

# USING THE CASIO FX-82ES CALCULATOR

## HINTS IN COMP MODE

**HOW TO** clear your calculator of all previous settings

SHIFT



**You have 3 important calculation modes:**

MODE SETUP



- 1: COMP Use for all general calculations
- 2: STAT Use for all statistical and regression calculations
- 3: TABLE Use for drawing all functions and finding y values from input x values



**HOW TO** know what you have done wrong

when you get a **MATH ERROR** PRESS  $\leftarrow$  and the cursor goes back to highlight the mistake

$\sin^{-1}(1,5) \leftarrow \sin^{-1}(1,5=)$  because  $-1 < \sin x < 1$

$5 \div 0 + 16 \leftarrow 5 \div 0 = +16$  because you may not divide by 0.

**HOW TO** set your calculator for best use/display

- SHIFT MODE SETUP SETUP and choose 1: MTH IO
- SHIFT MODE SETUP 1: a b/c (for mixed fractions)
- SHIFT MODE SETUP 1: d/c (for improper fractions)
- SHIFT SETUP 3: DEG (default angle measure degrees) make sure you are never in 4: RAD (you will get all answers wrong)

**HINT FOR STAT MODE**

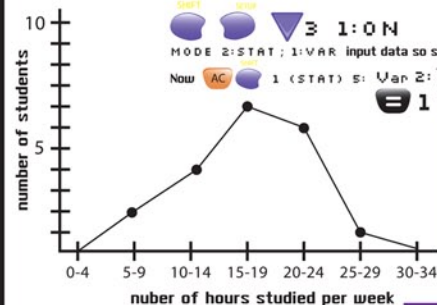
**HOW TO** get an estimated mean from grouped data

TURN FREQUENCY ON:

SHIFT MODE SETUP 3: 1: ON

MODE 2: STAT 1: VAR input data so screen becomes

Now AC 1 (STAT) 5: Var 2: X = 17



**HOW TO** use the **ANS** button. This works like a memory storing answer from the last time you pressed  $\text{=}$ , even if you turn calculator off. Very handy in Finance to store partial workings for annuities. Solve for x (payment).

$$180\,000 = X \frac{\left(1 + \frac{0,135}{12}\right)^{60} - 1}{\frac{0,135}{12}}$$

Work out ① get 85,03512704  
now AC 180 000  $\div$  ANS = 2116,77  
 $\therefore$  payment of R2116,77 needed monthly for 5 years.



**HOW TO** get answers left in  
a) surd form after calculation press  $\text{=}$   
b) decimal form after calculation press  $\text{=}$

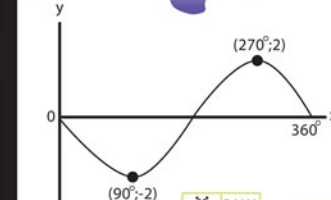
Example:  $\frac{-6 + \sqrt{48}}{2} = -3 + 2\sqrt{3}$   
SHIFT  $\text{=}$  = 0,4641



**HINT FOR TABLE MODE**

**HOW TO** sketch  $y = 2 \sin \theta$  for  $\theta \in [0^\circ; 360^\circ]$

MODE SETUP MODE 3: TABLE ALPHA (X)  $\text{=}$



START ? 0 = 0 0  
END ? 360 = 180 0  
STEP ? 90 = 270 2  
360 0



**HOW TO** get a regression function  $\hat{y} = Bx + A$

Use (3;4) (6;9) (7;8) (12;13) (16;14) (14;14) (20;21) to get  $\hat{y} = Bx + A$

MODE SETUP MODE 2: STAT 2: A+BX  
input all x  $\downarrow$  then go up and insert all y  $\downarrow$   
AC SHIFT STAT 7: REG

- 1: A 2,1125
- 2: B 0,8745
- 3: C 0,97 (if asked for correlation)
- $\therefore \hat{y} = 0,8745x + 2,1125$

X	Y
3	4
6	9
7	8
12	13
16	14
14	14
20	21

**HOW TO** check whether general term for sequence is correct

1) given 3; 17; 4; 8... get  $T_n = 3(2)^{n-1}$   
Check:  $F(x) = 3(2)^{x-1}$   
START ? 1  
END ? 4  
STEP ? 1

X	F(X)
1	3
2	15
3	0,75
4	0,375

2) given 6; 17; 34; 57... get  $T_n = 3n^2 + 2n + 1$   
Check:  $F(x) = 3(x)^2 + 2x + 1$   
START ? 1  
END ? 4  
STEP ? 1

X	F(X)
1	6
2	17
3	34
4	57

