Mathematics

YEAR 9
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:

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Administrative Use Only:

Topic:	Marks:
Part A &Part B MA5.1-4NA	/37
Part C MA5.2-4NA	/23
Part D MA5.2-1WM, MA5.2-2WM , MA5.2-3WM	/10
Total	/70
%	/100

PART A: Earning an Income

1. a) Complete the following time sheet for Sammie, who works as a waiter in a restaurant. (6 marks)

Day	Pay Rate	Start Time	Finish Time	Hours Worked
Friday	Normal	9: 00 am	6:00pm	
Saturday	Time and a Half	5:00 pm	12:00 midnight	
Sunday	Double time	5:00 pm	9:00pm	
Monday	Normal	9:00 am	6:00pm	
Tuesday	Normal	9:00 am	6:00pm	
Wednesday				
Thursday	Normal	9:00 am	6:00pm	

b) Complete the pay slip for Markus: (show all working out)   (6 marks)

Pay slip	Week ending 19th February 2017	Total Amount
Normal Hours		
Normal Pay rate	$ 10.45/hr	
Time and Half Hours		
Time and Half Pay rate		
Double time Hours		
Double time Hours rate		
Gross Income		

2. Annie earns $ 18435 each year. How much is this each? (5 marks)
(Round the answers to the nearest cent.)

   a) Month

   b) Week

   c) Fortnight

   d) Day

   e) If she works 25 hours per week, find her Hourly rate.

3. Sonny earns 2.8% commission on his sales.
   a) Complete the table to see how much is Jesse's income from week to week.
      (First one is done for you) (5 marks)

Weekly sales	Commission (2.8% of sales)
$ 24 000	$ 24000 X 2.8÷ 100= $672
$ 45000	
$ 9000	
$80 50	
$ 0	
$ 11 500	

b) Will Sonny's weekly income change if he earned a retainer of $ 650 plus the 2.8% commission? Justify your answer with an example. (2 marks)

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PART B: Profit and Loss

1. A second hand shop buys second hand desks for $ 58.00 and sells them for $70.00 (3 marks)

a) What is the net profit?

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b) Calculate the profit as a percentage of the cost price.

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c) Calculate the profit as a percentage of selling price.

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Discounts

2. You want to buy a new bedside table. You choose the following tables:

$ 500 at 15% off $139 at 10% off $249 at 25% off $395 at 60% off

a) Which side table has the largest discount? Calculate discount for all the tables.
(4 marks)

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b) Which tables have the same amount of discount? (1 mark)

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c) What is the difference between the largest and smallest discount? (1 mark)

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d)   If the $ 500 table was discounted at 25% off, would $ 300 be enough to buy it? (1 mark)

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e)   You are in the furniture shop and they have a special "One day only 35% off "sale and further 15% off that. You are excited as you are getting 50% off the original amount. Do you think you are right about the total discount? Explain your answer. (3 marks)

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PART C: Taxation and Interest

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

Using the above Tax Table, solve the following questions:

1) What is the difference between gross pay and net pay? (I mark)

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2) Annie's annual salary is $47305. She receives tax deductions for union fees of $120 per year and earn $1800 on an investment in the same year. What is her taxable income? (1 mark)

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3) Percy earns a gross pay of $95320 pa. Every week, 23% of his salary is paid toward tax and 9% to his retirement fund. He also pays a tax deductible fortnightly fee of $25 for internet use

a) What is the value of his total deductions each week? (1 mark)

b) What is his weekly net pay? (1 marks)

4) An engineer earns a salary of $86750 pa. His tax deductions are $230 to maintain his tools, $5197.50 superannuation and $185 union fees.

a) Find his total tax deductions. (1 mark)

b) Find his taxable income. (1 mark)

c) Find the amount of tax owing in the end of the financial year. (2 marks)

5) Calculate the annual tax payable and the net income per week for the following taxable incomes:
 (6 marks)

   a) $ 33500

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   b) $73000

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   c) $115060

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Simple Interest

1) Find the simple interest on $ 55555 invested at 8.5% PA for 6 years. (1 mark)

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2) What is the total amount when $ 9500 is invested for 18 months at 2.8 % PA simple interest? (2 Marks)

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3) Misty borrowed $900 at 7.75% PA for 3 years. What will be her interest amount after the term of the loan? What is the total amount Misty will need to return after the loan period? (2 marks)

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Compound Interest

4) An amount of $10 000 is invested at 4% p.a. interest, compounded over 3 years. What is the compound interest earned? (2 marks) (fill in the blanks and complete the calculations)

Answer:

The interest for each of the three years needs to be calculated separately.

After the first year: = $10 000 × 0.04

= $400

Total invested = $10 000 + $400 (old principal + interest)

= $_____

After the second year: = $10 400 × 0.04

= $_____

Total invested = $10 400 + $416

= $_____

After the third year: = $10 816 × 0.04

= $_____

Total invested = $10 816 + $432.64

= $_____

∴ Interest earned = final investment – principal

= $11 248.64 − $10 000

= $_____

5) An amount of $1200 is invested at 7% p.a. interest compounded over 2 years. Calculate: (2 marks)
a) the interest for the first year
b) the total invested after the first year
c) the interest for the second year
d) the total invested after the second year
e) the compound interest earned.

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<u>Part D:</u>   Please add more pages if the given space is not sufficient.

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

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

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

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d)   What did you learn? (2 mark)

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

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End of the assessment