

THEORY OF CONSTRAINTS

101

Presented by Kristen Cox

Executive Director

Utah Governor's Office of Management and Budget

1

2

3

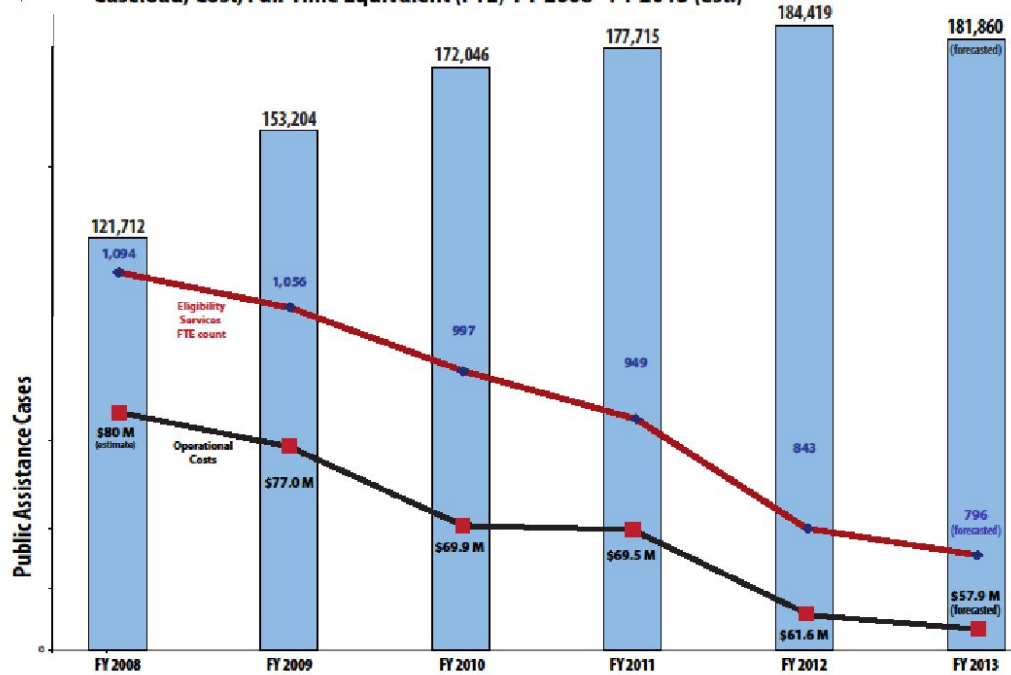
4



Department of Workforce Services

Public Assistance - Eligibility Services

Caseload, Cost, Full-Time Equivalent (FTE) FY 2008 - FY 2013 (est.)



Rev Date: 1/14/13

- More money/arbitrary budget cuts
- Reorganize
- Blame people/staff
- Training
- Technology
- Mistaking strategic plans for performance outcomes
- Data clutter



PROJECT



PEOPLE/
SOCIAL SERVICES



POLICY



REGULATORY



RESOURCE MANAGEMENT



TRANSACTIONAL



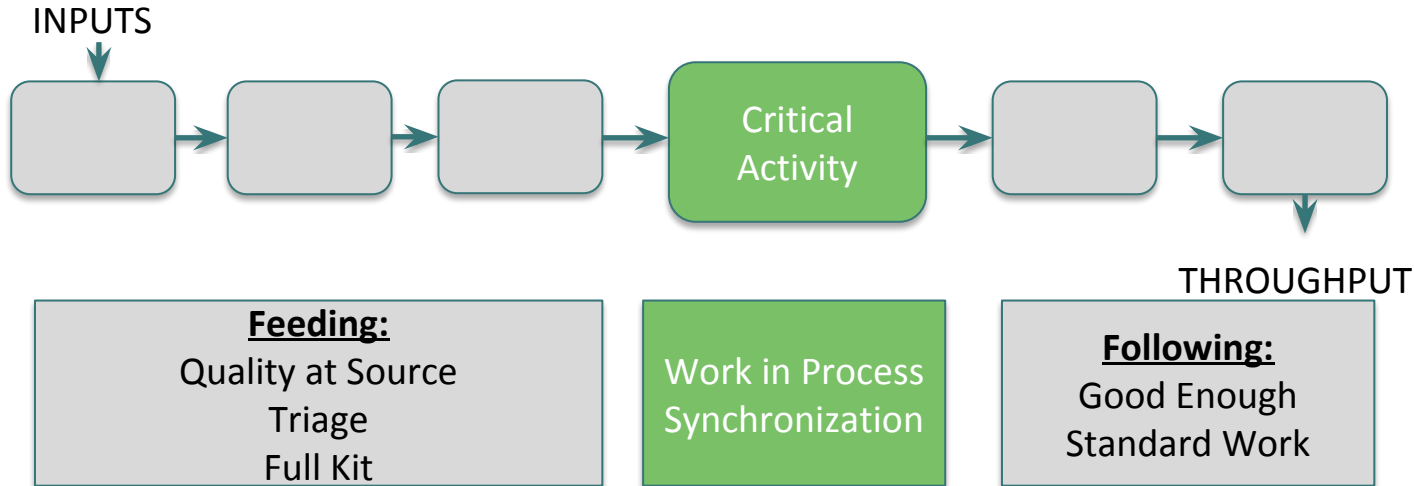
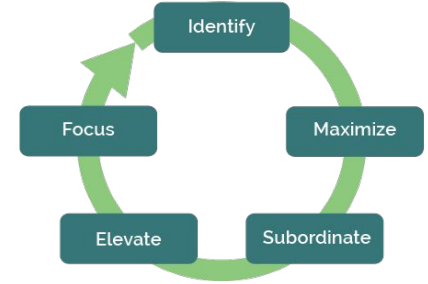
INVENTORY/DISTRIBUTION

