

Graphical Times.

Volume 11, Issue 44, 2012.



Welcome back to term 4! Winters officially over and we are on the home straight! Please find this term 4 newsletter, activities and pricing informative. As the first two weeks of the term are in October we are starting **back to school** pricing 2 weeks early so that if you need to spend that last bit of your department budget before it is frozen for the remainder of 2012 then you can purchase at the 'Back to school' prices.

What's in here!

Included in this terms newsletter are calculator activities for the CAS, graphic and scientific calculator:

- Worksheet for the Classpad 330+ and similar models: Limiting value for π
- Worksheet for the FX9750GII and similar models: List data linking
- Worksheet for the FX82AU: Why does $\sqrt{\sqrt{\sqrt{\sqrt{\dots}}}} \dots x \rightarrow 1$?

Term 4, 2012 pricing, valid for term 4 and upto 28th February 2013 or whilst stocks last.

N.B. The 2012 Graphic Technologies Catalogue is available on request.

Please email us: graph.tech@xtra.co.nz to receive your free copy.

Graphic Technologies Specials for Term 4.

See our **hot competitive pricing** valid until the end of February 2013.

Product	# of Units	Price per unit (excl GST)
FX9750GII graphic calculator (monochrome)	1 - 10	\$81.00
	11 - 19	\$78.50
	20 +	\$75.50
FA-124USB cable [high-speed data communication between PC and the FX9750GII] New item	NA	\$15.00
FX82AU emulator software [Limited supply] New item	NA	\$60.00

EA-2 CASIO MOTION SENSOR

Emits Ultrasonic pulses
Detects Pulses returned
Can connect to EA200

EA200 CASIO DATA LOGGER

Data Analyser
Includes Temperature, Optical and Voltage Probe
Data collection at up to 50,000 points per second

Product	EA-200 Data Logger	EA- 2 Motion Sensor	Both units purchased
			
Price (exclusive GST) per unit	\$300.00	\$300.00	\$500.00

The FX82AU+ and FX9750Gii emulator software are very useful tools in supplement and support classroom teaching and learning. Below is a link to download a free 90 day trial from Casio Education so that can see how great they are. Visit: https://edu.casio.com/freetrial/freetrial_form.php. See the pricing sheet with this mailout for very competitive emulator pricing. Graphic Technologies are the only New Zealand supplier of these emulators.

[See the term 4 pricing sheet for more products and associated pricing.](#)

Data projectors

Casio projectors have been added to our product range. If you are thinking of replacing your current data projectors or looking for an additional unit(s) to meet your schools requirements please consider either of these units offered in our school pricing list. Additional information on these two data projectors is available on request.

Features Include:

- Ecologically sound and energy saving
- NEW mercury-free light source
- 2 × optical zoom
- Lamp-free technology with up to 20,000 hours continuous performance
- WLAN capability
- USB 2.0 for FX9750Gii graphic calculator can be connected directly into the projector [XJA145]
- USB data files can be connected directly into the projector
- The size of a ream of A4 paper!



Workshop opportunities.

Workshop opportunities: If you would like to have a workshop for teachers and (or) students then please make contact with *Graphic Technologies*. A large number of schools are taking up this opportunity either singularly or as a cluster of schools (with both the graphic calculator and the ClassPad330+), to look at how the graphic and CAS calculators could impact on and be integrated into classroom practices. With NZQA having acknowledged that year 11, 12 & 13 students without a graphical calculator being disadvantaged, a large number of schools are taking up the opportunity to upskill teachers and students with this technology.

Websites of interest...

- stratified, systematic and cluster are all random sampling methods, and often more practical than simple random sampling. You may find this video useful in teaching about them <http://www.youtube.com/watch?v=be9e-Q-jC-0>
- genstat <http://www.vsni.co.uk/software/genstat>
- InZight <http://www.stat.auckland.ac.nz/~wild/iNZight/dlw.html>
- Interactive games: These games encourage students to explore the concepts of statistical methods in a fun and interactive manner. They have been graded into curriculum levels to help teachers identify which games are most appropriate for their students.
http://www.stats.govt.nz/tools_and_services/services/schools_corner/Activities/Interactive-Games.aspx
- Knowmia's lesson database is constantly growing. Every teacher who uses our free tools to create great lessons for their own class is also contributing these lessons to the greater community and you decide how to use it. Some teachers use lessons from Knowmia in the classroom while others assign them to students as homework. You are the teacher and you know what is best for your own students. <http://www.knowmia.com/>

Program to support the use of the FX9750Gii

In 2011 Casio Education NZ launched the 'Top Schools Program' to support schools using the new model of FX82AUplus scientific calculator. Registration numbers and general feedback indicated that the resources provided were of great benefit, so Casio Education NZ launched a similar program in 2012 to support schools currently using (or wanting to use) the FX9750Gii graphic calculator. Details were released in term 2, an information pack was sent in the post. The goal is to have all senior students in New Zealand using a graphics calculator so that no one is disadvantaged during NCEA examinations or in NCEA internal assessments. Professional development courses will be offered in conjunction with Graphic Technologies supporting the program which looks to offer a sample calculator and comprehensive 'How to get started on your FX9750Gii' instructional manual. Details of the program can be uploaded from www.casio.edu.monacocorp.co.nz.

Worksheets downloaded off the web.

Visit Monaco Corporation and Graphic Technologies websites to view and download worksheets. There are links to other informative mathematics education websites too. For teachers we currently offer a large number of 'classroom ready' resources available and are designed primarily for the CASIO® FX82AU, FX9750Gii, FX9750G, FX9750G+, CFX9850GB, CFX9850GB+, CFX9850GC+, FX9750GA+ and FX9750Gii models of graphical calculators and the ALGEBRA 2.0. There is also a variety of activity sheets designed for the ClassPad300, 300+, 330A and 330A+ models. All of the activities and worksheets are designed for beginners to advanced users of the GC and CAS. More have been added to the website since the last newsletter.

Please visit: www.casio.edu.monacocorp.co.nz and <http://graphic-technologies.co.nz>.

Some features of the FX9750Gii explored

Use of the **Binomial CD**(and **Binomial PD**(calculations.

Question: The farmer finds that insects have damaged 5% of all the sweet corn cobs grown and therefore these damaged sweet corn cobs will be unable to be given to the school.

- Find the probability that in the next 10 sweet corn cobs the farmer picks, at most 2 sweet corn cobs will not be able to be given to the school because of insect damage.
- Find the probability that in the next 10 sweet corn cobs the farmer picks, at 2 sweet corn cobs will not be able to be given to the school because of insect damage.
- Find the probability that in the next 10 sweet corn cobs the farmer picks, at least 2 sweet corn cobs will not be able to be given to the school because of insect damage.

Answer: In RUN-MAT icon

- $n = 10, x = \{0, 1, 2\}, p = 0.05$



Enter RUN-MAT from the Main Menu



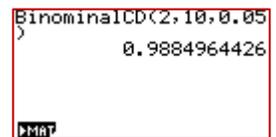
SHIFT [4] for Catalogue



Scroll down until you reach Binomial CD(



[F1] to input onto the screen

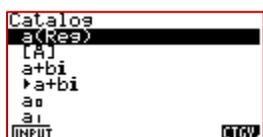


Enter the uppermost value, then the total number of trials, then the probability then)

- $n = 10, x = 2, p = 0.05$



Enter RUN-MAT from the Main Menu



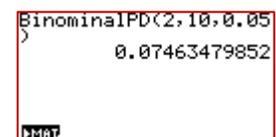
SHIFT [4] for Catalogue



Scroll down until you reach Binomial CD(



[F1] to input onto the screen



Enter the X = x score value, then the total number of trials, then the probability then)

