trig and applied force

1) A force is pushing in a direction that is $\theta$ degrees from the $x$ axis. How many lb of force are being produced in the $x$ and $y$ axis, for the given angles?

<table>
<thead>
<tr>
<th>$\theta$</th>
<th>$x$</th>
<th>$y$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0^\circ$</td>
<td></td>
<td></td>
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<tr>
<td>$15^\circ$</td>
<td></td>
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<tr>
<td>$30^\circ$</td>
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<tr>
<td>$45^\circ$</td>
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<tr>
<td>$60^\circ$</td>
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<tr>
<td>$75^\circ$</td>
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<tr>
<td>$90^\circ$</td>
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</tbody>
</table>

2) How many lb of force are applied between the Box & the ramp ($N$), and How many lb of force are pushing down the ramp ($N$)?

<table>
<thead>
<tr>
<th>$\theta$</th>
<th>$N$</th>
<th>$S$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0^\circ$</td>
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<tr>
<td>$30^\circ$</td>
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<td>$45^\circ$</td>
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<tr>
<td>$60^\circ$</td>
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</tr>
<tr>
<td>$80^\circ$</td>
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</tbody>
</table>

3) You weigh 120 lb. How hard must the person push to hold you up, at various $\theta$?

- Pushing the way
- Slippery floor

<table>
<thead>
<tr>
<th>$\theta$</th>
<th>Force req'd.</th>
</tr>
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<tbody>
<tr>
<td>$0^\circ$</td>
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<td>$1^\circ$</td>
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<td>$20^\circ$</td>
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