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$F = k\frac{q_1 q_2}{r^2}$ より、

$F_A = |k \cdot \frac{q_A q_B}{b^2} + k \cdot \frac{q_A q_C}{(2b)^2} + k \cdot \frac{q_A q_D}{(3b)^2}|$

$F_B = |k \cdot \frac{q_B q_A}{b^2} - k \cdot \frac{q_B q_C}{b^2} - k \cdot \frac{q_B q_D}{(2b)^2}|$

$F_C = |k \cdot \frac{q_C q_B}{b^2} - k \cdot \frac{q_C q_D}{b^2} + k \cdot \frac{q_C q_A}{(2b)^2}|$

$F_{\mathrm{D}} = |k \cdot \frac{q_D q_{\mathrm{C}}}{b^2} + k \cdot \frac{q_D q_{\mathrm{B}}}{(2b)^2} + k \cdot \frac{q_D q_A}{(3b)^2}|$

$q_A = q_B = q_C = q_D = +Q$ より、

$F_A = \frac{49kQ^2}{36b^2}$

$F_B = \frac{kQ^2}{4b^2}$

$F_C = \frac{kQ^2}{4b^2}$

$F_D = \frac{49kQ^2}{36b^2}$