Grade 7 Learning Outcomes

Unit 1 – Directed Numbers
Learning Outcomes
1. Substitute directed numbers into expressions or formulas and evaluate or solve them.
2. Construct tables of values and use them to graph functions.

Associated Vocabulary
- No new vocabulary

Teaching Notes
Students studied directed numbers in previous grades. The main purpose of this unit is to give them extra practice with these skills primarily in an algebraic context.

No calculators should be used during this unit. Care needs to be taken to ensure that the calculations can indeed be done without a calculator.

Substitutions should include mixed numbers and fractions.

Example questions:

1. $y = \dfrac{2}{3}x^2 - x$ Evaluate for y when $x = -\dfrac{4}{3}$

2. Evaluate $\dfrac{3}{a} - \dfrac{b}{2}$ for $a = \dfrac{1}{2}$ and $b = -1\dfrac{1}{7}$

3. $r^2 - \dfrac{1}{q} = 3t - 2v$ Solve for v when $r = \dfrac{2}{3}$, $q = -3$ and $t = -\dfrac{5}{6}$

Students should construct tables of values for a variety of functions including, but not necessarily limited to, the following:
- Quadratic
- Cubic
- Reciprocal
- Square root

No formal treatment of these functions is necessary. Students are being exposed them and using them as a context for substitution and evaluation.

Notes and Resources: