Capacitance of a "cubical" capacitor. Consider a "cubical" capacitor, which consist of two concentric hollow metallic cubes with thin walls, as shown in Fig. Q2.5. The edge lengths of the inner and outer conductors are $a = 5\,\text{cm}$ and $b = 15\,\text{cm}$, respectively, and the medium between the conductors is air. If a is made twice larger and b kept the same, the capacitance of the capacitor

(A) increases.
(B) decreases.
(C) remains the same.

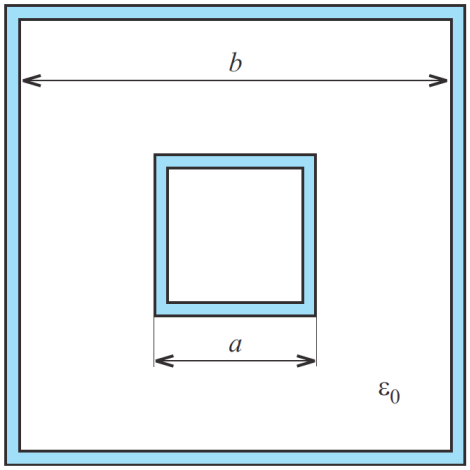

Figure Q2.5 "Cubical" air-filled capacitor; for Question 2.11.

Solution: (A)
Answer: (A)