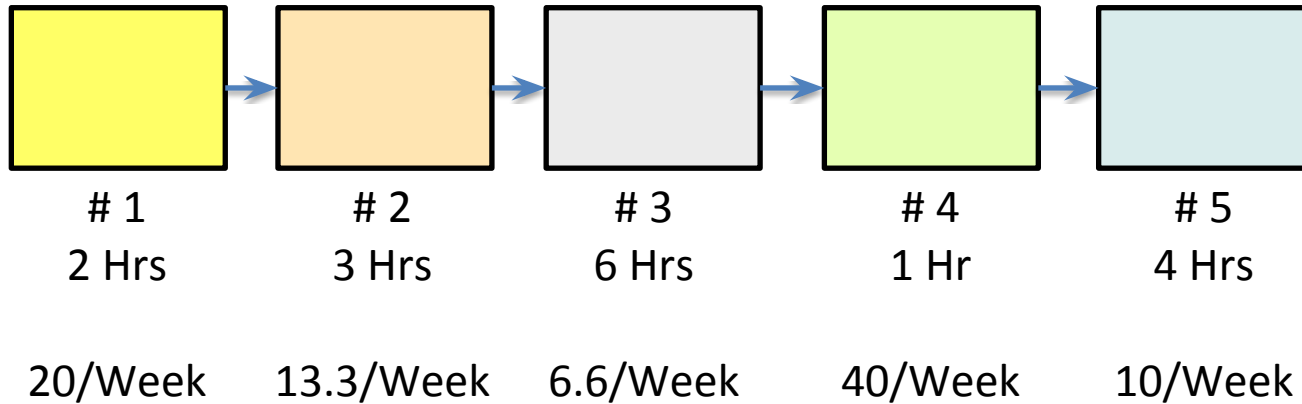


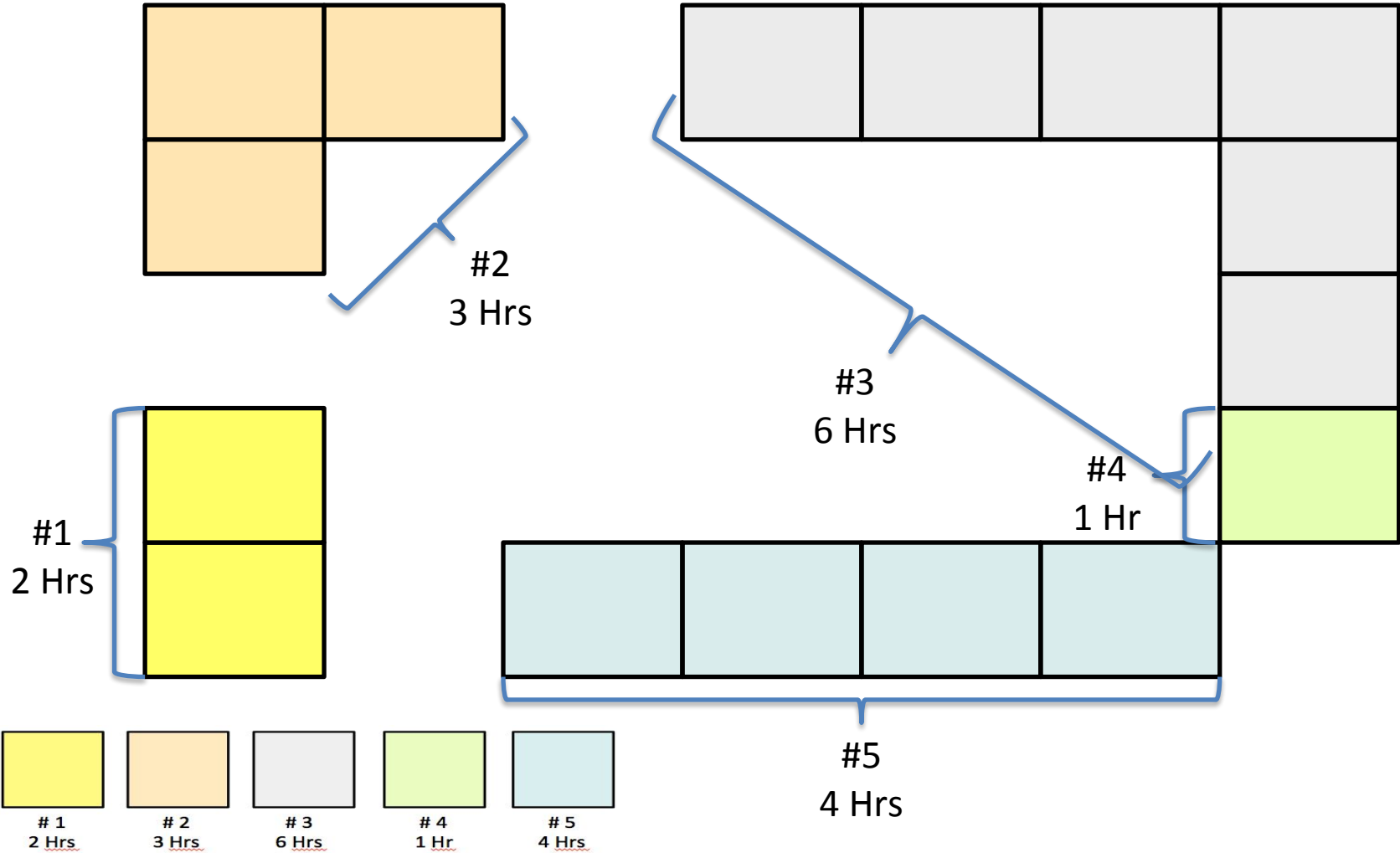
MARKETING AND OUTREACH

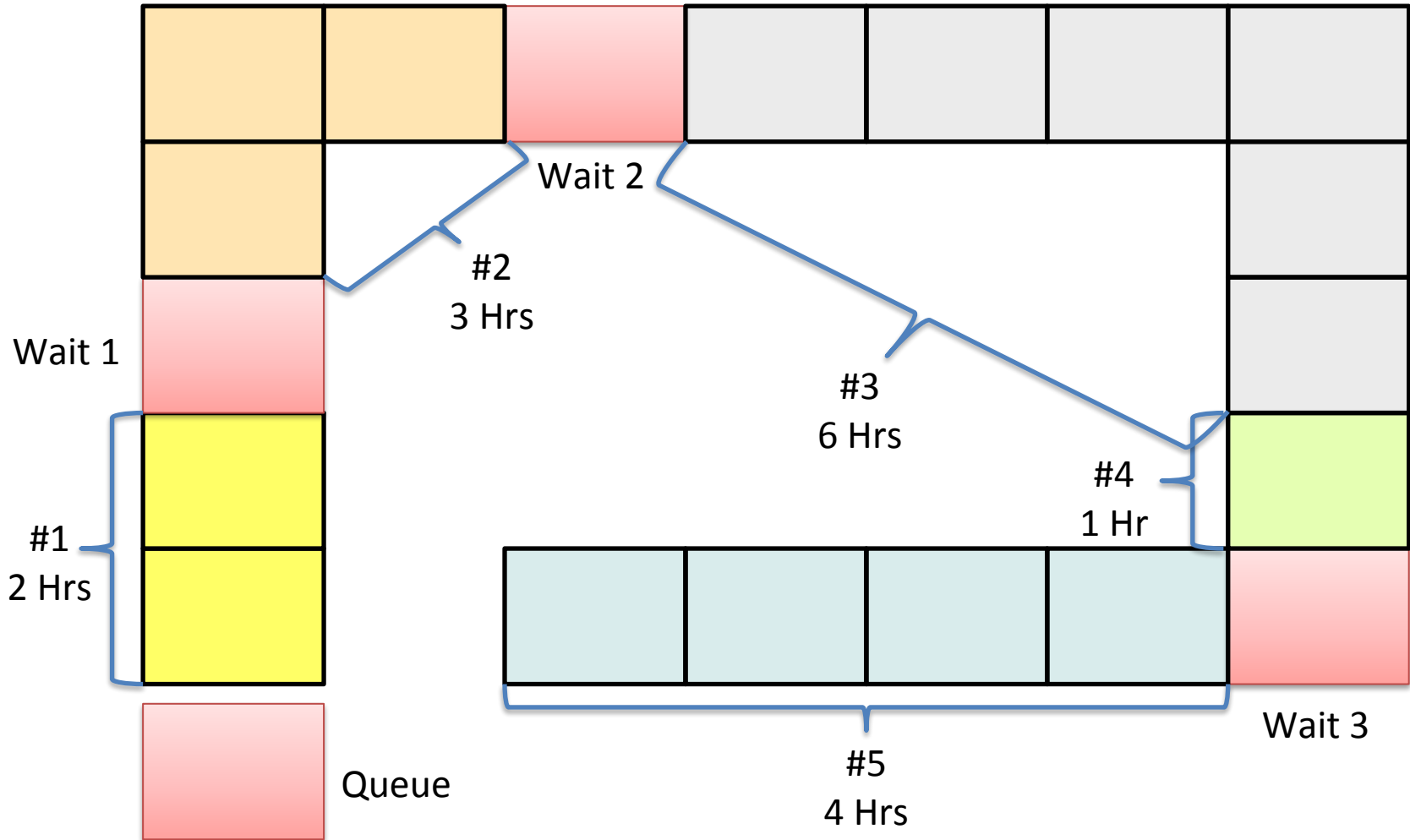
1. Identify the constraint
2. Exploit the constraint
3. Subordinate to the constraint
4. Elevate the constraint
5. Repeat

