

## Answer on Question #43739, Math, Algebra

**Problem.** The difference of the squares of two consecutive even natural numbers is 92. Taking  $x$  as the smaller of the two numbers from an equation in  $x$  and hence find the larger of the two.

**Solution.**

The difference between two consecutive even natural numbers is 2. If the smaller of the two numbers equals  $x$ , then the larger equals  $x + 2$ . From problem statement we have equation

$$\begin{aligned}(x + 2)^2 - x^2 &= 92, \\ x^2 + 4x + 4 - x^2 &= 92, \\ 4x &= 88, \\ x &= 22.\end{aligned}$$

**Answer:** The larger number equals 24, the smaller number equals 22.