1. Notation

1.1 Negation Notation

Notation1.1.1—Operation of Negation (ONeg).

$$-a = \neg a \tag{1.1a}$$
$$\neg a = -a \tag{1.1b}$$

I have used a different symbol, $\neg$, as the prefix negation operator only to differentiate it from the minus sign infix operator symbol, $-$, which is also used as the infix operator for the dyadic operation of subtraction. I will refer to this change of symbol as ONeg. This is used only as a teaching tool and should not be confused with the logic negation operator. Another advantage of using this symbol is that it reduces the number of delimiters used in an expression for example, $\neg a$ versus $(-a)$.

- Negative five: -5
- Negative five: $\neg 5$
- Four minus five: $4 - 5$
- Four minus negative five: $4 - -5$
- Four minus negative five: $4 - (-5)$
- Four minus negative five: $4 - \neg 5$
- Negative four minus five: $-4 - 5$
- Negative four minus five: $\neg 4 - 5$

1.2 Multiplication Notation

Notation1.2.1—Juxtaposition to Center-Dot (JTC).

$$ab = a \cdot b \tag{1.2}$$

Notation1.2.2—Center-Dot to Justapostion (CTJ).

$$a \cdot b = ab \tag{1.3}$$

1.3 Power Notation

Notation1.3.1—Power To Factor (PoTF).

$$a^n = a_1 \cdot a_2 \cdot \ldots \cdot a_{n-1} \cdot a_n \tag{1.4}$$

Notation1.3.2—Factor To Power (FTPo).

$$a_1 \cdot a_2 \cdot \ldots \cdot a_{n-1} \cdot a_n = a^n \tag{1.5}$$

Notation1.3.3—Radical To Power (RTPo).

$$\sqrt[m]{b^n} = b^{\frac{n}{m}} \tag{1.6}$$

Notation1.3.4—Logarithm to Power (LTPo).

$$x = \log_b y \qquad\qquad \Rightarrow y = b^x \tag{1.7}$$