

Business Mathematics (BK/IBA) – Quantitative Research Methods I (EBE) Digital test 2

Question 1

b)

Family name	Galt
Given name	John
Student number	1234567
Programme	IBA
Date	7 October 2015

Question 2

a)

$$S = \begin{cases} aT & \text{if } T > 10 \\ 0 & \text{otherwise} \end{cases}$$

where S is the sales of ice creams, T is temperature, and a is some constant.

b)

$$c = \left(\sum_{i=1}^{23} a_i \right) \frac{1}{1 - \sqrt{a^2 - b^2}}$$

Question 3

a)

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	0	-1	2	-3		0		0.056911	0.121951	0.219512	0.056911		0.398374
2	1	4	0	5		0		0.178862	0.097561	-0.02439	0.178862		1.252033
3	4	-3	0	-2		0		0.357724	0.195122	-0.04878	-0.14228		-0.99593
4	0	4	-2	0		7		-0.15447	0.097561	-0.02439	-0.15447		-1.0813

b)

excel_digitaltest_2_answers.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Add-Ins

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11

General

Conditional Formatting as Table Cell Styles

Insert Delete Format Sort & Filter Find & Select

Clipboard Font Alignment Number Styles Cells Editing

P3 {=N1:N3-E1:E3}

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	-20.3	12.5	5.6		2.3		-20.3	65.2		4663.13	-1205.67	166.68		51165.04		51162.74
2	65.2	-14.6	4.3		-27.5		12.5	-14.6		-1205.67	369.41	7.22		-12616.3		-12588.8
3					43.7		5.6	4.3		166.68	7.22	49.85		2363.259		2319.559
4																
5																

Sheet1 Sheet2 Sheet3 Sheet4

Ready 100%

c)

Solver Parameters

Set Objective:

To: Max Min Value Of:

By Changing Variable Cells:

Subject to the Constraints:

Make Unconstrained Variables Non-Negative

Select a Solving Method:

Solving Method

Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.

d)

Formula for f in B2

=EXP(B\$1)+2*\$A2

Do not forget to save this file regularly!