

Digital cameras – Grade 11

Create a folder. Name the folder YourSurname_FirstName. Save ALL your files in this folder. Files not found in this folder will not be marked.

Name of question	Hand in Stapled in the correct order	Needed
1 Serious saving	Printed sheet with graph Printed sheet as formula Write answers on Answer sheet	Spreadsheet DigCamSaving.xls
2 Costs	Printed sheet and graph Answers on Answer sheet	Spreadsheet DigCamCosts.xls
3 Sending information		Spreadsheet DigCamFirms.xls Database DigCamFirms.mdb Form letter DigCamLet.doc
4 Finding	Answers on Answer sheet	Database DigCamStock.mdb
5 Formatting the database		Database DigCamFirms.mdb

1 Serious saving

Sipho wants to buy a digital camera. In January 2001 he decided to start saving in earnest. He went to ABSA to discuss his best options. The consultant suggested the Target Save plan.

- You can open an account with a minimum of R50.
- You have to save at least R50 per month for at least one year.
- You may not withdraw any money for the first year.
- You must give 32 days notice if you wish to withdraw any money.
- The amount of interest you receive depends on the current balance.
- The interest is compounded daily (although for this test we will be calculating it monthly).
- You have to go into the bank to make your deposit, but if your balance is over R1000 you can bank via the Internet.
- There are no transaction charges.

This sounded acceptable to Sipho. He started by opening an account in January 2001 with a deposit of R1000. Every month he deposited R75 into his account. At the end of every month interest at the current rate is added to the balance. At the beginning of every month interest is calculated on the balance at the current rate of interest. The interest changes when the amount reaches certain levels.

N.B. Use formulas or functions to do the necessary calculations. The typing of figures will not gain marks.

The spreadsheet is stored as [DigCamSaving](#). You must open the spreadsheet and immediately save it in your login as YourSurname_FirstNameSaving. Then perform the following operations. Refer to the appendix for clarity.

- 1 Provide the spreadsheet with appropriate headings. Format all the headings in bold. Format the headings so that the whole heading is seen at the top of each column using wrap text or whatever is appropriate with your software. [1]
- 2 Add a heading SERIOUS SAVING and centre it across the selection, bold and large. [1]
- 3 Fill in the interest rate. Note that the interest rate changes as the balance changes.

Balance R	Balance R	Interest rate
From	To	
0.01	49.99	0.0%
50.00	499.99	4.25%
500.00	999.99	4.75%
1000.00	1 999.99	5.75%
2 000.00	4 999.99	6.00%
6 000.00	9 999.99	6.80%
10 000.00	+	7.90%

- 4 Format the column widths so that the spreadsheet acquires a neat appearance. The columns must be wide enough to show the figures.
- 5 Format the currency in columns (C, E, F and G) so that each appears in Rands with two decimal places.
- 6 Fill in the Monthly payment column (Column F) with R75.00 for each month.
- 7 Calculate the interest for each month (Column E) by multiplying the balance at the beginning of the month by the interest rate and dividing by 12.
- 8 Calculate the balance at the end of each month (Column G) by adding the balance at the beginning of that month to the interest for the month and adding the Monthly payment.