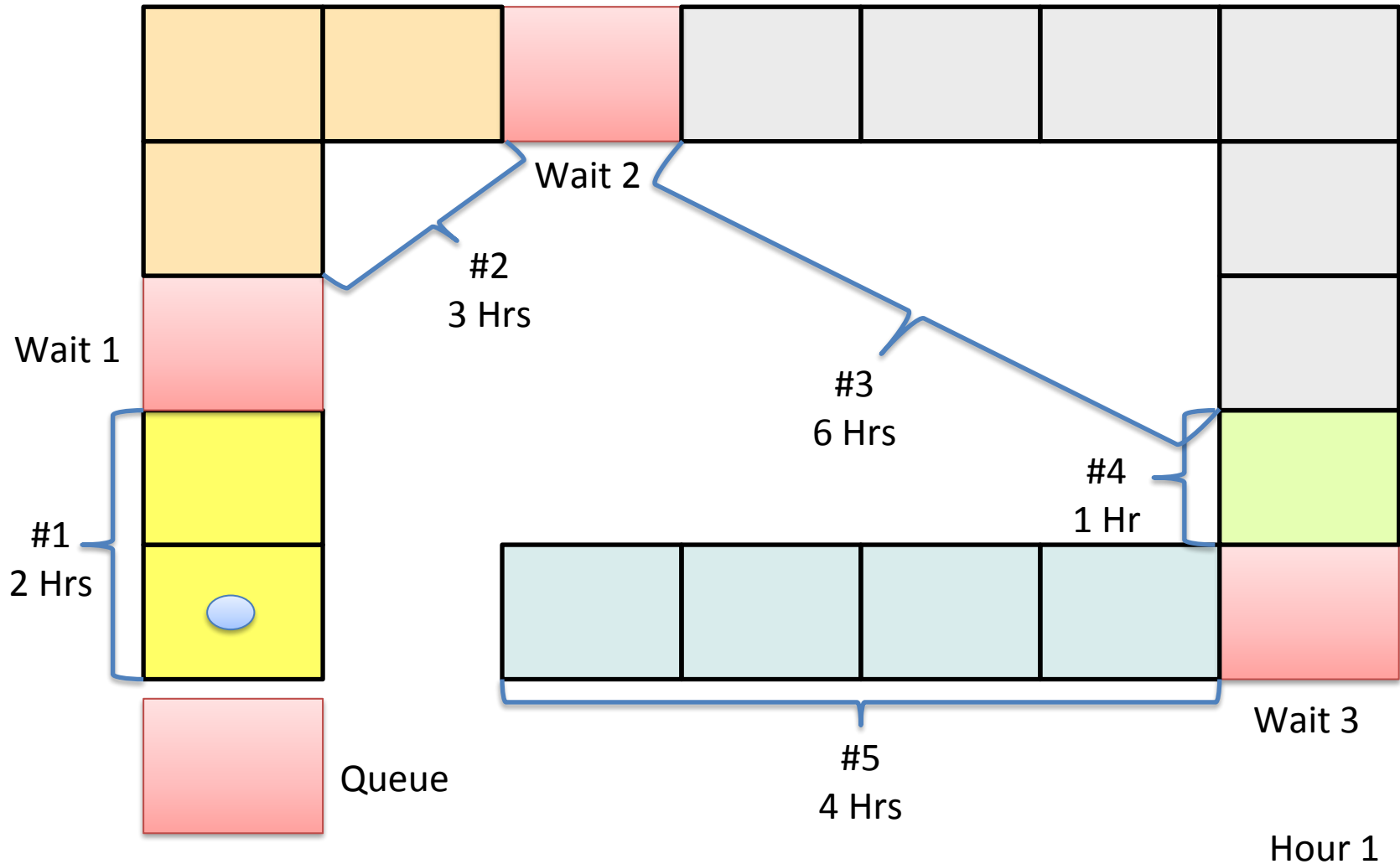
Applying the principles of flow: maximize and subordinate to the system critical activity

