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| **Problem 28.49** |
| The figure http://session.masteringphysics.com/problemAsset/1074473/3/knight_Figure_27_48.jpgshows an infinitely wide conductor parallel to and distance dfrom an infinitely wide plane of charge with surface charge density eta, where \eta >0.   |  |  | | --- | --- | | Part A |  | | What is the magnitude of the electric field E_1_vecin region 1?   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | ***Answer not displayed*** | \frac{\eta} {\epsilon_0} |  | | | | | Part B |  | | What is the direction of the electric field E_1_vecin region 1?   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  |  | | --- | --- | |  | Upward | |  | Downward | |  | The field is zero | |  | ***Answer not displayed*** | | | |  |  |  | | --- | --- | | Part C |  | | What is the magnitude of the electric field E_2_vecin region 2?   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | ***Answer not displayed*** | \frac{\eta} {\epsilon_0} |  | | | | | Part D |  | | What is the direction of the electric field E_2_vecin region 2?   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  |  | | --- | --- | |  | Upward | |  | Downward | |  | The field is zero | |  | ***Answer not displayed*** | | | |  |  |  | | --- | --- | | Part E |  | | What is the magnitude of the electric field E_3_vecin region 3?   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | ***Answer not displayed*** | \frac{\eta} {\epsilon_0} |  | | | | | Part F |  | | What is the direction of the electric field E_3_vecin region 3?   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  |  | | --- | --- | |  | Upward | |  | Downward | |  | The field is zero | |  | ***Answer not displayed*** | | | |  |  |  | | --- | --- | | Part G |  | | What is the magnitude of the electric field E_4_vecin region 4?   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | ***Answer not displayed*** | \frac{\eta} {\epsilon_0} |  | | | | | Part H |  | | What is the direction of the electric field E_4_vecin region 4?   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ANSWER: | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | |  |  | | --- | --- | |  | Upward | |  | Downward | |  | The field is zero | |  | ***Answer not displayed*** | | | | |