- 9 Fill in the balance at the beginning of the month (Column C). It is the same as the balance at the end of the previous month.
- 10 Fill in the average interest during the 24 months (average of Column D). [2]
- 11 Calculate the total interest that will be added on the balance over 24 months (total of Column E). [2]
- 12 Calculate the total of all the payments that will be made over 24 months (total of Column F). [2]
- Answer questions 13 and 14 by **writing** down your answers on the answer sheet.
- 13 If Sipho withdraws all his money on 1 January 2003, how much money would he have? [3]
- 14 If in April 2001 he deposited R200 instead of R75, how much money would he have on 1 January 2003. (When you have answered this question, replace the R200 with R75.) [3]
- 15 Using the chart component of the spreadsheet package carry out the following actions:
- 15.1 Draw a line graph of the interest rate over the 24 months. (1)
- 15.2 The graph must be provided with the title "TARGET SAVE INTEREST RATES" as shown in Appendix B. (1)
- 15.3 Provide the x-axis with the title "24 MONTHS" (1)
- 15.4 On the x-axis align the months at 90 degrees in the way shown in the appendix. (The alignment of months is important but the names of all 24 months are not required.) (1)
- 15.5 Provide the y-axis with the title "INTEREST RATES". (1)
- 15.6 On the y-axis indicate the rates. (The rates are important but a specific scale of rates is not required.) (1)
- 15.7 Add a picture of a camera as a background in your graph. (1)
- [7]
- 16 Insert your Surname and First Name and the words Question 1 as a footer, e.g. Bloggs Joe Question 1. **Print** the spreadsheet and graph on *one* sheet.
- 17 **Print** the spreadsheet a second time with its formulae fitted on *one* sheet. [1]
- 18 **Save** the spreadsheet with its associated chart. Exit the spreadsheet program. [22]

Bonus: If you use VLOOKUP tables or IF statement there is a bonus mark of 2.

2 Costs

The spreadsheet is a costing of digital cameras sold by a wholesaler, and is an indication of how customer costs are arrived at.

Copy the spreadsheet [DigCamCosts](#) to your own login. Rename the file YourSurname_FirstNameCosts.

Do not add any rows nor any columns to the spreadsheet.

Refer to the Appendix for clarity.

- 1 VAT column - Using the absolute reference of 14% in E3, calculate the VAT on all the prices. (If you do not use an Absolute reference, no mark.) [1]
- 2 Total column - Add the prices *Without* to the *VAT* amounts. [1]
- 3 Display the monetary values as Rand currency. [1]
- 4 Sort in order of the *Total* from most expensive to cheapest. [1]
- 5 Comments column - Use the If statement - Indicate 'Too expensive for me' if the price *Without* VAT is above R4000. If the price is below that amount, indicate 'Maybe'. [1]
- 6 VAT column - Use conditional formatting making the cells red, to indicate if the VAT is less than or equal to R150. [1]
- 7 Rename the sheet 'Digital cameras'. [1]

- 8 Insert a clustered column chart showing just the amounts of *Without* and *Total* (1)
 - Alpha Cam Explorer XGA USB
 - Alpha USB PC Webcam Camera
 - Fuji Finepix A101 Digital Camera
- 8.1 Indicate the Series names with *Without* and *Total* (1)
- 8.2 Give the chart the legend *Possible buys*
- 8.3 Label the X axis *Cameras*
- 8.4 Label the Y axis *Cost*
- 8.5 The labels on the X axis must all be at 90°.
- 8.6 The full names of the 3 cameras must be visible. (1)
- 8.7 The currency on the Y axis must indicate 0 decimal points. (1)
- 8.8 The legend must be placed on the left of the chart. (1)

- [5]
- 9 Insert your Surname and First Name and the words Question 2.1 as a footer, for example Bloggs Joe Question 2.1
- 10 **Print** the spreadsheet and graph on ONE sheet. [1]

On your answer sheet **write** the answers and formulae used to obtain the following:

- 11 Average Total cost of the cameras [2]
- 12 Maximum Total cost of the cameras [2]
- 13 Total cost of all Fuji cameras [2]
- 14 Total number of all USB cameras [2]
- [21]

3 Sending information

The firm Computer Wholesalers needs to send out a personalised letter telling their customers that they have just obtained new stock of digital cameras. It is hoped that they will place their orders soon so they can sell them to the public during the Xmas shopping period. The firms also needs to mention to just those shops in the Pinelands area that Pinelands High may want to buy a camera.

