QUESTION

Rob is making for his young son a replica armchair of one he uses. The ratio of the length of the arm of the old chair to that of the new chair is 3:2. The arm of the old chair is 9 inches long. How many inches long will the arm of the new chair be? A) 13.5 B) 6 C) 18 D) 8

SOLUTION:

As the ratio of the length of the arm of the old chair to the length of the arm of the new chair is $\frac{3}{2}$, and the length of the old chair is 9 inches, hence the length L of the arm of the new chair is

$$\frac{9}{L} = \frac{3}{2}$$

$$L = \frac{2 \cdot 9}{3} = 6 \; inches$$

ANSWER

B 6 inches