Since the two legs have the same length, the two acute angles must be equal, so they are each 45°.

In a $45^\circ - 45^\circ - 90^\circ$ triangle, the length of the hypotenuse is $\sqrt{2}$ times the length of the leg. You may have correctly realized $h = \sqrt{2} \cdot 3\sqrt{2}$, but then simplified incorrectly. The correct answer is 6.