3.1 Algebraic Expressions

EQ: What are the different parts that make up an expression? What is the difference between a numeric and algebraic expression?

Expression

- terms

- terms are put together by operations

\[ 2x + 5 \]

- coefficient
- variable
- constant

EX 1: \[ 2x^2 + 5x + y = -3 \]

- Terms: \( 2x^2, 5x, y, -3 \)
- Coefficient: \( 2, 5, 1 \)
- Constant: \( -3 \)

EX 2: Write an algebraic expression

\[ 4 \cdot a \cdot a \cdot a \]

\[ = 4a^3 \]

EX 3: Evaluate when \( k = 25 \)

\[ \frac{k + 10}{25} + 10 = 35 \]

EX 4: Evaluate when \( x = \frac{1}{2} \) and \( y = 4 \)

\[ \frac{x}{y} = \left( \frac{1}{2} \right) \cdot (4) = 2 \]

\[ \frac{1}{2} \cdot \frac{4}{1} = \frac{4}{2} = 2 \]