What Each Grade Might be Tested On for NCC

- Basic addition, subtraction, multiplication, division, including order of operations. How brackets work. What words like sum, difference, product, quotient, remainder mean.
- Everyone should know what squares, triangles, rectangles, trapezoids, circles, rhombuses, and parallelograms are. Everyone should also know what perimeter and area mean, including how to calculate them for these shapes. Everyone should also know about the basic prisms (cube, rectangular prism, triangular prism, cylinder), basic pyramids (square-based pyramid, triangle-based pyramid, cone), and how to classify them. Don't forget the sphere as a 3-d object. Know what vertex/vertices, edge, face, as well as volume, surface area mean, and know how to calculate them for these solids. **The only exception is grade 3's and 4's won't be expected to know what π is, so they don't need to know the formulas for the circular objects (circle, cylinder, cone, sphere). Grade 3's and 4's also don't need to know the volume formulas for pyramids, and the surface area for a cone.**
- Common geometry words, like equilateral triangle, isosceles triangle, scalene triangle, parallel lines, perpendicular lines.
- Operations with fractions, including finding the LCM. How to convert between fractions, percents, and ratios.
- How to read graphs, for example bar/line graphs and circle graphs.
- Speed=Distance/Time. Know how to solve various speed questions.
- What integers are, positive integers are, and non-negative integers are.
- What factor, multiple, GCD/GCF (Greatest Common Divisor/Factor), LCM (Least Common Multiple), prime number, composite number mean.
- What mean, median, mode mean.
- What the word probability means, and how to calculate probability. **Grade 3's and 4's don't need to know this.**
- What angles are, what a right angle (90°) is. The fact that there are 360° around a point. What acute and obtuse mean.
- What positive exponents mean, ie. 3^5=3x3x3x3x3.
- It helps to know what variables (eg. x=4, y) are, but no question will assume that you have seen variables. Overall, the questions promote mathematical insight and problem-solving experience instead of advanced knowledge.