2 terrific technologies

ClassPad (CAS) and Graphe Easy (software)



Presenter: Geoff Phillips

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Session outline:

Part 1

ClassPad's ease/speed of use - a tour of some highlights

Basic operation	Modes (std/dec, rad/deg, recalc line/all)
Drag and drop (within and be	tween apps), live updating
Keyboards	2D etc. simult. eqns, derivatives etc.
CAS alegebra	solve, factorise, expand, differentiate, sim eqns etc.
Wizards	e.g. Normal curve calcs.
Graphing	$p(x) = x^3 + 5x^2 - 8x - 12$, locating key features, tangents and
	integrals, dynamic graph, panning.
Sequences	Defining explicit/implicit, tables, sum, graphs
Solver	Solve for any variable in an equation (no need to $put = 0$).
Main – Geom	dragging from Main to Geometry app & vice verse.
Geometry unleashed	incentre, theorems made fun, tangent animations, tables
Spreadsheet application	copying data from Geometry area investigation
Statistics	lists, stats calcs, regression calcs and plots.
eActivity	family of functions, dragging to Main for analysis.
Questions	How do I?

Part 2

Graphe Easy – teaching aid and desktop publishing application

Basic graphing	y = xx
Built in features	Plot types, Parameters, Integration, Data, DEs etc.
Teaching aid files	Left boxes example, Gradient of secant.
Representing data	Scatter, column and box plots.
Keyboard shortcuts	Customising GE for use in desktop publishing.
Desktop publishing	Formatting for tests and worksheets.

Modes / keyboards





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Simultaneous equations – 4 methods

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CAS algebra







Wizards

Interactive/Distribution/nornCDf





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Toolbar icon or Analysis/G-Solve/



Tabulate icon.



Analysis/G–Solve/ $\int dx$ /Key lower



Arrow key for next root.



Points plot icon.

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Include *a* and *b* in equation.



Main → Geometry

From Main, enter expression Drag to Geometry window Draw/Construct/Tangent to Curve



Create animation (Edit/Animate/Add) Edit/Animate/Go Once Tabulate point co-ords and slope



Drag table back to Geom window



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Geometry unleashed







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Spreadsheet application

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Combining applications (e.g. Geometry and Spreadsheet apps)









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Calc, Distribution.

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Statistics



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Calc, LinReg (list1, list2).



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eAcitivities (i.e. Save-able files)

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Questions - "How do I ...?"

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Part 2 Graphe Easy – teaching aid and desktop publishing application

Basic graphing $y(x) = x^2$

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Built in features <u>Parameters</u>! Set up *a*, *b* and *n*.

Teaching aid file 1 Document→New Math Object→Integrals etc. Formatting. Text Calc (* *) box & Commands.





Teaching aid file 2 Introduction to limits, differential calculus

Teaching aid file 3 Differential equations and Euler's method (screen 1)





Teaching aid file 3 Differential equations and Euler's method (screen 2)

Representing data



Keyboard shortcuts

$Tools \rightarrow Customise \rightarrow Keyboard$

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Formatting for tests and worksheets



Information and further resources





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Geoff Phillips – ClassPad Geoff's ClassPad pdfs

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Geometry theorems

Appendix ClassPad Geometry and calculus – The gradient function eActivity





eActivity/More theorems/Circle tangents



Geometry→GP_Geom/BoxVol2



GPeActs→Integral anim







Geometry→GP_Geom→GradChor File Edit View Draw

GPeActs→River and fence 2 (Geom) ▼ File Edit View Draw





→Van Aubel's theorem

File Edit View Draw

Van Rubel's theorem

Van Rubel's theorem

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GPeActs→Grad-tangt●