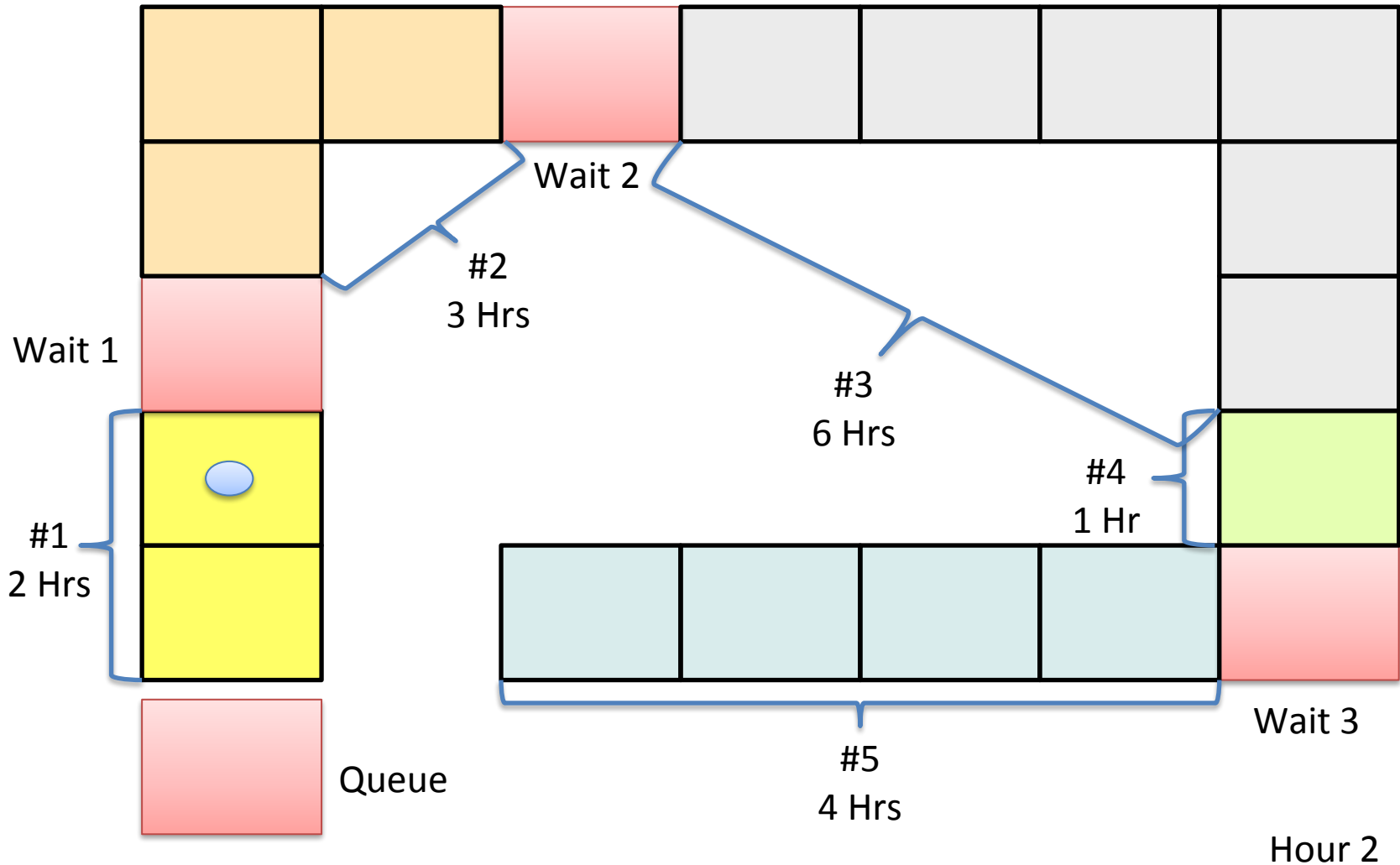


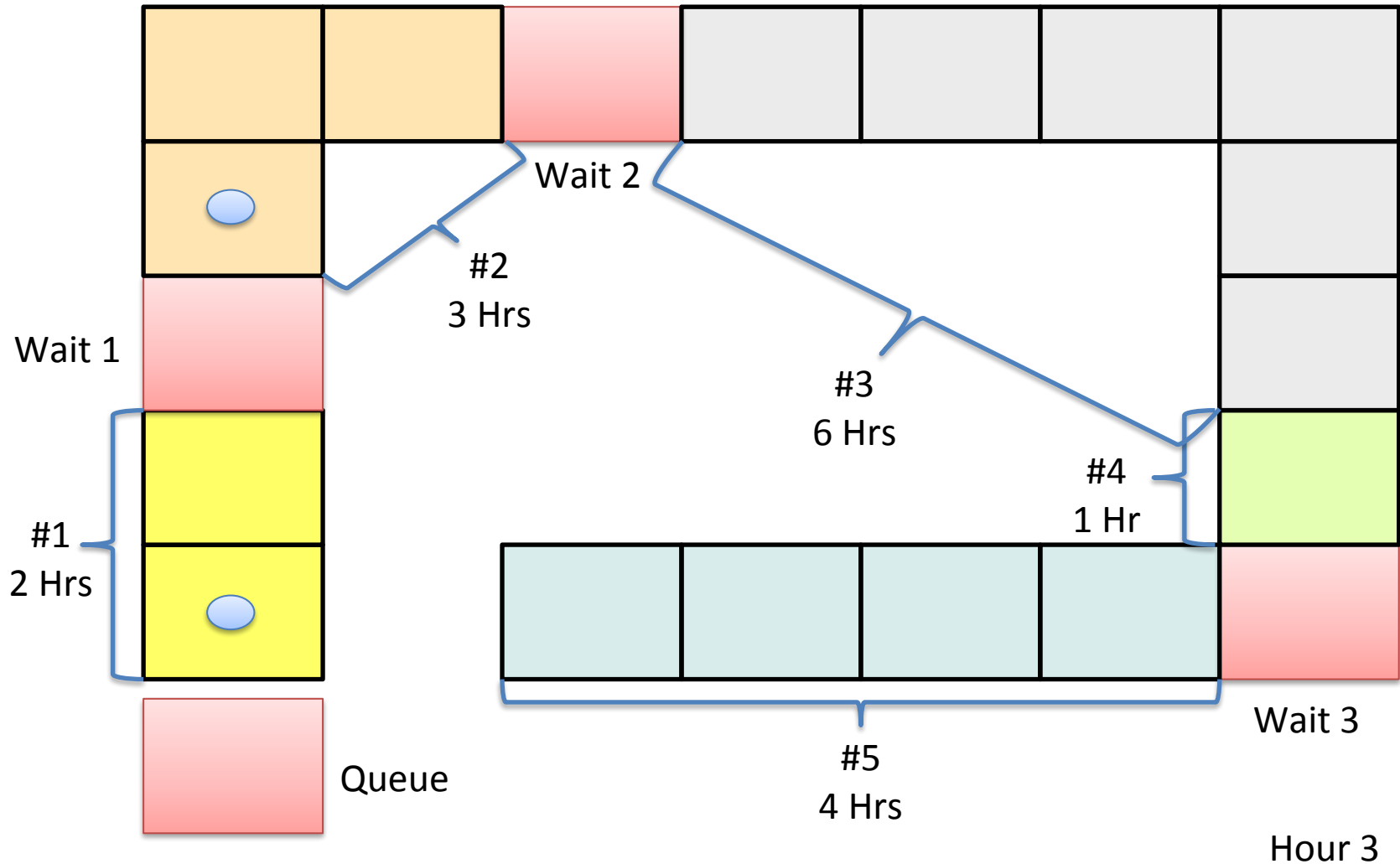


