along.
10. At the Cape Vidal Gate there is a 10% discount per car on Sundays and children younger than 12 may enter free of charge. Both families plan to get the benefit of this discount.



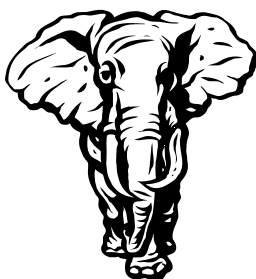
12. What is the average fee per person (adults) at all the Parks? (Display the answer in A:20).
13. Also determine (by means of an Excel function) the number of Parks that charge no fees on vehicle entrance. (Display the answer in A21).
14. Make a printout after completion of the task. Format the worksheet by centring horizontally and vertically on the page.
14. The data you will need to key in is set out below. You may use the same font as in the column headings. Sort the table alphabetically according to the first column:

### St Lucia Wetland Park

	<i>Date here</i>			
<i>GATE</i>	<i>Vehicle charge</i>	<i>Per Person</i>	<i>Per Child under 12</i>	<i>Children under 3</i>
<i>Cape Vidal</i>	<i>R 35.00</i>	<i>R 25.00</i>	<i>R 15.00</i>	<i>Free</i>
<i>False Bay</i>	<i>None</i>	<i>R 25.00</i>	<i>R 13.00</i>	<i>Free</i>
<i>uMkhuze</i>	<i>R 35.00</i>	<i>R 35.00</i>	<i>R 18.00</i>	<i>Free</i>
<i>Sodwana Bay</i>	<i>None</i>	<i>R 20.00</i>	<i>R 15.00</i>	<i>Free</i>
<i>Maphelana</i>	<i>None</i>	<i>R 20.00</i>	<i>R 10.00</i>	<i>Free</i>
<i>Mabibi</i>	<i>R 15.00</i>	<i>R 20.00</i>	<i>R 10.00</i>	<i>Free</i>
<i>Kosi Bay</i>	<i>R 15.00</i>	<i>R 20.00</i>	<i>R 10.00</i>	<i>Free</i>
<i>Charters Creek</i>	<i>None</i>	<i>R 20.00</i>	<i>R 10.00</i>	<i>Free</i>

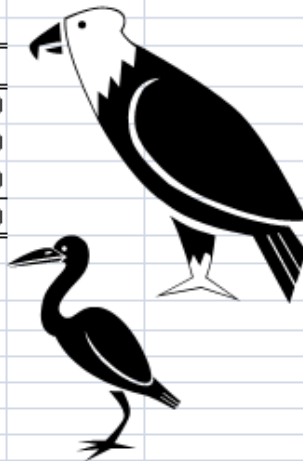
	<i>Behrens</i>	<i>Shültz</i>
<i>Sodwana Bay</i>		
<i>False Bay</i>		
<i>Cape Vidal</i>		
<i>TOTAL</i>		

*In the file named Task 7 (Wetlands pictures).docx there are a number of animal pictures. Open the file and choose one/two pictures to paste here right next to the spreadsheet.*



## SOLUTION – PARK FEES

	A	B	C	D	E
1	St Lucia Wetland Park				
2					2014-07-13
3	<b>GATE</b>	<b>Vehicle charge</b>	<b>Per Person</b>	<b>Per Child under 12</b>	<b>Children under 3</b>
4	Cape Vidal	R 35.00	R 25.00	R 15.00	Free
5	Charters Creek	None	R 20.00	R 10.00	Free
6	False Bay	None	R 25.00	R 13.00	Free
7	Kosi Bay	R 15.00	R 20.00	R 10.00	Free
8	Mabibi	R 15.00	R 20.00	R 10.00	Free
9	Maphelana	None	R 20.00	R 10.00	Free
10	Sodwana Bay	None	R 20.00	R 15.00	Free
11	uMkhuze	R 35.00	R 35.00	R 18.00	Free
12					
13					
14		<b>Behrens</b>	<b>Shültz</b>		
15	Sodwana Bay	R 100.00	R 60.00		
16	False Bay	R 102.00	R 50.00		
17	Cape Vidal	R 81.50	R 106.50		
18	TOTAL	R 283.50	R 216.50		
19					
20	R 23.13				
21	4				
22					
23					
24					
25					
26					
27					



