COIL LENGTH-WEIGHT ESTIMATE

Project
Estimate the amount of wire required to wind a 200-turn coil

Turns 200
Core diameter 1.25 inches
Coil width 0.375 inches
Material #26 Copper Magnet Wire

#26 Copper Magnet Wire Characteristics

<table>
<thead>
<tr>
<th>DIAMETER (IN)</th>
<th>OHM RESISTANCE/1000 FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td>NOM</td>
</tr>
<tr>
<td>0.0157</td>
<td>0.0159</td>
</tr>
</tbody>
</table>

Calculate
Total Length of wire feet
Coil weight lbs
Coil weight gms
Coil resistance ohms

Coil Model

Coil Cross Section

Hint:
. Create a spreadsheet
. How many turns fit in the coil width?
. How does the wire circumference change with each layer of wire?