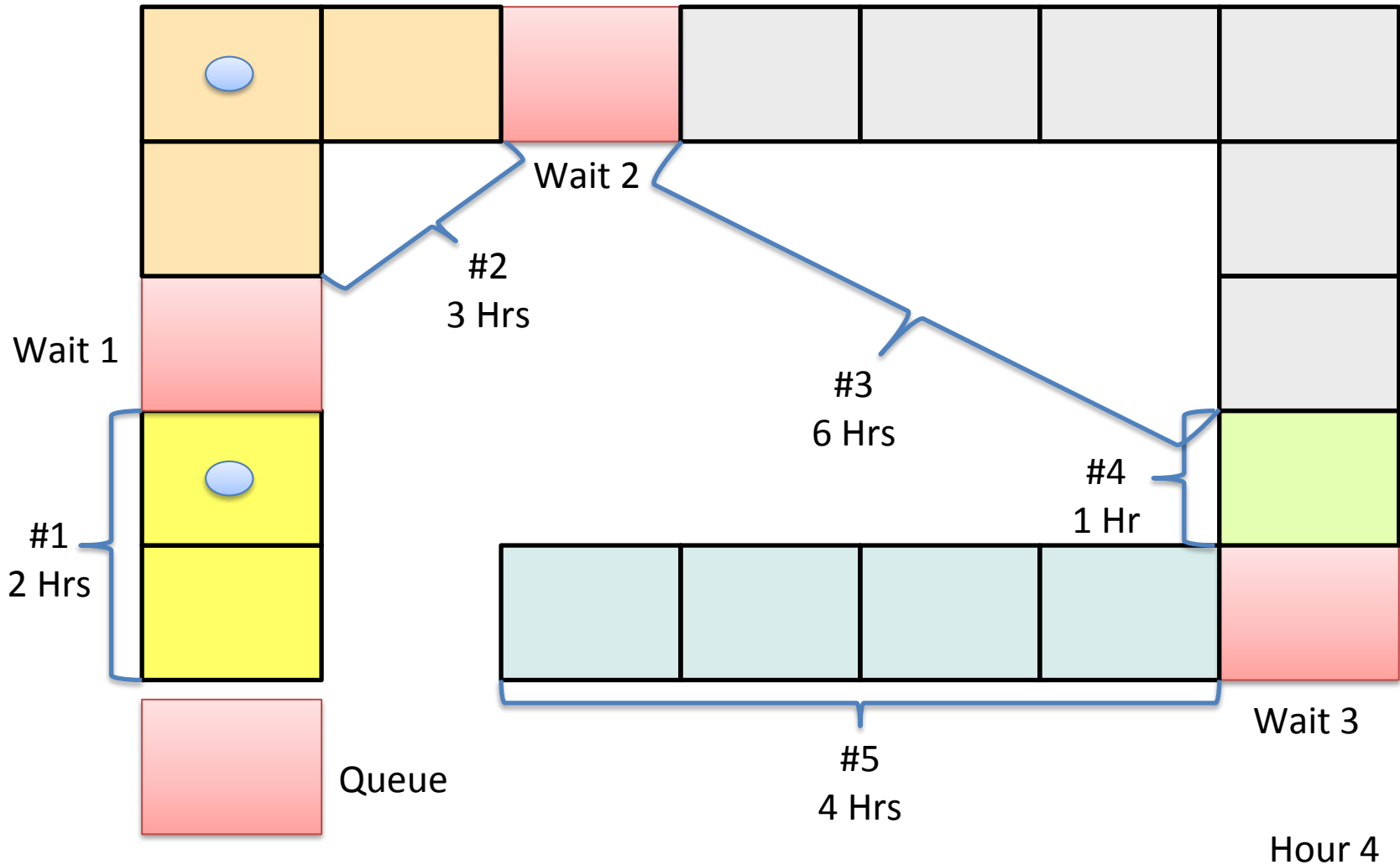


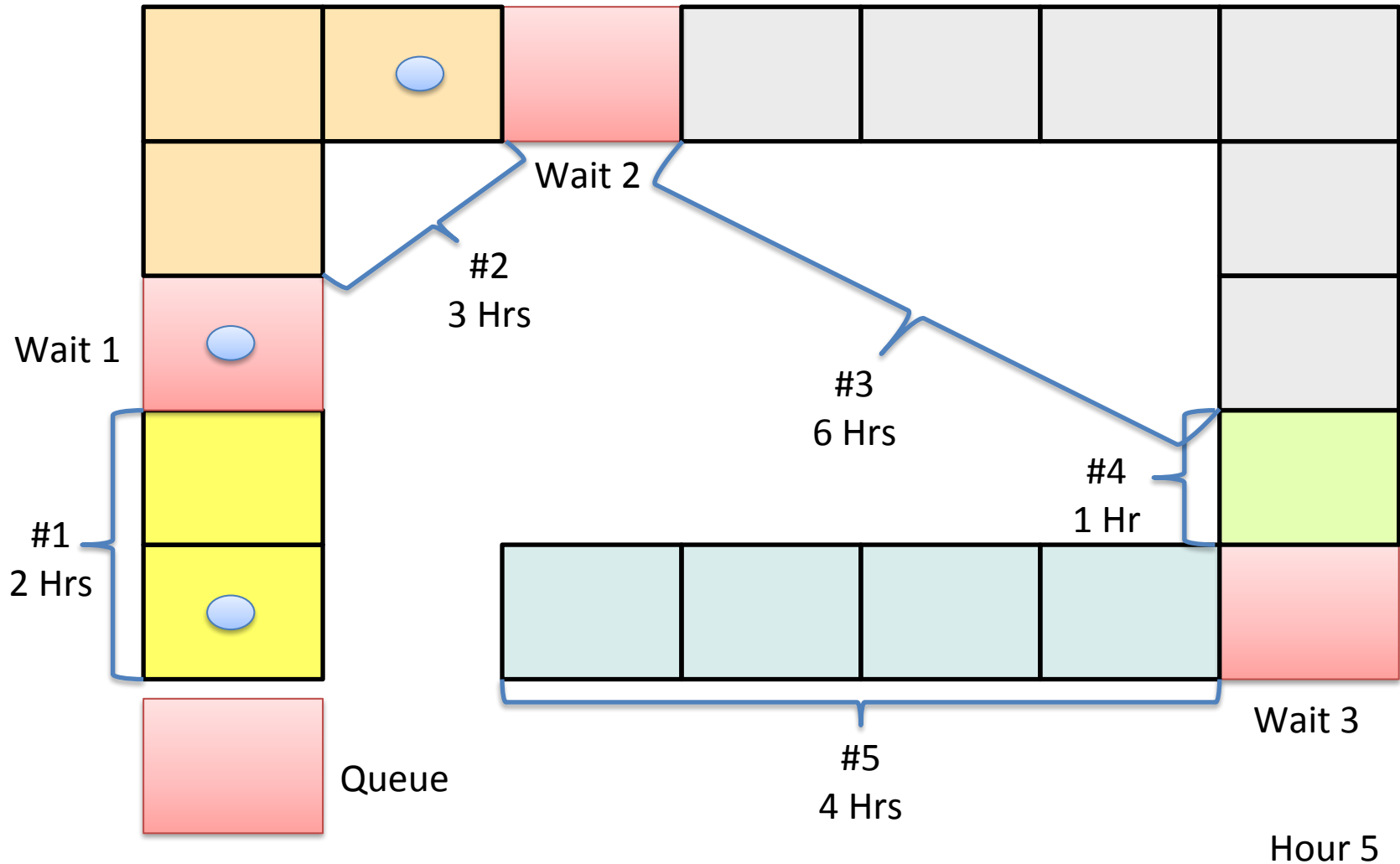


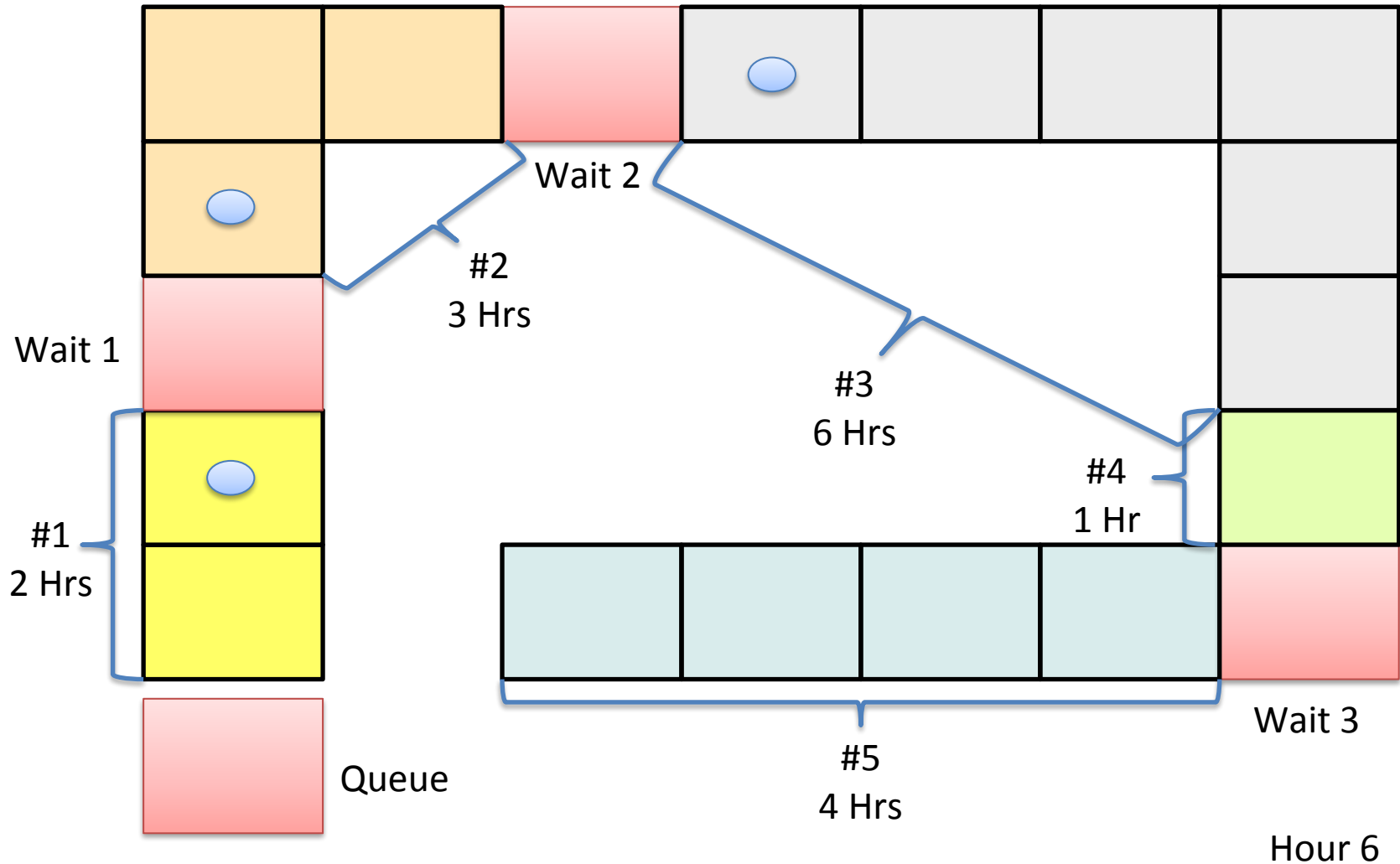


