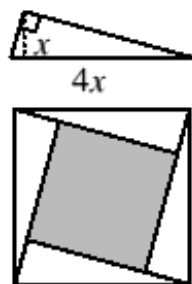




8. The right-angled triangle shown has a base which is 4 times its height. Four such triangles are placed so that their hypotenuses form the boundary of a large square as shown.

What is the side-length of the shaded square in the diagram?

- A $2x$ B $2\sqrt{2}x$ C $3x$ D $2\sqrt{3}x$ E $\sqrt{15}x$



-
8. **B** The area of the shaded square is equal to the area of the large square minus the area of the four triangles. Thus the area of the shaded square is $(4x)^2 - 4 \times \frac{1}{2} \times 4x \times x = 16x^2 - 8x^2 = 8x^2$. So the side-length is $\sqrt{8x^2} = 2\sqrt{2}x$.