

## eActivities

### Introduction

To quote the Casio world site, "The innovative eActivity functions of the fx-9860G series allow the students, not to mention teachers, to create their own problems or study materials. With this function, students can learn at their own pace and study more efficiently at school or at home. By making full use of the superb features of the eActivity function, motivation for learning and understanding can be greatly improved."

This edition – Volume 4 - of fxNews contains three new eActivities.

**LAT~LONG** is an eActivity to help solve distance problems along lines of latitude or longitude between places on the earth.

<pre> =====LAT~LONG===== Latitude and Longitude Problems General hints      NOTES Travel N-S        NOTES D=2πR×θ FILE STRP TEXT CHAR A↔3 ▾                 </pre>	<pre> Decide which way by considering positions Example Melb 38°S 145°E to Cook 16°S to 145°E Note the E same and S different, so travel JUMP DEL INS MATH CHAR A↔3                 </pre>	<table border="1"> <tr><td>Travel N-S</td><td>NOTES</td></tr> <tr><td>D=2πR×θ</td><td></td></tr> <tr><td>Travel N-S</td><td>SOLVE</td></tr> <tr><td>Travel E-W</td><td>NOTES</td></tr> <tr><td>FILE STRP TEXT CHAR A↔3 ▾</td><td></td></tr> </table>	Travel N-S	NOTES	D=2πR×θ		Travel N-S	SOLVE	Travel E-W	NOTES	FILE STRP TEXT CHAR A↔3 ▾	
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FILE STRP TEXT CHAR A↔3 ▾												

**MATTRANS** is a collection of *notes* strips that summarize common matrix transformations, together with some hints and examples.

<pre> =====MATTRANS===== Summary of matrix transformations. General           NOTES Reflection        NOTES Rotation          NOTES FILE STRP TEXT CHAR A↔3 ▾                 </pre>	<pre> The origin (0,0) never moves under any matrix transformation Premultiply object coordinates by transformation matrix JUMP DEL INS MATH CHAR A↔3                 </pre>	<pre> [0 -1] 270° [1  0] θ° from x-axis [cos θ -sin θ] [sin θ  cos θ] JUMP DEL INS MATH CHAR A↔3                 </pre>
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**MOVINGAV** is a set of Solve strips to help with calculation of 3, 4, 5, 6 and 7 point moving averages, together with residuals.

<pre> =====MOVINGAV===== Solve moving average Problems Help              NOTES 3 MA              SOLVE 4 CMA            SOLVE FILE STRP TEXT CHAR A↔3 ▾                 </pre>	<pre> Even moving averages are all centered. Example 4 point CMA for A, B, C, D and E is 4CMA= A+2+B+C+D+E+2 4 JUMP DEL INS MATH CHAR A↔3                 </pre>													
<table border="1"> <tr><td>Help</td><td>NOTES</td></tr> <tr><td>3 MA</td><td>SOLVE</td></tr> <tr><td>4 CMA</td><td>SOLVE</td></tr> <tr><td>5 MA</td><td>SOLVE</td></tr> <tr><td>6 CMA</td><td>SOLVE</td></tr> <tr><td>FILE STRP INS CHAR A↔3 ▾</td><td></td></tr> </table>	Help	NOTES	3 MA	SOLVE	4 CMA	SOLVE	5 MA	SOLVE	6 CMA	SOLVE	FILE STRP INS CHAR A↔3 ▾		<pre> Eq: (A+2+B+C+D+E+2)+4= A=34 B=42 C=30 D=32 E=0 M=35 RCL DEL SOLV                 </pre>	<pre> Eq: (A+2+B+C+D+E+2)+4= E=38 Lft=35 Ret=35 REF                 </pre>
Help	NOTES													
3 MA	SOLVE													
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5 MA	SOLVE													
6 CMA	SOLVE													
FILE STRP INS CHAR A↔3 ▾														
<pre> Residuals. These are usually given by Residual=DataPoint-MA Residual          SOLVE FILE STRP TEXT CHAR A↔3 ▾                 </pre>	<pre> Eq: A-M=R A=0 M=0 R=0 Lower=-9E+99 Upper=9E+99 RCL DEL SOLV                 </pre>													

## Easy to customise.

Once in their own fx-9860G, all eActivities can be modified by teachers or students to suit their own personal requirements. Examples can be deleted, notes can be edited or added to and so on. If you want to save these changes, remember to save the eActivity before you leave it.

## Working with eActivities

After loading an eActivity into your fx-9860G (see feature 'How to load fxNews from CD into your fx-9860G'), choose eACT from the Main Menu. Highlight the FXN06V4 folder, tap EXE, highlight the eActivity you require and tap EXE again.

Scroll down through the eActivity. When you arrive at a 'strip' it will highlight itself. Tap EXE to jump into the application and work on it, just as you would if you had entered through the main menu. Note that each strip is an individual and unique copy of one of the applications available from the Main Menu.

To return to the eActivity tap SHIFT then → (the arrow key below the tan key).

Once within a strip, to jump to another strip tap SHIFT then , (the comma key below the cos key).

To leave an eActivity tap EXIT. You will be asked whether you want to save changes to the eActivity. To leave the eActivity unchanged, tap F6 (No).

## eActivities in this edition

Below is a brief summary of each of the included eActivities.

Name	Description
<b>LAT~LONG</b>	This is an eActivity to help solve distance problems along lines of latitude or longitude between places on the earth.
<b>MATTRANS</b>	This eActivity is a collection of Note strips that summarize common matrix transformations, together with some hints and examples.
<b>MOVINGAV</b>	This is a set of Solve strips to help with calculation of 3, 4, 5, 6 and 7 point moving averages, together with residuals.