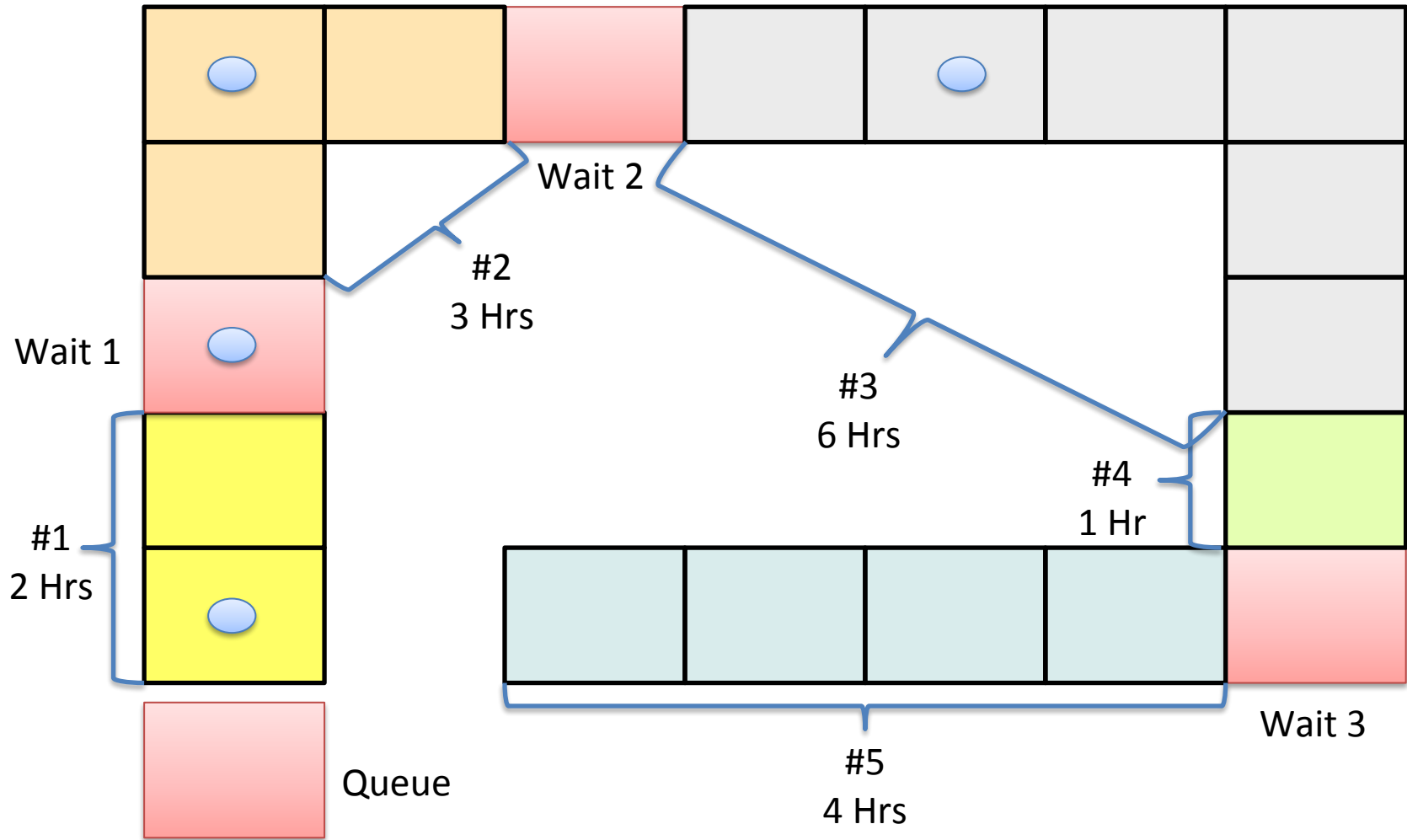




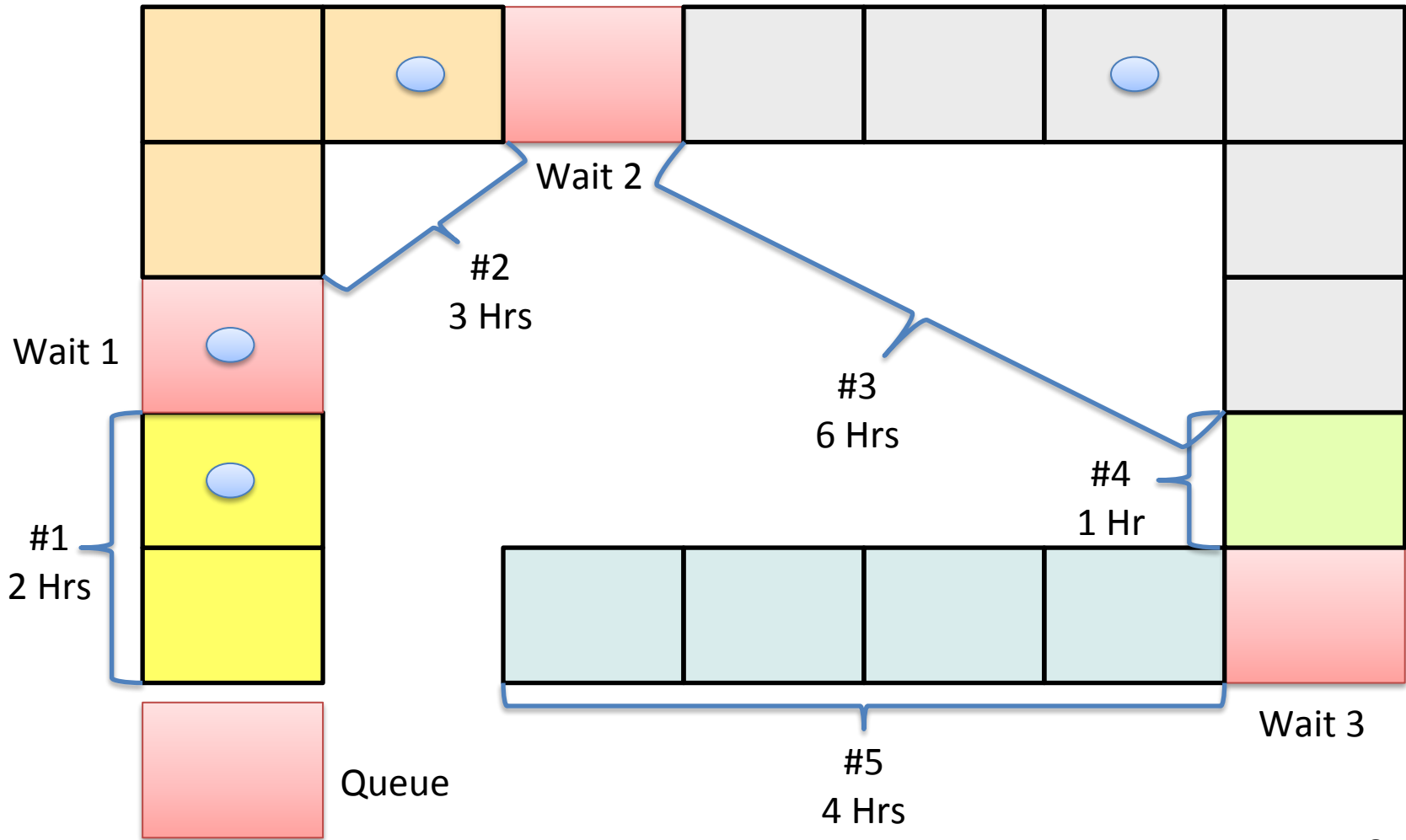


