Mathematics

YEAR 10
Term 1
Assignment

2018

Financial Mathematics

- All assignments should be submitted to your classroom teacher during class time on the due date given.
- Late assignments will be penalized by 20% each day for five days. After five days a zero mark will be awarded.
- If you are absent on the due date of the assignment due to illness you must submit the task on your first day back at school (even if you do not have a lesson on that day) accompanied by a note from your parents explaining your absence.
- If you are absent on the due date of the assignment due to a sporting commitment or excursion you need to make prior arrangements with your teacher regarding the submission of the task.
- Application for an extension must be discussed with the classroom teacher BEFORE the due date.

Issue Date: Week 5 Term 1 2018

Due Date: Week 8 Tuesday 20/03/2018

Name: ....

Teacher's Name:

_____

Administrative Use Only:

Topic:	Marks:
Part A MA5.1-4NA	/17
Part B MA5.2-4NA	/48
Part C MA5.2-1WM, MA5.2-2WM , MA5.2-3WM	/10
Total	/75
%	/100

Part A

Choose a job out of the three given.

Using the given information:

a) Description of the job you choose. (1 mark)
b) What type of income will you earn? (1 mark)
c) List the advantages and disadvantages of this type of income. (2 mark)
d) Calculate the Net income for your job. (2 mark)
e) Using the expenses table and PAYG tax, design a budget to help you with weekly financial planning. (2 mark)
f) Calculate any savings if possible.(1 mark)
g) Using the Tax Table, calculate your taxable income including the Medicare Levy of 2% (2 mark)
h) Calculate your income tax based on your income (3 mark)
i) Using all the above information, calculate if you will receive a Tax return or will be in Tax Debt at the end of the financial year (3 mark)

Expenses:

Rent: $340/week
Petrol: $60/week
Travel expenses: $50/week
Mobile and internet: $80/week.
Food and related expenses: $200/week
Miscellaneous: $150/week

Tool kit for an electrician: $ 210
Safety Gear: $90

PAYG Tax:

Job 1: $450.67/week
Job 2: $127.89/week
Job 3: $230/week

Taxable income	Tax on this income
0 – $18,200	Nil
$18,201 – $37,000	19c for each $1 over $18,200
$37,001 – $87,000	$3,572 plus 32.5c for each $1 over $37,000
$87,001 – $180,000	$19,822 plus 37c for each $1 over $87,000
$180,001 and over	$54,232 plus 45c for each $1 over $180,000

Medicare levy is 2%

Job 1:

LICENCED ELECTRICIAN / SOLAR INSTALLER - DOMESTIC & COMMERCIAL

$80,000 FOR SUCCESSFUL APPLICANT

The ideal candidates for this role will have the following:

- Electrical experience in Domestic & Commercial field
- Current CPR/LVR
- Work both autonomously and collaboratively
- High Communication Skills and well presented
- Strong understanding and regard for electrical and safety standards
- Take pride in your work and ensure that installations undertaken are completed to a high standard
- Any additional tickets will be advantageous

YOU MUST HOLD THE FOLLOWING LICENCES

- Current Qld Electrical Licence
- Current Queensland Driver's Licence (Manual)
- Construction Industry Blue/White Card

RENUMERATION

- Full time position
- Above award wage
- Uniforms

Nixon Energy and Electrical are seeking an Electrician experience in the domestic and commercial field.

We currently have an full time opportunity for a Licensed Electrician to join our team.

Our company has a wide variety of works from new homes, renovations, solar, commercial, real estate and maintenance along with some service and warranty works.

We are a family business and all our staff are treated like family and well looked after.

Requirements:

- Current QLD drivers and electrical licence.
- White card.
- Self motivated with the ability to work unsupervised
- High attention to detail with great customer service skills.
- Excellent working knowledge of current electrical and solar rules and regulations.

Please forward your resume/CV and proposal expressing interest in this position to admin@nixonbuild.com.au or call 1300 731 959.

Job 2:

Call Centre - Welcome Caller

WAYS Fundraising 29 reviews - Sydney Central Business District NSW
$22.86 an hour - Casual

Job Summary

WAYS Fundraising specialises in regular giving acquisition and currently works with many high profile international charities such as **Oxfam Australia** , **Taronga Conservation Society** , **The Smith Family** , **Red Cross Australia** and many more.

The WAYS Fundraising Welcome Call Team performs the vital task of ensuring all donors that are signed up to a regular giving program are qualified and welcomed on behalf of our charity partners.

The successful candidate will be the voice for our charity clients and welcoming their new supporters on board to their regular giving program so must therefore possess the following skills, experience and attributes;

- Excellent phone manner
- Exceptional people and rapport building skills
- Experience in call centre, fundraising or customer service / sales environment is essential
- A proven track record of people management and development
- Must be data and technology savvy
- Willing to work evenings
- Must have an understanding and passion for charities and fundraising
- Must be able to think outside the box to achieve goals
- Must have solid work ethic
- Must be very reliable.