## SOLUTION – PARK FEES

	A	B	C	D
1		TASK 7 (Park Fees)		
2				
3	No.	Action/Calculation/Formatting	Max	Mark
4	1	WordArt for main heading, horizontal style - any font	3	
5	2	A1:E1 merged for heading, row height adapted accordingly	3	
6	3	E2 current date inserted: =TODAY()	2	
7	4	Arial or Comic Sans 12 pt for all except main heading	2	
8	5	Column headings bold, wrap, horizontally & vertically centred	3	
9	6	Table sorted alphabetically according to first column	1	
10	7	Picture(s) inserted and appropriate	4	
11	8	Framing of table and effective use of other lines	2	
12	9	Accurate input of all data	4	
13	10	Appropriate formatting of cells - e.g. Currency	2	
14	11	Calculations in B15 and B16: =(2*C10)+(4*D10), etc.	3	
15	12	B17 - % discount: =B4-(0.1*B4)+2*C4	3	
16	13	C15: =3*C10 AND C16: =2*C6	3	
17	14	C17: =B4-(0.1*B4)+3*C4	3	
18	15	Totals for each family B18:C18: =SUM(B15:B17), etc.	3	
19	16	A20 - Average fee per person (adults): =AVERAGE(C4:C11)	3	
20	17	A21 - Number of Parks that allow free vehicle entrance: =COUNTIF(B4:B11,"None")	3	
21	18	Vertical and horizontal centring on page, check Print Preview	3	
22		<b>TOTAL</b>	<b>50</b>	

## Grade 11/12

### Chart & Excel/Word integration

50 marks

While working at a recruitment agency, you need to make some changes to the data about recruitment and replacement costs. Retrieve the spreadsheet called **Task 34 (Recruit)**. Save the file as **Recruit**.

1. Key in the heading that follows in capital letters in row 1. Align left. Enlarge the font to 16 pt and adjust the row height if necessary.

#### TOP BRASS CAN BREAK THE BANK

2. Open the file called **Task 34 (Recruitment text).docx**. Copy the text to the spreadsheet in row 3. Change the format of the cells to accommodate the text. Check the spelling of the imported text and make the necessary corrections. Abbreviations must be typed in full.
3. Insert the column shown below into the spreadsheet (it is column C). All the figures must be increased by 50%.

MARKETING/ SALES
R9 000
R4 500
R10 000
R1 750
R88 000
R930 000

4. Change the page orientation to landscape. Centre horizontally on the page.
5. Adjust the widths of columns and the height of rows (if necessary) so that all the text is visible and easy to read.
6. Add the words **TOTAL COST** in cell A14 and complete the calculations in row 14. Change the font size and style of this row to 12 pt and bold. Use **currency** format (no decimals).
7. Add the following **electronic comments** in the spreadsheet (without the quotes):
  - a. In cell A12: "Cost is calculated on 5% of turnover". Hide the comment.
  - b. In the cell containing the heading **GM/MD** (allow the comment to show): "GM/MD: General Manager/Managing Director"



8. Replace the figure **2.75** (it may display as **2,75** in your file) in the *GM/MD* column with 2,750,000 (or 2 705 000).
9. Correct the heading in row **5** as follows.