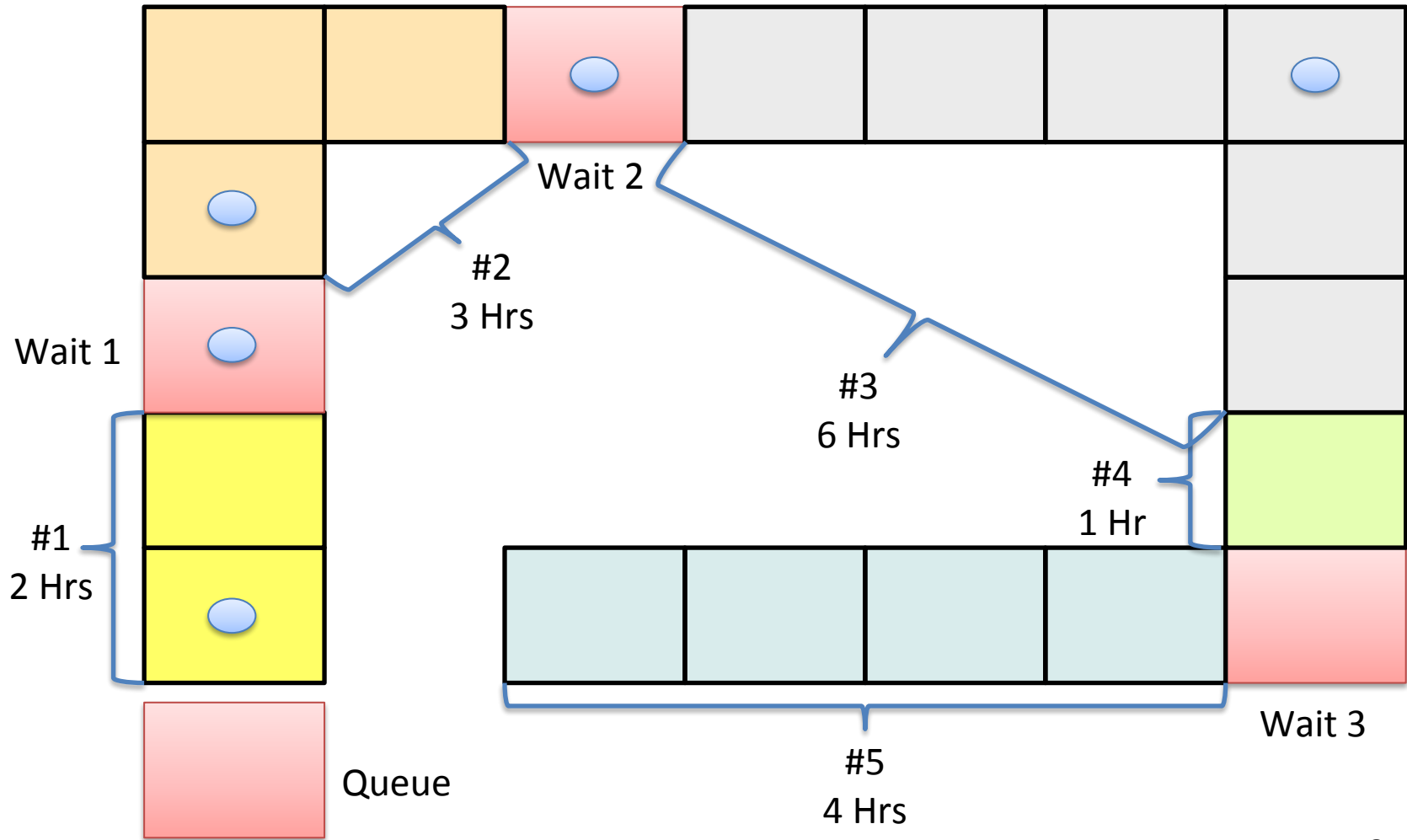


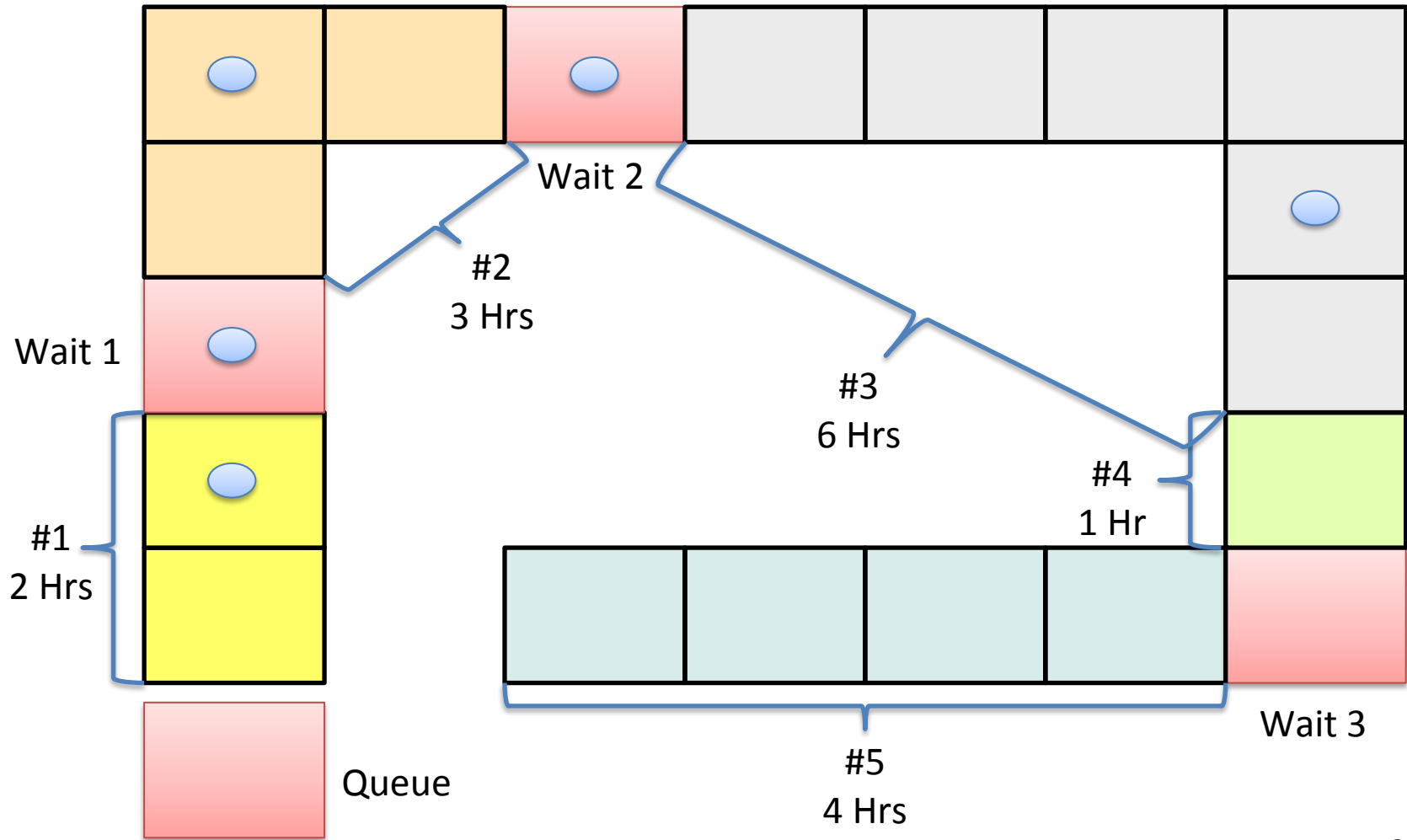


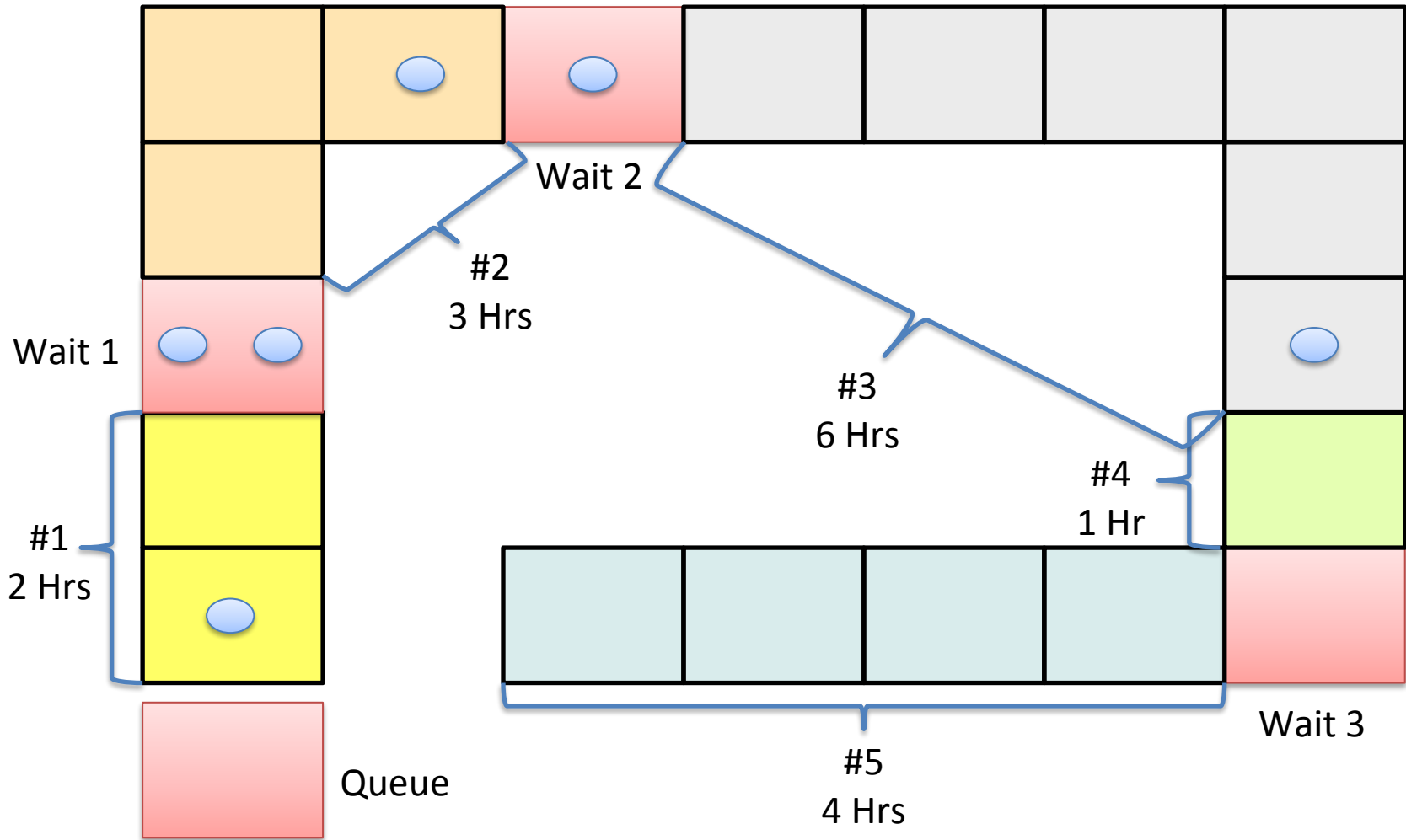


