**Foundations of Mathematics 12**

2nd Semester S.Y. 2021-2022

**Teacher: Mr. Formaran**

**Resource: Foundations of Mathematics 12 (Nelson)**

*Chapter 4 – PERMUTATIONS AND COMBINATIONS*

4.1 Counting Principles

4.2 Introducing Permutations and Factorial Notation

4.3 Permutations When All Objects are Distinguishable

4.4 Permutations When Objects are Identical

4.6 Combinations

4.7 Solving Counting Problems

*Chapter 5 - PROBABILITY*

5.2 Probability and Odds

5.3 Probabilities Using Counting Methods

5.4 Mutually Exclusive Events

5.5 Conditional Probability

5.6 Independent Events

*Chapter 1 – Financial Mathematics Investing Money*

1.1 Simple Interest

1.3 Compound Interest: Future Value

1.4 Compound Interest: Present Value

1.5 Investments Involving Regular Payments

1.6 Solving Investment Portfolio Problems

*Chapter 2 – Financial Mathematics: Borrowing Money*

2.1 Analyzing Loans

2.3 Solving Problems Involving Credit

2.4 Buy, Rent, Or Lease?

*Chapter 6 – Polynomial Functions*

6.1 Exploring the Graphs of Polynomial Functions

6.2 Characteristics of the Equations of Polynomial Functions

6.3 Modelling Data with a Line of Best Fit

6.4 Modelling Data with a Curve of Best Fit

*Chapter 7 – Exponential and Logarithmic Functions*

7.2 Relating the Characteristics of an Exponential Function to Its Equation

7.3 Modelling Data Using Exponential Functions

7.4 Characteristics of Logarithmic Functions with Base 10 and Base *e*

7.5 Modelling Data Using Logarithmic Functions

*Chapter 8 – Sinusoidal Functions*

8.1 Understanding Angles

8.2 Exploring Graphs of Periodic Functions

8.3 The Graphs of Sinusoidal Functions

8.4 The Equations of Sinusoidal Functions

8.5 Modelling Data with Sinusoidal Functions

FINAL EXAM

**CALCULATION OF CLASS WORK MARK**

**Assignments 20%**

* from the book/workbook
* given by the teacher
* make your own word problem
* given by classmate/s

**How to mark: marks**

* complete and correct 4
* complete but some are wrong 3
* not complete and correct 2
* not complete but some are wrong 1
* no assignment 0

**Classroom Participation 15%**

* In class, taking notes/participating in the discussion

No cellphone during class 4

* In class but late (unreasonable) taking notes/participating

in class but distracted by cell phone or someone/thing twice 3

* In class but late (unreasonable) taking notes/participating in class

but distracted by cell phone or someone/thing more than twice 2

* In class but late (unreasonable) and distracted 1
* Absent without valid reason or skipping class 0

**Quizzes 25%**

* 1st try (set A) - 2nd try (set B)

**Tests 30%**

* 1st try (set A) - 2nd try (set B)

**How to mark quiz and test:**

*Level Mark Total*

*1 Emerging (50%) 1*

*2 Developing (22%) 2*

*3 Proficient (13%) 3*

*4 Extending (15%) 4*

**Project 10%**

* In every term

**Total 100%**

**FINAL MARK – School-based final exam**

Class work 80%

Final Exam 20%

**TOTAL 100%**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please fill in:

I am good at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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At school, I am good at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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In Math, I am good at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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I usually have difficulty with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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I would appreciate help with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at note-taking

I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at reading assigned passages from the textbook,

And extracting important information

I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at copying notes from the board

Please circle the letter in the beginning of the expression(s) that most appropriately describes your attitude towards this course

a. I find math interesting but difficult

b. I am curious to see if I like this course

c. I am taking this because I did not want to take any other Math course

and I needed another credit

d. I am taking this course because I was told to do so

e. I love math, it is my favorite subject

**SUDOKU 1**

Calendar

Description automatically generated