COST ESTIMATES OF RECRUITING/REPLACING MANAGEMENT IN  
VARIOUS DISCIPLINES

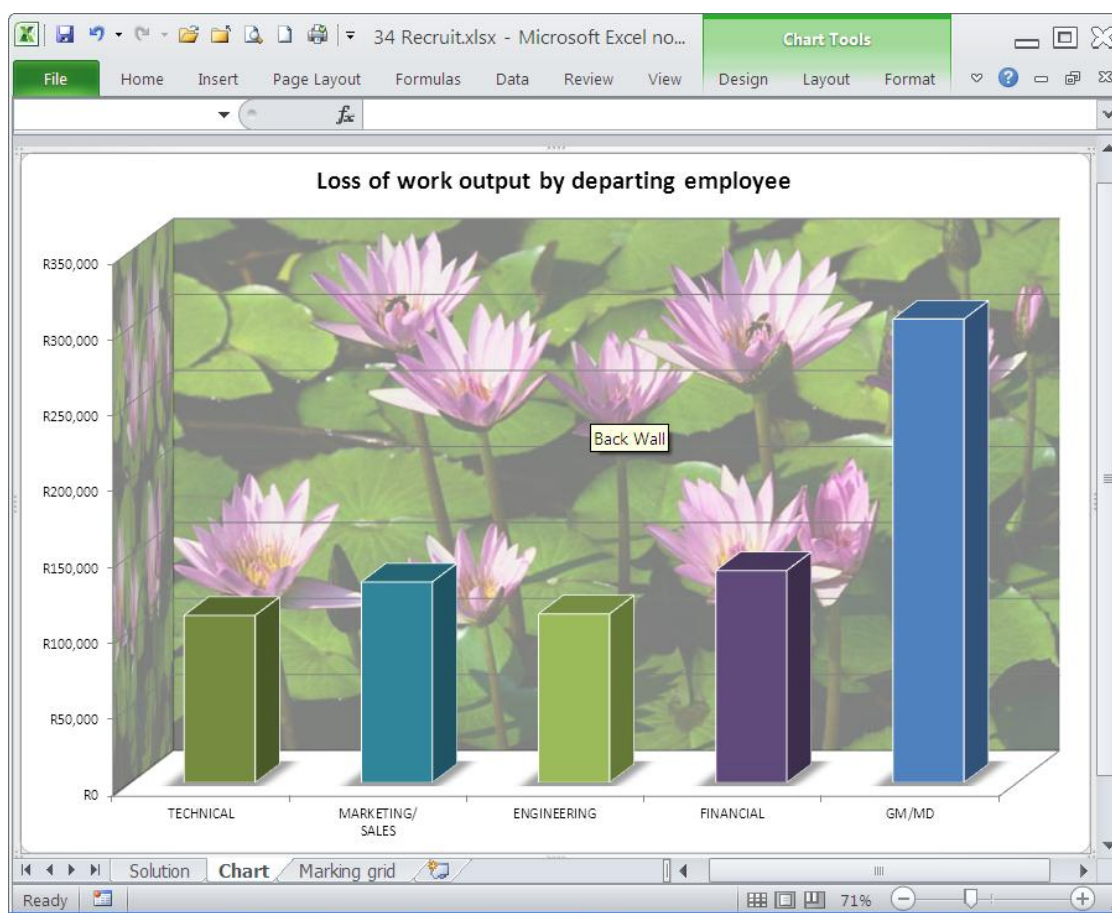
10. Frame all cells in the range **A7:F14**.
11. Use an 'Accent 6' cell style (any colour) for the range **A7:F14**.
12. Change the text in the table heading row (row **7**) to bold.
13. Use **currency** format for all cells containing amounts of money (no decimals).
14. Calculate/determine the following (use rows **17** to **20**, columns **A** and **B**):
  - a. Average total cost.
  - b. Highest cost to company in recruiting someone in the technical field.
  - c. What is the average cost across all fields of training a new employee?
  - d. In which discipline does it cost the most to train a new employee? Use **conditional formatting** to identify the cell containing this total cost.
15. Create a column chart (type: 3D columns with depth) with each column a different colour, for the **Loss of work output** row. Provide appropriate titles and save the chart separately. No legend is required.
16. Format the walls of the chart by using a 'stack' picture in the background.
17. Add the following text in the middle section of the header (Verdana, 11 pt, italics): *Cost estimates for recruitment (work output)*; and insert today's date in the middle section of the footer (any format).