- 1 Using the mail merge feature, create a merged letter to send to all 24 firms in the spreadsheet or database. The firms are listed in the spreadsheet [DigCamFirms](#) or the database [DigCamFirms](#). The form letter to use is the word document [DigCamLet](#).
- 2 *IF* the firms have the postal code of 7405 add the *Word field* "Pinelands High is probably going to buy a digital camera soon." [4]
- 3 Merge the work and **save** it as YourSurname_FirstNameMerged. [4]
- [8]

4 Finding

This data is an inventory of stock held by a wholesaler.

- 1 Open the database file [DigCamStock](#). Look at the table Cameras. This table has been obtained from a large wholesale firm which sells to shops.

There are three prices:

- Wholesale price - This is the price shops such as Naughty Lemon pay wholesale dealers such as Rectron for stock
- Retail price without VAT - The profit Naughty Lemon would obtain would be - *Retail price without VAT* minus *Wholesale price*
- Retail price with VAT - This is the price you would pay Naughty Lemon if you bought the item from him.

Write the answers on your answer sheet. Give the question number, answer and then Field1, Criteria1, Field2, Criteria2 where necessary. Both answer, field and criteria are required for each question.

All of the questions below refer to *Retail price with VAT* unless otherwise indicated.

- 1 How many Canon cameras are there in the table?
- 2 How many cameras have the USB feature?
- 3 How many cameras come with bundled software?
- 4 How many cameras cost less than R500?
- 5 How many cameras cost between R500 and R1000?
- 6 How many Intel cameras cost between R500 and R1000?
- 7 How many cameras do not have *digital* in their description?
- 8 How many Canon or Epson cameras are there in the table?

[8]

5 Formatting the database

Use the database [DigCamFirms](#) and the table Computer firms.

- 1 Display the format of the table
 - 1.1 with the names of the firms as capital letters (1)
 - 1.2 with all telephone numbers grouped with three letters and then four letters (1) [2]
 - 2 Personalise the database with the title *Customers* and an icon [2]
 - 3 Add a validation rule to make sure that from now on that the postal code of all firms are added. [2]
 - 3.1 Validation rule - Use the coding "????"
 - 3.2 Validation text - Postal code please
 - 3.3 Required field - Yes
- [6]

Name

Serious saving

13

14

Costs

	Question 2 Costs	Answer	Formula
11	Average Total cost of the cameras		
12	Maximum Total cost of the cameras		
13	Total cost of all Fuji cameras		
14	Total number of all USB cameras		

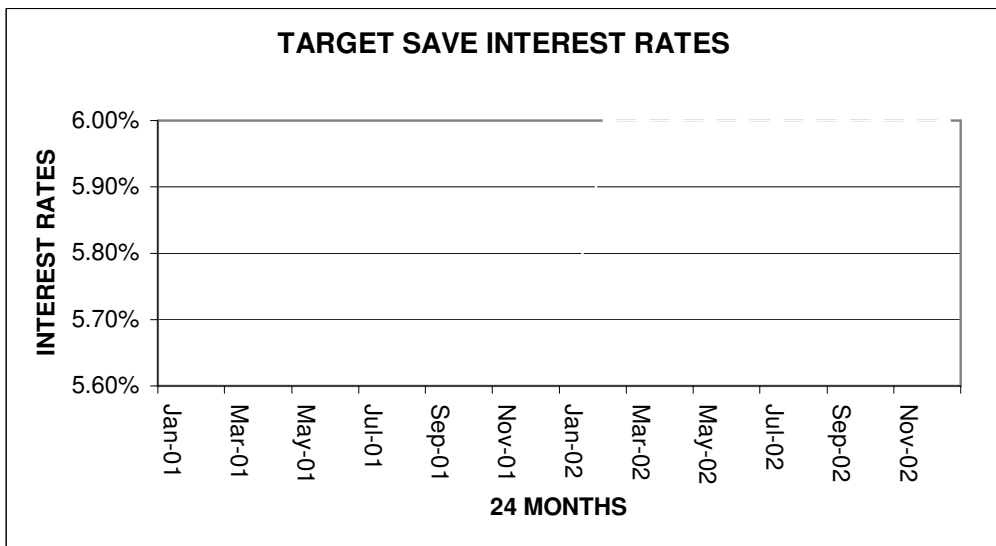
Finding

	Answer	Field1	Criteria	Field2	Criteria
1	How many Canon cameras are there?				
2	How many cameras have the USB feature?				
3	How many cameras come with bundled software?				
4	How many cameras cost less than R500?				
5	How many cameras cost between R500 and R1000?				
6	How many Intel cameras cost between R500 and R1000?				
7	How many cameras do not have <i>digital</i> in their description?				
8	How many Canon or Epson cameras are there?				

