

CASIO®

LIKE US ON



CASIO
CALCULATORS
SOUTH AFRICA

VISIT OUR
WEBSITE
FOR
RESOURCES

www.casio.jamesralphedu.co.za



How to CLEAR (Initialise) your calculator:

SHIFT 9 3 = AC

This returns the MODE & SETUP to the initial default settings

& Clears the MEMORY.

fx-82ZA PLUS II

MATHEMATICAL LITERACY WORKSHEET

AUTHENTICATION

ON MODE 0



MODES

1. COMPUTATIONAL

Normal scientific calculations

2. STATISTICS

Data handling and Regression

3. TABLE

Graph work and Functions

4. BASE-N

Calculations involving specific number systems (Binary & more)

5. RATIO

To calculate the x in ratio calculations



MODE 1 – COMPUTATIONAL

SURDS	Calculator Keys: $\sqrt{\square}$ \square $\sqrt{\square}$ \square x^{\square}
-------	--

1. $\sqrt{\frac{81}{25}}$ = OR OR 2. $\sqrt[3]{250} - \sqrt[3]{144}$ =

3. $\sqrt{13^{\frac{1}{2}} - 2} \times \sqrt{13^{\frac{1}{2}} + 2}$ =

FIXING (Rounding off)

How to set your calculator to round off to 2 decimal places

<pre> 1:MthIO 2:LineIO 3:Deg 4:Rad 5:Gra 6:Fix 7:Sci 8:Norm </pre>	<p>Key Sequence:</p> \square \square \square \square \square Now select decimal places \square	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Fix 0~9?</div>
--	--	--

How to clear your calculator from rounding off to 2 decimal places

<pre> 1:MthIO 2:LineIO 3:Deg 4:Rad 5:Gra 6:Fix 7:Sci 8:Norm </pre>	<p>Keys Sequence:</p> <p>SHIFT MODE 8</p> <p>Select</p> <p>2</p>	<p>Norm 1~2?</p>
<p>Norm 1 is the setting to display answers in scientific notation. e.g. $1 \div 50\,000 = 2 \times 10^{-5}$</p> <p>Norm 2 is the new default setting which expresses numbers in a decimal format. e.g. $1 \div 50\,000 = 0,0002$</p>		

Round off to three decimal places: $\frac{120}{99}$

Round off to four decimal places: $\sqrt{9 + 25}$

Round off to two decimal places: $\frac{\pi}{3}$



QUOTIENT & REMAINDER

Calculate the Quotient & Remainder if 39 is divided by 7 =.....

Calculate the Quotient & Remainder if 73 is divided by 8=.....

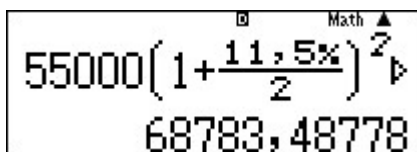
USING STORING, Ans & PreAns KEYS



Vuyo is saving to buy a second-hand car. He invests R55 000 in a fixed deposit account for 2 years at a fixed rate of 11,5% compounded every 6 months.

1) How much will he earn in interest on this investment?

5 5 0 0 0 (1 + $\frac{11,5}{2}$) 2) xⁿ
2 X 2 =



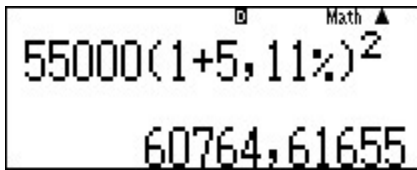
SHIFT RCL (-) - 5 5 0 0 0 =



Interest earned = R13 783.49

- 2) If the price for used cars keep pace with the annual inflation rate of 5,11% p.a. what will this R55 000 car cost in 2 years?

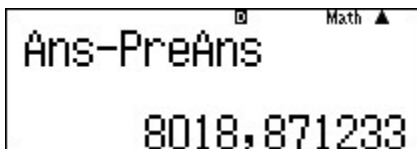
5 5 0 0 0 (1 + 5 , 1 1 %) 2 =



The car will cost R60 764.62 in 2 years' time

- 3) Will Vuyo have sufficient funds in his account after 2 years to pay of this car?

