

Topic: A1 – Operations With Numbers & Expressions**Lesson Objectives:**

- Review operations with whole numbers, integers & fractions
 - Simplify and perform operations on numbers and algebraic expressions.
 - Evaluate expressions for specified values.
 - Combine and simplify polynomial expressions using addition, subtraction and multiplication.
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(A) Context

Mr. Santowski likes to pay attention to the stock market, because he has invested some money for his eventual retirement and for his children's college fund.

My investment portfolio has the following funds:

Stock	Amount of shares	Price per share
Exxon Mobile (XOM)	160	\$70.60
Apple (AAPL)	80	\$165.55
Proctor & Gamble (PG)	120	\$55.46
Panasonic Corp (PC)	100	\$15.87

So with this context, today's KEY point → In order to analyze my portfolio, I need to understand a number of key mathematical concepts that we will address in our first few classes together

QUESTION → EXPLAIN how you would determine the total value of my portfolio.

QUESTION → What is the total value of my portfolio?

(B) Expressions

Let's revisit our context and introduce some VARIABLES in order to create EXPRESSIONS

Variable	Stock	Price per share
Let A =	The price of Exxon Mobile shares	\$70.60
Let B =	The price of Apple shares	\$165.55
Let C =	The price of Proctor & Gamble shares	\$55.46
Let D =	The price of Panasonic Corp shares	\$15.87

Q1. Explain what the expression $10A$ means. Evaluate the expression.

Q2. Explain what $(5A + 4B + 10C) - (2A + B)$ means. Evaluate the expression.

Q3. What would the expression $\frac{1}{3}A + \frac{1}{4}A + \frac{2}{5}A + 1\frac{1}{3}B + \frac{1}{2}B$ mean? Evaluate the expression.

Q4. Explain what $3(2A + 4B + 5C) - 2(A + 3B + C)$ means. Evaluate this expression.

Q5. Write an expression that can be used to determine the total value of my portfolio.

Q6. (Time permitting) → Set up Q5 on an EXCEL spreadsheet.