A sign says:  

<table>
<thead>
<tr>
<th>NO PARKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-9am</td>
</tr>
<tr>
<td>4-6pm</td>
</tr>
<tr>
<td>Mon-Fri</td>
</tr>
</tbody>
</table>

Using variables like $t$ for time of day and $d$ for day of week, write a binary expression that says when there is no parking.

§ My first attempt is

$$(7\text{am} \leq t < 9\text{am} \lor 4\text{pm} \leq t < 6\text{pm}) \land \text{Mon} \leq d \leq \text{Fri}$$

For the time $t$, it is not important whether we use $<$ or $\leq$. But the problem is that the days cycle. Saturday comes after the preceding Monday and before the following Friday. Likewise the times of day cycle, so that midnight comes after the preceding 4pm and before the following 6pm. So I will represent a day as a string of length 3:

$\text{year}; \text{week}; \text{day}$

and a time as a string of length 4:

$\text{year}; \text{week}; \text{day}; \text{time}$

I need the weeks to start on a Saturday or a Sunday or a Monday; let's say Monday. Since a year may not start on Monday, number the first partial week 0, and after that number the weeks starting on Mondays. My next attempt is

$$y; w; \text{Mon} \leq y; w; d \leq y; w; \text{Fri}$$

$$\land \left( y; w; d; 7\text{am} \leq y; w; d; t < y; w; d; 9\text{am} \lor y; w; d; 4\text{pm} \leq y; w; d; t < y; w; d; 6\text{pm} \right)$$

In any given year $y$ and week $w$, if the day $d$ is between Mon and Fri, and on that day the time $t$ is between 7am and 9am or between 4pm and 6pm, then there is no parking. That's better than the previous attempt, but it is still wrong concerning the first and last partial weeks in a year.