

Math 1513 - College Algebra

Quiz #5 - 2008.09.23

Solutions

Solve the following equation:

$$\sqrt{6x+7} - 1 = x + 1$$

First we add one to both sides:

$$\sqrt{6x+7} = x + 2$$

Next we square both sides:

$$6x + 7 = x^2 + 4x + 4$$

Now we get it in standard form:

$$x^2 - 2x - 3 = 0.$$

This clearly factors as $(x - 3)(x + 1) = 0$, so $x = -1$ and $x = 3$ are possible solutions. After checking, we notice that both are true solutions and satisfy the initial problem.