IB Financial Maths

Exam Style Questions

Addvance
AddvanceMaths.com/IBSLAI

Financial Maths Revision: www.addvancemaths.com/ibslai/financial/
Mark scheme and video lessons available online!

|	
n`	**Number of years** $\times$ P/Y
I%	**Interest Rate**
PV	**Present Value**
PMT	**Payments**
FV	**Future Value**
P/Y	**Payments Per Year**
C/Y	**Compounds Per Year**

Tip: Always copy out the table of financial parameters in the exam.

Compound Interest

1. A savings account pays **4% interest per year**, compounded annually. If a student invests **$2,000** today, calculate the value of the investment after **5 years**.

n	5
I%	4%
PV	-2000
PMT	0
FV	?
P/Y	0
C/Y	1
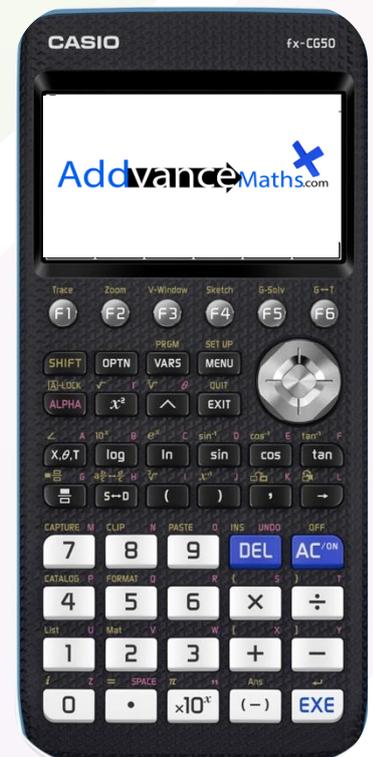
_____

Financial Maths Revision: www.addvancemaths.com/ibslai/financial/

Markscheme and video lessons available online!

2. A company invests **$10,000** in a fixed deposit at an interest rate of **3.6% per year**, compounded **quarterly**.
Find the value of the investment after **8 years**.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____
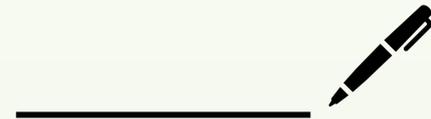
3. A parent wants to have **$15,000** saved for their child's university fees in **6 years' time**. The account pays **5% interest per year**, compounded **monthly**.
Calculate how much should be invested **now**.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____

4. An investor places **$5,000** in an account that pays **6% interest per year**, compounded **semi-annually**.

How many **years** will it take for the investment to reach **$10,000**? Give your answer to 2 decimal places.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____

5. A loan of **$12,000** is to be repaid in full after **7 years**. The repayment amount is **$18,000**, with interest compounded **monthly**.

Find the **annual interest rate**, correct to **2 decimal places**.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____

6. A student deposits **$200 at the end of each month** into a savings account paying **4.2% interest per year, compounded monthly**.
Find the total amount in the account after **3 years**.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____

7. A loan is to be repaid with **quarterly payments of $1,500 for 5 years**.
The loan charges **6% interest per year, compounded quarterly**.
Calculate the **present value** of the loan.

_____

8. An investor pays **$400 at the end of each month** into a retirement fund earning **5% per year, compounded monthly**.
How many **years** will it take until the fund reaches **$100,000**? Give your answer to 2 decimal places.

_____

6. A student deposits **$200 at the end of each month** into a savings account paying **4.2% interest per year, compounded monthly**.
Find the total amount in the account after **3 years**.

n	
I%	
PV	
PMT	
FV	
P/Y	
C/Y	

_____

7. A loan is to be repaid with **quarterly payments of $1,500 for 5 years**.
The loan charges **6% interest per year, compounded quarterly**.
Calculate the **present value** of the loan.

_____

8. An investor pays **$400 at the end of each month** into a retirement fund earning **5% per year, compounded monthly**.
How many **years** will it take until the fund reaches **$100,000**? Give your answer to 2 decimal places.

Tip: Click Shift + Set Up to change the payment settings to the "Start" of each month.

_____

9. A person plans to save for a car by depositing **$250 at the start of each month** into an account earning **3.6% per year, compounded monthly**.

How much will be saved after **4 years**?

10. A company takes out a loan of **$50,000**, to be repaid with **monthly payments of $1,200 for 5 years**. Interest is compounded monthly.

Find the **annual nominal interest rate** charged on the loan, correct to **2 decimal places**.

11. A student takes a loan of **$2,400** to buy a laptop. The loan is to be repaid in **12 equal monthly payments** at **6% annual interest compounded monthly**.

Find the **monthly repayment amount**.

12. A car loan of **$18,000** is repaid in **monthly instalments of $350**. The annual interest rate is **5.4% compounded monthly**.
How many **months** will it take to fully repay the loan?

_____

13. A family wants to take out a mortgage where they can afford to pay **$1,200 per month** for **25 years**. The bank charges **4.8% annual interest compounded monthly**.
What is the **maximum loan amount** they can borrow?

_____

14. A person borrows **$50,000** and repays it over **10 years** with equal **monthly payments of $530**.
Find the **annual interest rate** (compounded monthly).

_____

Scan for the answers!