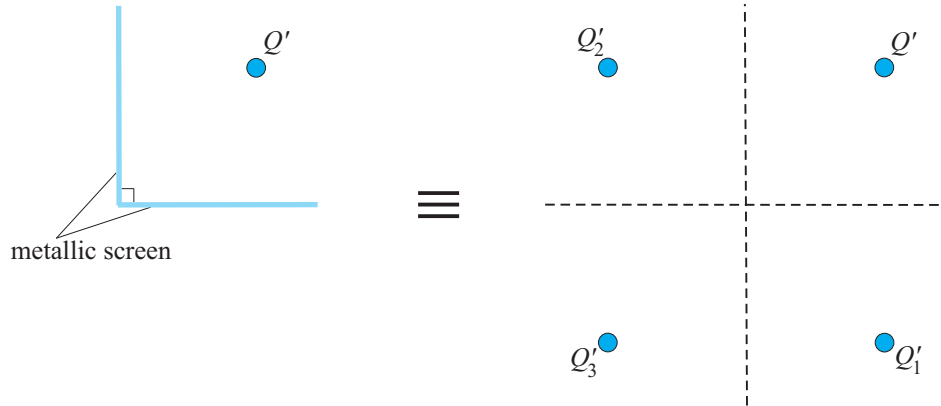


Image theory for a line charge parallel to a corner screen. Illustrated in the figure below is the application of image theory to a line charge of density Q' in the presence of a 90° corner metallic screen in air. The densities of the three image line charges in the figure are:

- (A) $Q'_1 = Q'_2 = -Q'$ and $Q'_3 = Q'$.
- (B) $Q'_1 = Q'_2 = Q'_3 = -Q'$.
- (C) $Q'_1 = Q'_2 = Q'$ and $Q'_3 = -Q'$.
- (D) $Q'_1 = Q'_3 = -Q'$ and $Q'_2 = Q'$.
- (E) $Q'_1 = Q'_2 = -Q'$ and $Q'_3 = 0$.



Solution: (A)

Answer: (A)