

Solving Word Problems

- Understand the problem.
 - Read the problem at least two times
 - Make a drawing
 - Find the important information
 - What are you asked to find? What information do you need?
- Choose a variable to represent the unknown
- Translate into an equation
- Work to Solve the equation
- Interpret the results
 - check your answer
 - does it make sense

C	Circle key numbers & units What do I know?
U	Underline the question What am I being asked to solve?
B	Box math "action" words Am I going to add, subtract, multiply or divide?
E	Evaluate and eliminate What steps do I take? What information don't I need?
S	Show your work and check Does my answer make sense? How can I double check?

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no. sign = sign

Write an expression that represents the sum of three consecutive integers, if n is the first consecutive integer.

Variables: 1st = n
 2nd = $n + 1$
 3rd = $n + 2$

Expression: $n + n + 1 + n + 2$
 $3n + 3$

The sum of four consecutive odd integers is 64. Find the integers.

Variables: 1st n 3rd $n + 4$
 2nd $n + 2$ 4th $n + 6$

Equation: $n + n + 2 + n + 4 + n + 6 = 64$

Work:

$$\begin{array}{r}
 4n + 12 = 64 \\
 \underline{-12 \quad -12} \\
 4n = 52 \\
 \underline{\quad \quad 4} \\
 n = 13
 \end{array}$$

Solution: $\{13, 15, 17, 19\}$

There were 104,830 people who attended a rock festival. If there were 8110 more boys than girls, and 24,810 fewer adults over 50 years of age than there were girls, how many of each group attended the festival?

Variables:
 boys $x + 8110$
 girls x
 50+ $x - 24,810$

Equation:
 Work: $x + 8110 + x + x - 24810 = 104,830$

$$3x - 16700 = 104,830$$

$$\begin{array}{r} 3x - 16700 = 104,830 \\ +16700 \quad +16700 \\ \hline 3x = 121530 \end{array}$$

$$\frac{3x}{3} = \frac{121530}{3}$$

$$x = 40,510$$

Solution:
 boys = 48,620
 girls = 40,510
 50+ = 15,700
104,830 ✓

The sum of two numbers is 41. The larger number is 1 less than twice the smaller number. Find the numbers.

Variables: sm# x
 lg# $2x - 1$

Equation:
 Work: $x + 2x - 1 = 41$

$$3x - 1 = 41$$

$$\begin{array}{r} 3x - 1 = 41 \\ +1 \quad +1 \\ \hline 3x = 42 \end{array}$$

$$\frac{3x}{3} = \frac{42}{3}$$

$$x = 14$$

Solution:
 sm# = 14
 lg# = 27
41 ✓