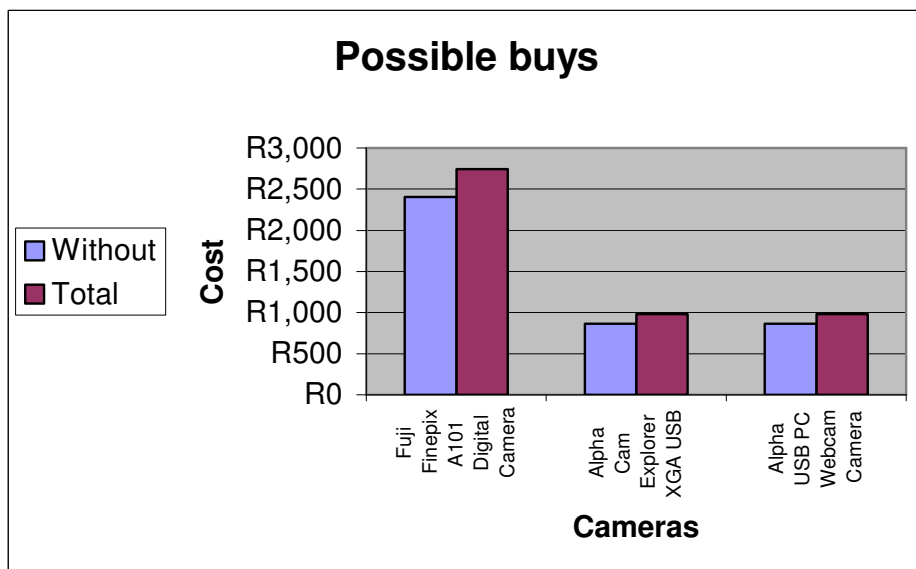
Appendix

SERIOUS SAVING							
Month		Balance at beginning of month	Interest rate	Interest for the month	Monthly payment	Balance at end of month	
1	Jan-01	R 1,000.00	5.75%	R 4.79	R 75.00	R 1,079.79	
2	Feb-01	R 1,079.79	5.75%	R 5.17	R 75.00	R 1,159.97	
3	Mar-01	R 1,159.97	5.75%	R 5.56	R 75.00	R 1,240.52	
4	Apr-01	R 1,240.52	5.75%	R 5.94	R 75.00	R 1,321.47	

Question 1



Question 1



Question 2

Computers For Us

123 Bree Street

Cape Town

8001

10 November 2002

computersforus@mweb.co.za

www.computersforus.co.za

<<Name>>

<<Address1>>

<<Address2>>

<<Address3>>

<<Address4>>

<<Postal code>>

Dear Sir or Madam

We wish to bring to your attention the arrival of new digital cameras. Listed below are their names and the wholesale prices.

Alpha Cam Explorer XGA USB	R859.99
Alpha USB PC Webcam Camera	R859.96
Fuji Finepix A101 Digital Camera	R2407.95
Fuji Finepix A201 2 MP Digital Camera	R3697.99
Kodak CX 4230 Digital Camera	R4592.40
Logitech Clicksmart 310 Digital Webcam	R1203.96
Logitech Quickcam Express USB	R687.96
Logitech Quickcam Pro 3000	R1289.99
Sony DSC-P31 Digital Camera	R3267.96

We suggest that you order soon, before Xmas.

Put comment about Pinelands here.

Yours sincerely

B. Fish