

34. If the original capacitance is given by $C = \epsilon_0 A/d$, then the new capacitance is $C' = \epsilon_0 \kappa A/2d$. Thus $C'/C = \kappa/2$ or

$$\kappa = 2C'/C = 2(2.6 \text{ pF}/1.3 \text{ pF}) = 4.0.$$