# SOLUTION – RECRUIT

	A	B	C	D	E	F
1	TOP BRASS CAN BREAK THE BANK					
2	It can cost as much as R4 million to recruit or replace a top executive according to estimates by Renwick Management Services. The bulk of the cost of replacing or recruiting management is in the cost of training the new employee. The second-largest contributor to the cost is the cost of work done by the outgoing employee.					
3						
4						
5	COST ESTIMATES OF RECRUITING/REPLACING MANAGEMENT IN VARIOUS DISCIPLINES					
6						
7	COST AREA	TECHNICAL	MARKETING/ SALES	ENGINEERING	FINANCIAL	GM/MD
8	Writing/production/placing of one advertisement in the newspaper	R13,500	R13,500	R13,785	R13,500	R14,000
9	Interviewing applicants	R9,000	R6,750	R10,000	R11,500	R15,000
10	Response administration	R15,000	R15,000	R15,000	R15,000	R15,000
11	Testing and checking references	R3,000	R2,625	R4,200	R4,500	R5,600
12	Loss of work output by departing employee	R110,000	R132,000	R111,000	R139,500	R305,000
13	Cost of training new employee	R1,275,000	R1,395,000	R2,625,000	R315,000	R2,750,000
14	TOTAL COST	R1,425,500	R1,564,875	R2,778,985	R499,000	R3,104,600
15						
16						
17	Average total cost	R1,874,592				
18	Highest cost to company (Technical)	R1,275,000	(Cost of training new employee)			
19	Average training cost (all)	R1,672,000				
20	Highest cost of training	R2,750,000	(General Manager/Managing Director)			

GM/MD: General Manager/Managing Director





## SOLUTION – RECRUIT

	A	B	C	D
1	TASK 34 (Recruit)			
2				
3	No.	Action/Calculation/Formatting	Max	Mark
4	1	Heading text keyed in, row 1: caps, 16 pt, aligned left, row height adjusted	2	
5	2	Text retrieved from Word file, pasted in row 3, columns merged, row height adjusted, text wrapped	2	
6	3	Executive in full	1	
7	4	Spelling of [recruit], [estimates], [recruiting] - use of Excel spell checker	2	
8	5	Insert new column C with heading	2	
9	6	Amounts increased by 50% using Paste Special > Multiply	2	
10	7	Page orientation landscape, spreadsheet centred horizontally	2	
11	8	Column widths and row heights adjusted	2	
12	9	Words "TOTAL COST" inserted, font 12 pt and bold (also figures)	2	
13	10	Calculation (SUM) of total row, currency format	2	
14	11	Electronic comments added to A12 (hide) and F7 (show), also accuracy of text	2	
15	12	2.75 (or 2,75) replaced by 2,750,000 or 2 750 000 (see note below)	1	
16	13	Change word to DISCIPLINES in row 5	1	
17	14	Framing of cells in range A7:F14	1	
18	15	Accent 6 cell style applied to range A7:F14, any colour	2	
19	16	Heading row (row 7) bold text	1	
20	17	Currency format (R-sign up against figures), no decimals (can use cell styles)	1	
21	18	Average total cost (row 14) =AVERAGE(B14:F14)	2	
22	19	Highest cost (Technical: column B) =MAX(B8:B18)	2	
23	20	Average cost of training - all fields (row 13) =AVERAGE(B13:F13)	2	
24	21	Highest cost of training (row 13) =MAX(B13:F13)	2	
25	22	Conditional formatting applied (top/bottom rule, top 1), any formatting	2	
26	23	Column chart (3D with depth) created from "Loss of work..." row; no legend	3	
27	24	Columns different colours	2	
28	25	Appropriate chart title	1	
29	26	Saved separately on own worksheet	1	
30	27	'Stack picture' added to walls of chart	3	
31	28	Header (text) and footer (date) added	2	
32		<b>TOTAL</b>	<b>50</b>	<b>0</b>