Foundations 11 - Week 1: April 16th, 17th

Anticipated time required: 1 - 2 hours

Goals to be completed:

1. Review "Completed note set for finance, geometry and logic" to ensure that all your notes are up to date and sufficient.

2. Finish all ESSENTIAL assignments listed below:

    a. Unit 1 Project

3. **New this week**: complete the 2020 midterm exam.

• Midterm exam will be scored as an assignment (not as an exam) and may now be completed with assistance of any notes you possess, notes you acquire from this website, but should be done individually. PLEASE SHOW ALL OFF YOUR WORK TO EARN FULL MARKS ON EVERY QUESTION.

Please submit completed midterm assignments to Charlie.feht@yesnet.yk.ca either as a scanned and uploaded PDF attachment to email, or as a jpeg image file. Midterm assignments will be scored and sent back to you as I receive them.

Upcoming next week:

Introduction to quadratic functions and parabolas. This will correspond to chapter 7 from the textbook.

Foundations 11 Midterm Assignment

1. Trevor has $4500 to invest. He wants to invest his money at 9.61% interest compounded every two weeks, for the next 3 years. What is his approximate future value?

2. When Jess started working 30 years ago, she started making deposits of $250 each month into an investment account. The current value of the account is $155 000. How much did she invest altogether?

3. Your friend approaches you asking for financial advice. They want to know if they should invest their summer earnings of $3000 into a 5 year CSB that earns 14% simple interest, or if they should invest into a GIC that earns 11% interest compounded quarterly. Prove what the smarter decision is.

4. Glenn borrowed $8500 at 6.2% interest. He agreed to repay the loan in a single payment at the end of the term, in 1.5 years.

   a) Determine the loan payment amount if the interest is simple interest.

   b) Determine the loan payment amount if the interest is compounded semi-annually.

5. Make a conjecture about the following evidence:

$$9 \times 2 = 18$$
$$9 \times 3 = 27$$
$$9 \times 4 = 36$$
$$9 \times 5 = 45$$

6. Either confirm the conjectures below by providing supporting evidence, or disprove them with a counter example.

   a. All polygons have an equal number of side lengths to diagonals

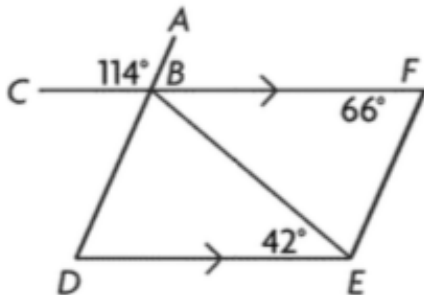   b. When you travel north it gets colder

   c. There is always school on Mondays

7. Determine the sum of the interior angles of an octagon

8. Each interior angle of a regular polygon is 144 degrees. How many sides does it have?

9.

Determine the measure of $\angle DBF$.

10.

Determine the values of a, b, and c.