RCL (←) = ALPHA Ans =



Yes, he will have enough funds

PERCENTAGES

A. WRITING A FRACTION AS A PERCENTAGE

Example:

Write $\frac{126}{150}$ as a percentage.
= 84%

Key Sequence:

1 2 6 = 1 5 0 = × 1 0 0 =

B. FINDING THE PERCENTAGE OF AN AMOUNT

Example:

Find 15% of 1 250.
= 187,5

Key Sequence:

1 5 = SHIFT (× 1 2 5 0 = S+D

C. PERCENTAGE INCREASE

<p>Example:</p> <p>Increase 2 000 by 15%</p> <p>= 2 300</p>	<p>Key Sequence:</p> <p>2 0 0 0 + 1 5 SHIFT (X 2 0 0 0 =</p>
--	---

D. PERCENTAGE DECREASE

<p>Example:</p> <p>Decrease 2 000 by 15%</p> <p>= 1 700</p>	<p>Key Sequence:</p> <p>2 0 0 0 - 1 5 SHIFT (X 2 0 0 0 =</p>
--	---

LCM & HCF (GCD)

Find the LCMs of the following:

- 10 & 25 =.....
- 7 & 28 =.....



Find the HCFs (GCD) of the following:

- 12 & 15 =.....
- 9 & 21 =.....

TIME CALCULATIONS



DETERMINING TIME

Mr Williams has to attend a wedding that is 93km away from his house, his travelling at an average speed of 75km/h. How long did the drive take?

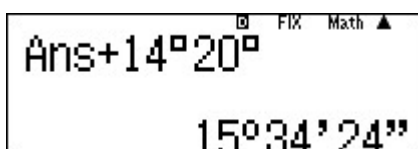
$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{93}{75}$$

=.....Hours.....Minutes.....Seconds

ADDING TIME

Mr Williams wants to go back home and watch a football game that starts at 15:40 PM. Will he make it in time before the game starts if he leaves at 14:20 PM?

Yes / No



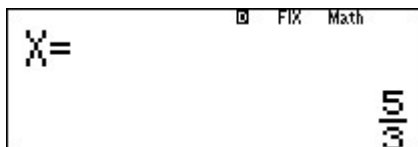
MODE 5 - RATIO

1:a:b=X:d
2:a:b=C:X

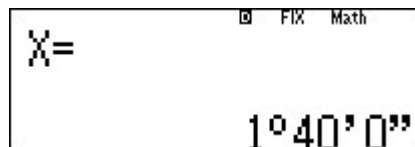
TIME & RATIO

- 1.) It takes approximately 5 minutes for an urn to boil 2.5 litres of water. How long will it take the same urn to boil 50 litres of water?

MODE 5 1 0 $\frac{\square}{\square}$ 5 $\frac{\square}{\square}$ = 2 , 5 = 5 0 = =



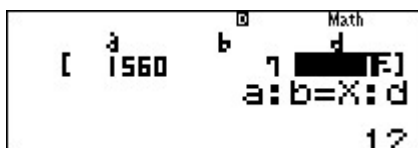
S/D $\frac{\square}{\square}$



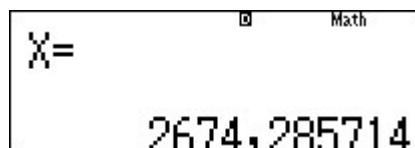
MONEY & RATIO

- 1.) It costs R1560 for 7 people to attend a concert. 5 more people join the group, calculate the new total price.

MODE 5 1 1 5 6 0 = 7 = 7 + 5 =

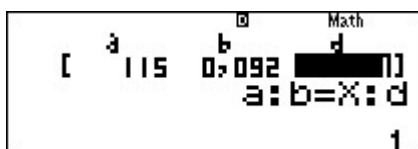


= S/D

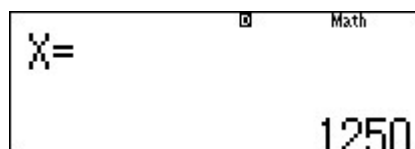


- 2.) Cindy has part-time job and she saves 9,2% of her monthly salary. If she saves R115.00 each month, what is her salary?

MODE 5 1 1 1 5 = 9 , 2 SHIFT (= 1 0 0 SHIFT (=



=



MODE 2 - STATISTICS

DATA HANDLING

A school provides buses to transport the learners to and from a nearby village. A record is kept of the number of learners on each bus for 26 school days.

