

Consecutive Numbers

Consecutive Numbers Chart				
Type of Consecutive Numbers	Examples	Expressions for Terms		
		First	Second	Third
Consecutive Numbers	4, 5, 6 27, 28, 29	x	$x + 1$	$x + 2$
Consecutive Even Numbers	8, 10, 12 62, 64, 66	x	$x + 2$	$x + 4$
Consecutive Odd Numbers	23, 25, 27 89, 91, 93	x	$x + 2$	$x + 4$

1. The sum of three consecutive numbers is 72. What is the smallest of these numbers?

Variables: x : smallest integer

Equation: $x + x + 1 + x + 2 = 72$

$$\begin{array}{r} 3x + 3 = 72 \\ -3 \quad -3 \\ \hline 3x = 69 \end{array}$$

$$\frac{3x}{3} = \frac{69}{3}$$

$$\boxed{x = 23}$$

2. Find three consecutive odd integers whose sum is 261.

Variables: x : smallest integer

Equation: $x + x + 2 + x + 4 = 261$

$$\begin{array}{r} 3x + 6 = 261 \\ -6 \quad -6 \\ \hline 3x = 255 \end{array}$$

$$\frac{3x}{3} = \frac{255}{3}$$

$$x = 85$$

$$\boxed{85, 87, 89}$$

Write an equation that can be used to model the following problem. Finally, use your equation to SOLVE the problem.

1. Find three consecutive integers whose sum is 171.

Equation: $x + x + 1 + x + 2 = 171$

$$3x + 3 = 171$$

$$\frac{3x}{3} = \frac{168}{3}$$

$$x = 56$$

$$\boxed{56, 57, 58}$$

2. The sum of 3 consecutive even numbers add up to 1002. Find the three numbers.

Equation: $x + x + 2 + x + 4 = 1002$

$$\begin{array}{r} 3x + 6 = 1002 \\ -6 \quad -6 \\ \hline 3x = 996 \end{array}$$

$$\frac{3x}{3} = \frac{996}{3}$$

$$x = 332$$

$$\boxed{332, 334, 336}$$

3. The sides of a triangular birdcage are consecutive integers. If the perimeter is 114 centimeters, what is the length of each side?

Equation: $x + x + 1 + x + 2 = 114$

$$\begin{array}{r} 3x + 3 = 114 \\ -3 \quad -3 \\ \hline 3x = 111 \end{array}$$

$$\frac{3x}{3} = \frac{111}{3}$$

$$x = 37$$

$$\boxed{37 \text{ cm}, 38 \text{ cm}, 39 \text{ cm}}$$