Word Problem Strategies

To solve a problem means to translate an ”**English-like**” statement into a “**Mathematical**” one using the specific mathematical vocabulary and a special skills.

General Strategies

- Read the Problem
- Visualize the Problem
- Translate the Problem
- List given Values and what you are looking for
- Set the operation, equation, or inequality
- Substitute the given values
- Solve (do computation)
- Check your answer in the original setting identify missing information
- Identify and discard extra information

Special Strategies

- Recognize the type of Problem
- Recognize the type of operation (addition, division, equation, inequality, etc)
- Translate correct the mathematical terms
- Organize the information
- Balance the unit of measures
- Use specific rules for fractions, decimals, percents, radicals, exponents, etc.
- Use graphs, pictures, charts do be able better to visualize
- Check your answer
- Use your common sense

Math as a Language

- **Wide experience in life**
- **Listening to a native speaker**
- **Speaking for ourselves**
- **Connecting spoken language writing**
- **Visualizing the ideas**
- **Using the language to solve life problems**

Translating English Terms into Mathematical Symbols

Addition (plus)

Sum	+
Add	+
In addition	+
More than	+
Increased	+
In excess	+
Greater	+

Subtraction (- minus)

Decreased by	-
Less than	-
Subtract	-
Difference	-
Diminished	-
Reduce	-
Remainder	-

Multiplication (× times)

Time as much	×
Percent of	×
Product	×
Interest on	×

Division ($6 \div 2$ or $2\overline{)6}$ is read six divided by 2 or 2 divided into six)

Per $\div$

Divide $\div$

Quotient $\div$

Equality

Is – was – will be =

Equal =

Results =

Inequality

Greater than	$>$
Greater than or equal to	$\geq$
Less than	$<$
Less than or equal to	$\leq$

Special Symbols

Quantity	( ) or [ ]
Parenthesis	( )
Bracket	[ ]
Approximate	≈
Not equal	≠
Percent	%

What is the area of a square if the sides measures $\frac{3}{8}$ inch?

A. $1\frac{1}{2} sq in$

B. $1\ \frac{1}{8}\ s\ q\ \ i\ n$

C. $\frac{9}{64} sq in$

D. $\frac{9}{16} sq in$

E. $\frac{1}{8} sqin$

Mr.Kee pays $ 20 for a pair of shoes. He puts a $6 markup on every pair of shoes in his store. The markup is what percent of the price Mr.Kee pays?

A 6%

B 10%

C 20%

D 30%

E 40%

Ten times a number decreased by seven equals 101 plus that number. Find the number.

A. 12
B. 13
C. 18
D. 20
E. 23

Louie drove 48 miles directly north and then 36 miles directly west. Find the shortest distance in miles from the point where he ended up to the starting point.

A. 24
B. 36
C. C48
D. 60
E. 360

Which of the following points lies on the line of the graph of the equation

$$y = 3x - 2$$

A (0 , 5)
B. (1 , -4
C. (4 , 14)
D. (3 , 7)
E. (0 , 2)

Some important key words to remember:

Yearly

Monthly

Weekly

Workweek

Biweekly

Semiannually

Quarterly

Biweekly

The more you practice,
the more confident you will feel,
and the more successful you will be.

Good luck because this means
that preparation meets opportunity