- $n = 10, x = \{3, 4, 5, 6, 7, 8, 9, 10\}, p = 0.05$



Enter RUN-MAT from the Main Menu



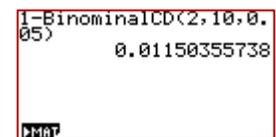
SHIFT [4] for Catalogue



Scroll down until you reach Binomial CD(



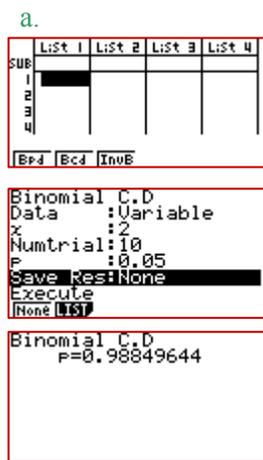
1 - [F1] to input onto the screen

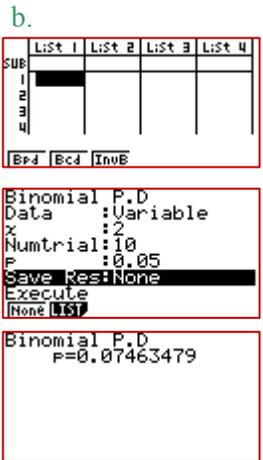


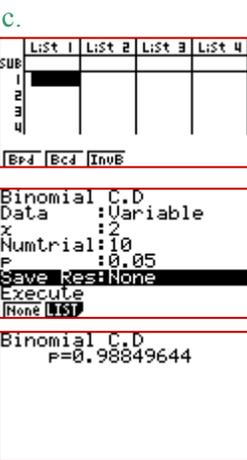
Enter the uppermost value, then the total number of trials, then the probability then)

Answer: In STAT icon



a. 

b. 

c. 

Answer: $P(X \geq 2)$
 $= 1 - 0.98849644$
 $= 0.01150356$

NOTE: Similar entries for the Normal Distribution and Poisson Distribution calculations, via ‘Catalogue’.









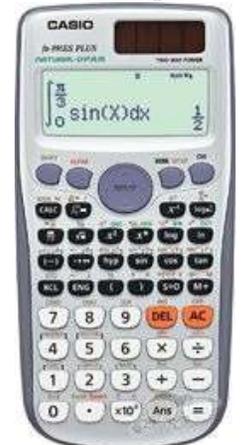
Casio fx-991ES plus Calculator

For use in the CIE Exams, IGCSE, A/AS and at university. It is the most advanced CIE approved calculator on the market. *Cambridge rules:*

- Where the only issue with calculators used by schools is that they produce exact numerical irrational output, and otherwise do not have any of the prohibited features, then they are permitted.
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FEATURES INCLUDE:

Two way power	Matrix calculations / Vector calculations	CALC function / SOLVE function
417 Functions	Complex number calculation	List-based STAT data editor
Full Dot Display	Logarithm	Standard deviation
Integration / Differentiation	Base-n calculation	9 variable memories
Equation calculation	Fraction calculation	Logical operations
40 scientific constants	Combination and Permutation	Table function
New equation mode with $\sqrt{\quad}$ and fraction display	40 metric conversions (20 conversion pairs)	Paired-variable statistics regression analysis
New slide on hard case	Natural Textbook Display	Random integers



Allows surd, numeric, improper fractions, proper fractions and standard deviation form.

Natural textbook display lets you input and display fractions, square roots, and other numeric expressions just as they appear in your textbook! Visit: <http://edu.casio.com/products/advcs/fx991esplus/> for more information.

A last word!

Well again, that's all I can fit onto the 4 pages! Enjoy the term! Hope to see you at some workshops or hear from you via this newsletter or otherwise! If you would like to contribute or have suggestions as to what you would like to have discussed via this medium, please do not hesitate to contact us either by snail - mail, email, website, telephone, text or fax.

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