(8pts) 25. A robot's 3V battery pack has a capacity of 2850 mAh. When the robot moves forward, its motor appears as a resistive load of 12 ohms. The forward speed of the robot is 0.5 ft/sec. How many inches will the robot travel before it stops? Assume the motor will run until the last coulomb of charge has been consumed.

$V = IR$

$I = \frac{V}{R} = \frac{3}{12} = \frac{1}{4} = 250\,mA$

$\frac{2850\,mAh}{250\,mA} = 11.4\ hours$

$0.5\,ft/sec \rightarrow 1800\,ft/hr$

$11.4\ hours * 1800\ ft/hr = 20{,}520\ ft$