CASIO®

FINANCIAL CONSULTANT

FC-200V

Worksheet

QUESTIONS	
1	Calculate the difference between investment proposals
2	Calculating the difference between investment options
3	Determining Growth Rate
4	Capital Budgeting Decisions

❖ Clear the calculator's memory before starting a calculation

ON SHIFT 9 ▼ ▼	EXE EXE	AC

Clear?
  Setup :EXE
  Memory :EXE
 All   :EXE
	Reset All
	Press [AC] key
		0

QUESTIONS

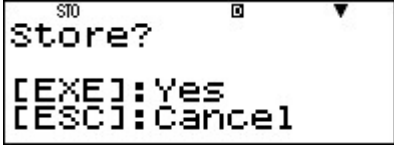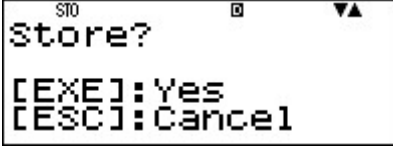**1.** Calculate the difference between the following investment proposals:

(A) R2 000 is invested annually for 5 successive years, at the end of each year, at 10% p.a. compound interest	(B) R4 103,70 is invested for 5 years at 20% p.a. compound interest

[CMPD] [▼] [5] [EXE] [1] [0] [EXE] [▼]
 	
 ```n   =5```
 ```Ix =10```
 ```PV =0```
 ```PMT=0```
 	
 [(–)] [2] [0] [0] [0] [EXE] [SOLVE]
 	
 ```Ix =10```
 ```PV =0```
 ```PMT=-2000```
 ```FV =12210.2```
	[CMPD] [▼] [▼] [2] [0] [EXE]
	 [(–)] [4] [1] [0] [3] [·] [7] [0] [EXE]
	
	 ```n =5```
	 ```Ix =20```
	 ```PV =-4103.7```
	 ```PMT=-2000```
	
	 [DEL] [EXE] [▼] [DEL] [EXE] [SOLVE]
	
	 ```Ix =20```
	 ```PV =-4103.7```
	 ```PMT=0```
	 ```FV =10211.31878```

You can assign a specific value or calculation result to a variable (A, B, C, D, X, Y)

(STO)re the FV into memory A	(STO)re the FV into memory B

[SHIFT] [RCL] [▼] [▼]
 	
 ```Store?```
 ```Shortcut1:```
 ```Shortcut2:```
 ```A```
 	
 [EXE]
 	
 ```Store?```
 ```[EXE]:Yes```
 ```[ESC]:Cancel```
 	
 [EXE]
	[SHIFT] [RCL] [▼] [▼] [▼]
	
	 ```Shortcut1:```
	 ```Shortcut2:```
	 ```A :#```
	 ```B```
	
	 [EXE]
	
	 ```Store?```
	 ```[EXE]:Yes```
	 ```[ESC]:Cancel```
	
	 [EXE]

Subtract the FV of B from the FV of A.

To include the contents of a variable in a calculation use ⬭ [ALPHA] and the variable

[COMP] [ALPHA] [CNVR] [−] [ALPHA] [COST] [EXE]
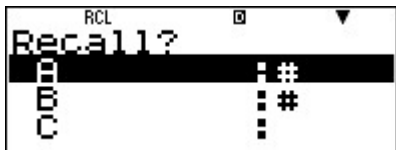
```
A-B
        1998.881216
```

The difference between the two investment proposals is R1 998,88.
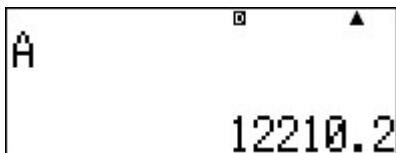
To ReCalL the contents of the variables [RCL]

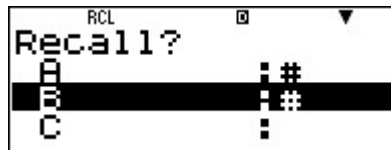   *# indicates that there is data assigned to the variable*
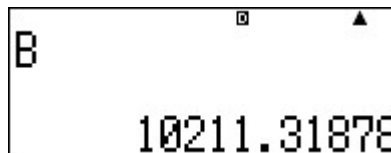
[RCL]

```
        RCL
Recall?
A               : #
B               : #
C               :
```

[RCL] [⬇]

```
        RCL
Recall?
A               : #
B               : #
C               :
```

[EXE]

```
A
        12210.2
```

[EXE]

```
B
        10211.31878
```

❖ Clear the calculator's memory before starting a calculation
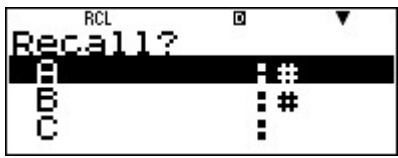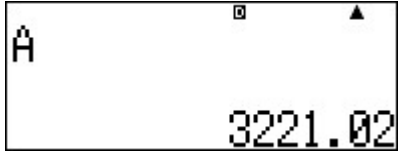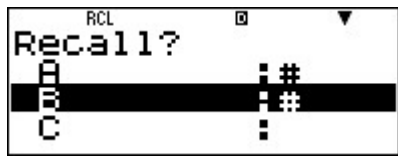   [ON] [SHIFT] [9] [⬇] [⬇] [EXE] [EXE] [AC]