Great perks including:

- Great hourly rate of $22.86 per hour plus excellent commission

- CBD office with a fast paced, entrepreneurial work environment

- Fantastic international charity clients to represent

To apply now!

Please email through your CV and cover letter explaining why you are the best candidate for the role.

Job Type: Casual

Salary: $22.86 /hour

Job 3:

Experienced Advertising Bookkeeper
Postbox Studios - Sydney NSW
$30,000 - $35,000 a year - Part-time
Job Summary

PostBox Studios is looking for an experienced bookkeeper to work part time in our post-production house.

We are an established company with a rewarding culture, and great atmosphere. We produce advertising and digital content weekly from a relaxed, creative studio on the skyline of East Redfern.

This position is permanent part-time, totalling 20 hours over five days (M-F) allowing flexibility with other commitments. The right candidate will have outstanding verbal and written communication skills. Proficient in using MYOB, Excel, and Word, they will be well organised and enthusiastic.

You will be responsible for the following functions:

- Payroll and Superannuation
- BAS returns and GST reconciliation
- Accounts receivable and collection
- Bank reconciliations
- Assist with budgeting and financial reporting
- Creditor liaison and management
- Accounts payable
- Liaising with clients and building relationships

$30k-$35k salary package or negotiable contract rate.

If you can see yourself joining our team, please apply by Monday 12th March 2018 via Indeed. You will be contacted regardless of your success in securing an interview.

Job Type: Part-time

Part B

You are planning to buy a new family car. You will need to borrow money from a bank or financial Institution as do not have the money to buy the car.

Task 1: Select a car from newspaper or online, you wish to purchase that includes all the necessary items that you like or need. Attach the chosen car, picture, its details and the advertisements with your assignment. (4 marks)

Task 2: Investigate two different options for borrowing money from banks or financial institutions. Use different, deposit amounts(if needed), principal amounts, interest rates, repayment options, etc.to compare and find the best deal on borrowing the money you need for the car. Add all the details in your assignment.

Show all the working out:

Option 1 (1 mark)	Option 2 (1 mark)
Amount borrowed with/without deposit (1 mark)	Amount borrowed with/without deposit (1 mark)
Repayment options (4 marks)	Repayment options (4 marks)

Task 3:

Calculate the total amount that you will have to pay at the end of the loan term under each option. You can also use online loan simulation sites for the working out and calculation of the final amount. Please include a screenshot or a photo of the online calculation if using. The banks, lending institutions and comparison sites have online loan repayment/calculation simulators, e.g. I select Nimble, Canstar, etc.

Show all the necessary working out.

Loan Calculation Comparison	
Option 1 (4 marks)	Option 2 (4 marks)
Total amount payable (2 marks)	Total amount payable (2 marks)

Task 4:

Which option would you prefer out of the two options you worked on and why? Give valid and appropriate reasons for your choice and include your calculations to support the argument. (5 marks)

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Part C Interest Rate: comparison

Simple interest: $I=PRN, A=P+I$ Compound Interest: $A = P(1+R)^{N}$

Where, P= Principal amount   R =Rate of Interest   N- Term of the loan

A= Total Amount   I = Interest earned

Simple interest

a)   Chloe deposits $1200 into a savings account that pays 5% simple interest per year. How much money would Chloe have after 3 years? (1 mark)

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b)   Cathy deposits $300 into a savings account that pays 4% simple interest per year:

   i   How much would Cathy have after 6 years? (1 mark)

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   ii   How much would Cathy have after 20 years? (1 mark)

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Compound Interest

a)   Chloe deposits $1200 into a savings account that pays 5% compound interest per year. How much money would Chloe have after 3 years? (2 marks)

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b)   Cathy deposits $300 into a savings account that pays 4% compound interest per year:

   i   How much would Cathy have after 6 years? (1 mark)

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   ii   How much would Cathy have after 20 years? (1 mark)

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Explain why Chloe and Cathy are getting different amounts on simple and compound interests and which one is a better deal? (3 marks)

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Chloe's brother Max has $400 in savings and is considering borrowing money to buy a car. Max has to pay $400 up front, followed by monthly payments at 9.75% pa interest for 6 years.

a.   If the car is worth $4500, find how much interest Max will pay. In other words, how much more than $4500 will Max pay the car dealer? (3marks)

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b.   In your opinion, is it a good idea for Max to buy the car with the loan? Explain why it would be a lot cheaper for Max to save money before buying rather than to buy on these terms. Support your answers with calculations. (2 marks)

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Part D Please add more pages if the given space is not sufficient.

b) Evaluate your thoughts on the assignment. (2 mark)

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c) How does this assignment connect with real life? (2 mark)

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d) What did you like about the assignment? (2 mark)

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e) What did you learn? (2 mark)

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f) What could you have done better in the assignment? (2 mark)

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End of the assessment