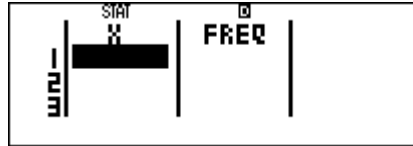
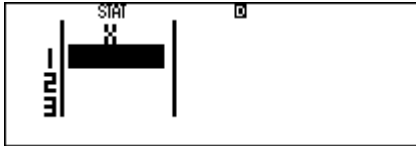
27 25 27 29 31 24 25 27 28 29 24 26 30
28 31 25 25 27 28 28 28 26 28 31 24 30

a) Organise the data in a frequency table

Set your calculator to STATS MODE for Single variable data handling
 $\boxed{\text{MODE}} \boxed{2} \boxed{1}$

Turn on your frequency table
 $\boxed{\text{SHIFT}} \boxed{\text{MODE}} \boxed{\blacktriangledown} \boxed{3} \boxed{1}$

Enter your data values



$\boxed{2} \boxed{7} \boxed{=}$ $\boxed{2} \boxed{5} \boxed{=}$ $\boxed{2} \boxed{9} \boxed{=}$
 $\boxed{3} \boxed{1} \boxed{=}$ $\boxed{2} \boxed{4} \boxed{=}$ $\boxed{2} \boxed{8} \boxed{=}$
 $\boxed{2} \boxed{6} \boxed{=}$ $\boxed{3} \boxed{0} \boxed{=}$
 $\boxed{\blacktriangledown} \boxed{\blacktriangleright} \boxed{4} \boxed{=}$ $\boxed{4} \boxed{=}$
 $\boxed{2} \boxed{=}$ $\boxed{3} \boxed{=}$ $\boxed{3} \boxed{=}$
 $\boxed{6} \boxed{=}$ $\boxed{2} \boxed{=}$ $\boxed{2} \boxed{=}$

Clear the screen – ready for single variable sub menu

```
1:Type  2:Data
3:Sum   4:Var
5:MinMax
```

$\boxed{\text{AC}} \boxed{\text{SHIFT}} \boxed{1}$

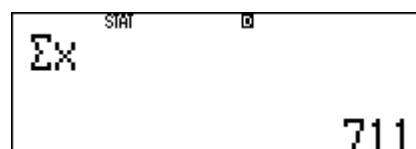
Breakdown of Single variable sub menu

Key	Menu Item	Explanation
1: Type	Stats menu	Change statistical calculation type
2: Data		Displays inputted data
3: Sum	$1: \Sigma x^2$ $2: \Sigma x$	1. Sum of squares 2. Sum
4: Var	$1: n$ $2: \bar{x}$ $3: \sigma x$ $4: s x$	1. Number of samples 2. Mean 3. Population standard deviation 4. Sample standard deviation
5: MinMax	$1: \text{min} X$ $2: \text{max} X$	1. Minimum value 2. Maximum value

b) Calculate the total number of learners that were transported to school by bus.

The Sum of the learners that were transported to school by bus

$\boxed{3} \boxed{2} \boxed{=}$



b) Calculate the mean number of learners per trip, correct to one decimal place

Arithmetic mean

$\bar{x} = 27,346 \approx 27,3$ Number of learners on each bus

SHIFT 1 4 2 =

STAT \bar{x}
27.34615385

MODE 3 - TABLE



Lucy will be a student at the university for four years. Analysts have predicted that transport costs will increase at a compound interest rate of 8% p.a.

Calculate how much she will need to budget for her weekly transport in April **2021**, **2022** & **2023**.

Her transport costs are R200.00 per week currently.

Given:

$$P = R200$$

$$i = 10\% = \frac{8}{100} = 0,08$$

$$n = x \text{ years}$$

$$A = ?$$

Formula:

$$A = P(1 + i)^n$$

$$A = 200(1 + 0.08)^x$$

Key Sequence:

- Input $f(x)$ formula

2 0 0 (1 + , 0 8 SHIFT () x^y ALPHA)

=

- $g(x) =$

=

- Set boundaries for your table:

Start? 1 =

End? 3 =

Step? 1 =

- 2021 = R216,00
- 2022 = R233,28
- 2023 = R251,94

On screen:

FIX Math
 $f(X) = 200(1 + 0,08)^x$

FIX Math
F(X)
1 | 216
2 | 233,28
3 | 251,94
1,0