2. What is the difference between R2 000 invested at 10% p.a. compound interest for 5 years, if:

(A) Interest is calculated annually	(B) Interest is calculated semi-annually
[CMPD] [▼] [5] [EXE] [1] [0] [EXE] [(-)] [2] [0] [0] [0] [EXE]	[CMPD] [▼] [5] [X] [2] [EXE] [1] [0] [÷] [2] [EXE]
n =5 Ix =10 PV =-2000 PMT=0	Set:End n =10 Ix =5 PV =-2000
[▼] [SOLVE]	[▼] [▼] [DEL] [EXE] [SOLVE]
Ix =10 PV =-2000 PMT=0 FV =3221.02	Ix =5 PV =-2000 PMT=0 FV =3257.789254
[SHIFT] [RCL] [▼] [▼]	[SHIFT] [RCL] [▼] [▼] [▼]
Store? Shortcut1: Shortcut2: A	Shortcut1: Shortcut2: A :# B
[EXE]	[EXE]
Store? [EXE]:Yes [ESC]:Cancel	Store? [EXE]:Yes [ESC]:Cancel
[EXE]	[EXE]

Subtract the FV of A from the FV of B.

To include the contents of a variable in a calculation use ⬭ ALPHA and the variable

[COMP] [ALPHA] [COST] [-] [ALPHA] [CNVR] [EXE]

B-A

36.76925355

The difference between the two investment options is R36,77.

To ReCalL the contents of the variables [RCL]
> *# indicates that there is data assigned to the variable*
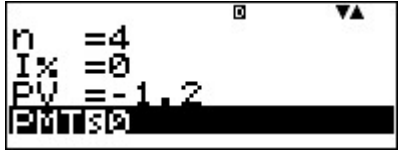
[RCL]	[RCL] [▼]
RCL ▼ Recall? A :# B :# C :	RCL ▼ Recall? A :# B :# C :
[EXE]	[EXE]
A ▲ 3221.02	B ▲ 3257.789254

❖ Clear the calculator's memory before starting a calculation
[ON] [SHIFT] [9] [▼] [▼] [EXE] [EXE] [AC]

3. What is the Growth Rate of the following stream of cash flows?

> 2011: R1,60
> 2010: R1,38
> 2009: R1,32
> 2008: R1,25
> 2007: R1,20

[CMPD] [▼] [5] [−] [1] [EXE] [▼] [(−)] [1] [.] [2] [0] [EXE]

```
            ▼▲
n   =4
I%  =0
PV  =-1.2
PMT:0
```

[▼] [1] [.] [6] [0] [EXE] [▲] [▲] [▲] [▲] [SOLVE]

```
            ▼▲
I% =7.45888162
PV =-1.2
PMT=0
FV =1.6
```

The Growth Rate is 7,46%

❖ Clear the calculator's memory before starting a calculation
[ON] [SHIFT] [9] [▼] [▼] [EXE] [EXE] [AC]

4. Capital Budgeting Decisions
Net present value (NPV)
Internal rate of return (IRR)

Initial investment	Project A	Project B
	-R84 000	-R90 000
Year	Net cash inflow (R)	Net cash inflow (R)
1	28 000	56 000
2	28 000	24 000
3	28 000	20 000
4	28 000	20 000
5	28 000	20 000

Cost of capital 15%

Project A	Project B
[CASH] [1] [5] [EXE]	[CASH] [1] [5] [EXE]
Cash Flow I% =15 Csh=D.Editor x NPV:Solve	Cash Flow I% =15 Csh=D.Editor x NPV:Solve
[EXE] [(−)] [8] [4] [0] [0] [0] [EXE] [2] [8] [0] [0] [0] [EXE]	[EXE] [(−)] [9] [0] [0] [0] [0] [EXE] [5] [6] [0] [0] [0] [EXE]
1 −84000 2 28000 3	1 −90000 2 56000 3
[2] [8] [0] [0] [0] [EXE] [2] [8] [0] [0] [0] [EXE] [2] [8] [0] [0] [0] [EXE] [2] [8] [0] [0] [0] [EXE]	[2] [4] [0] [0] [0] [EXE] [2] [0] [0] [0] [0] [EXE] [2] [0] [0] [0] [0] [EXE] [2] [0] [0] [0] [0] [EXE]
5 28000 6 28000	5 20000 7 20000

Project A	Project B
⌨ ESC ⏷ ⏷	⌨ ESC ⏷ ⏷
| ```
Cash Flow
I% =15
Csh=D.Editor x
NPV:Solve
``` | ```
Cash Flow
I% =15
Csh=D.Editor x
NPV:Solve
``` |
| ⌨ EXE | ⌨ EXE |
| ```
NPV=9860.342744
``` | ```
NPV=11372.02446
``` |
| ⌨ ESC ⏷ | ⌨ ESC ⏷ |
| ```
I% =15
Csh=D.Editor x
NPV:Solve
IRR:Solve
``` | ```
I% =15
Csh=D.Editor x
NPV:Solve
IRR:Solve
``` |
| ⌨ EXE | ⌨ EXE |
| ```
IRR=19.85770979
``` | ```
IRR=21.65011673
``` |
| *Net Present Value (NPV) is*
R9 860,34
Internal Rate of Return (IRR) is 19,8577% | *Net Present Value (NPV) is*
R11 372,02
Internal Rate of Return (IRR) is 21,6501% |

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