Translating Words into Algebraic Expressions

Common Mistakes
Algebra Dictionary

- *Is, was, are* mean equal.
- more, and, sum mean add.
- *less, difference* mean subtract.
- *is greater than, is more than* mean the inequality >.
- *is less than* means the inequality <.

Common Mistakes

- Mistaking *less than* (to subtract) for *is less than* (the inequality).
- Mistaking *more than* (to add) for *is more than* (the inequality).
- Incorrect: Seven less than *x is 5*:
  
  \[7 < x = 5\]
  
  4 plus *x is more than 8*:
  
  \[4 + x = x + 8\]

- Correct: Seven less than *x is 5*:
  
  \[x - 7 = 5\]
  
  4 plus *x is more than 8*:
  
  \[4 + x > 8\]
Algebra Dictionary

- *times, product* mean multiply.
- Twice a number means $2 \times$ number.
- *divide, quotient* mean divide.
- *square of x* means $x^2$.

**Common Mistakes**

- Mistaking product for quotient or sum and vice versa.
- Mistaking square of a number to mean twice a number and vice versa.

**Incorrect:**
- The product of 7 and $x$: $\frac{7}{x}$ or $7 + x$
- The square of $x$: $2x$
- Twice a number $n$: $n^2$

**Correct:**
- The product of 7 and $x$: $7x$
- The square of $x$: $x^2$
- Twice a number $n$: $2n$
Translating Words into Mathematical Problems

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Common Mistakes

- Reversing the placement of values for subtraction or division problems

Incorrect:

Seven less than my age is 32.

\[ 7 - \text{myage} = 32 \]

The quotient of 4 and \(x\) is 5.

\[ \frac{x}{4} = 5 \]

Correct:

Seven less than my age is 32.

\[ \text{myage} - 7 = 32 \]

The quotient of 4 and \(x\) is 5.

\[ \frac{4}{x} = 5 \]