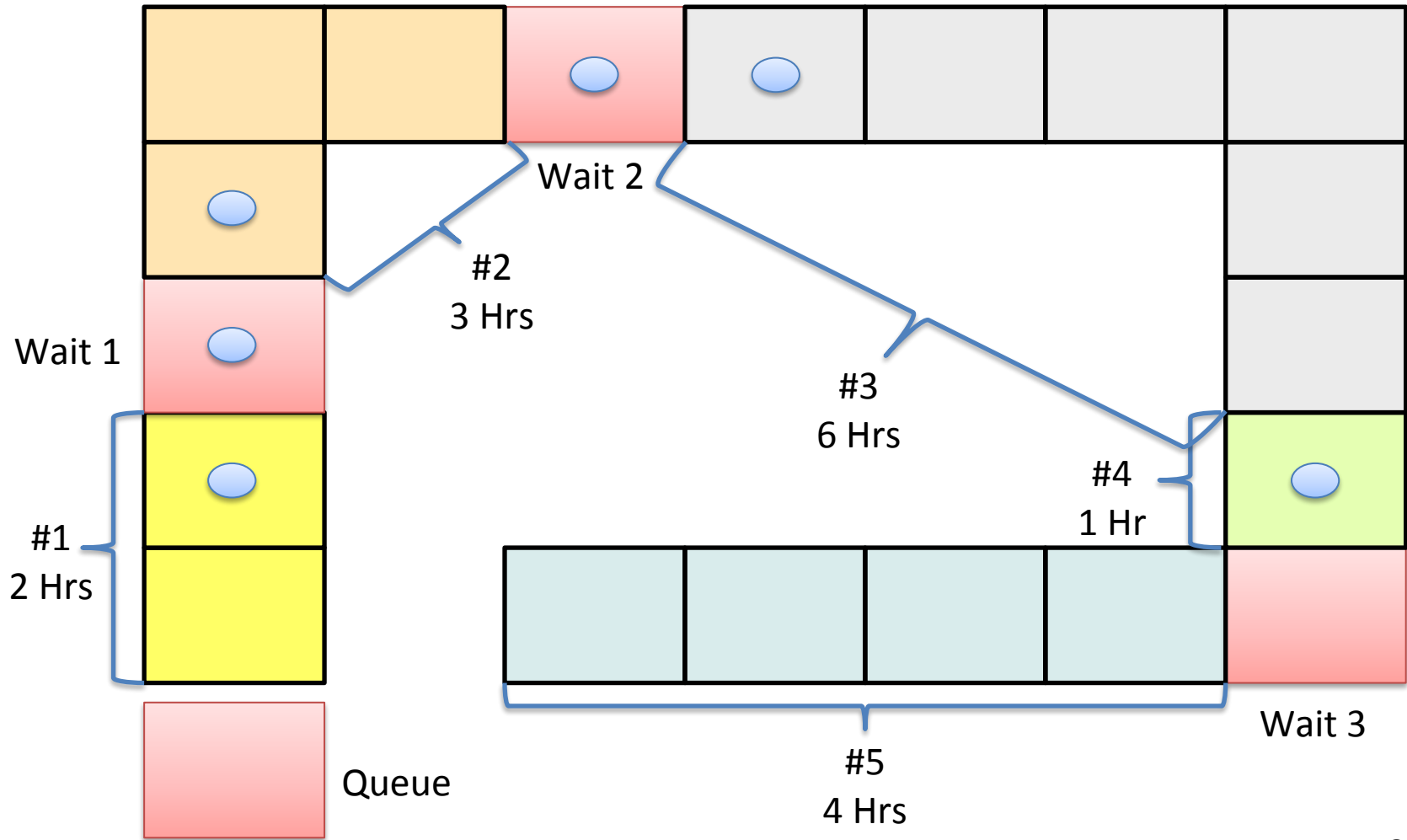
Hour 7

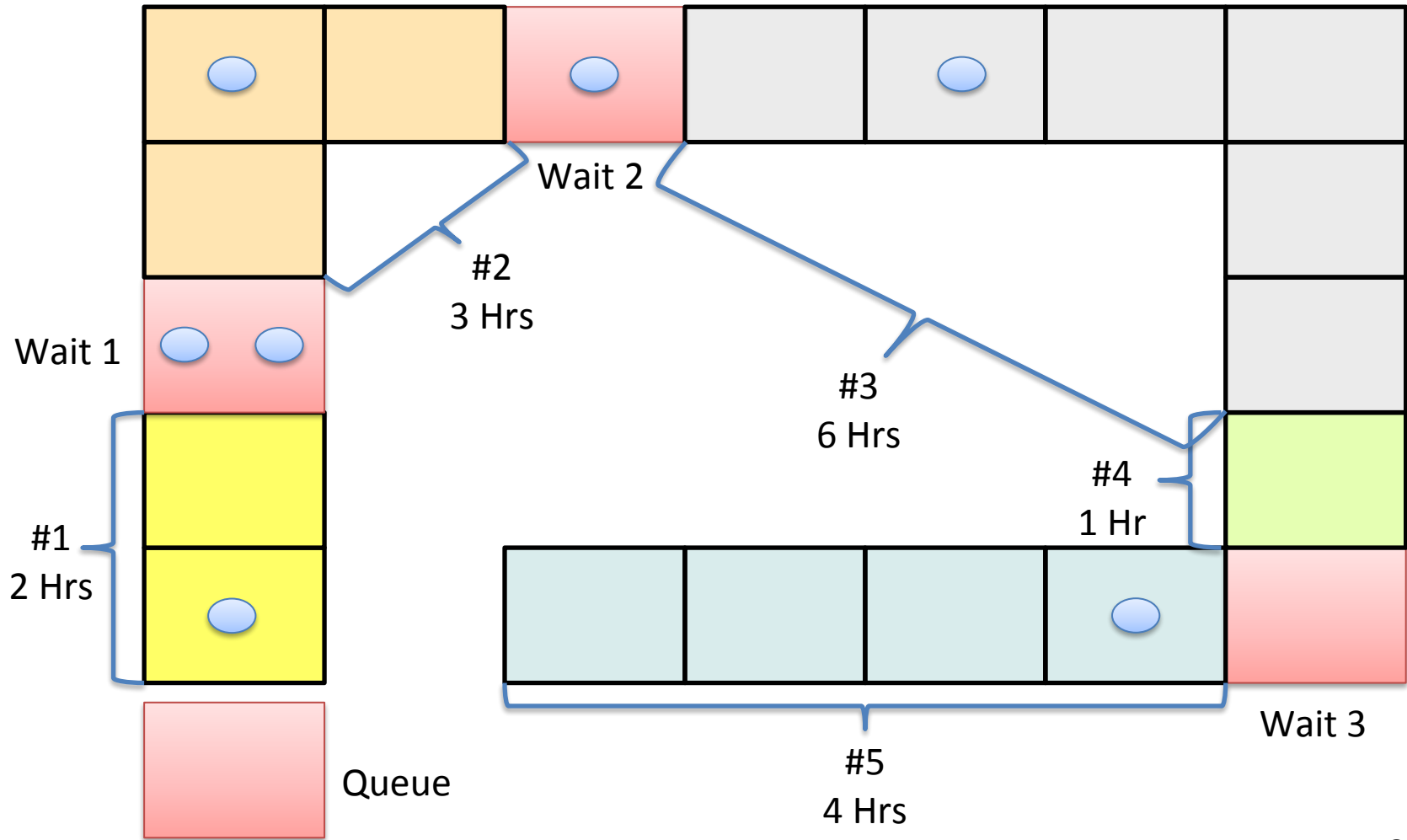


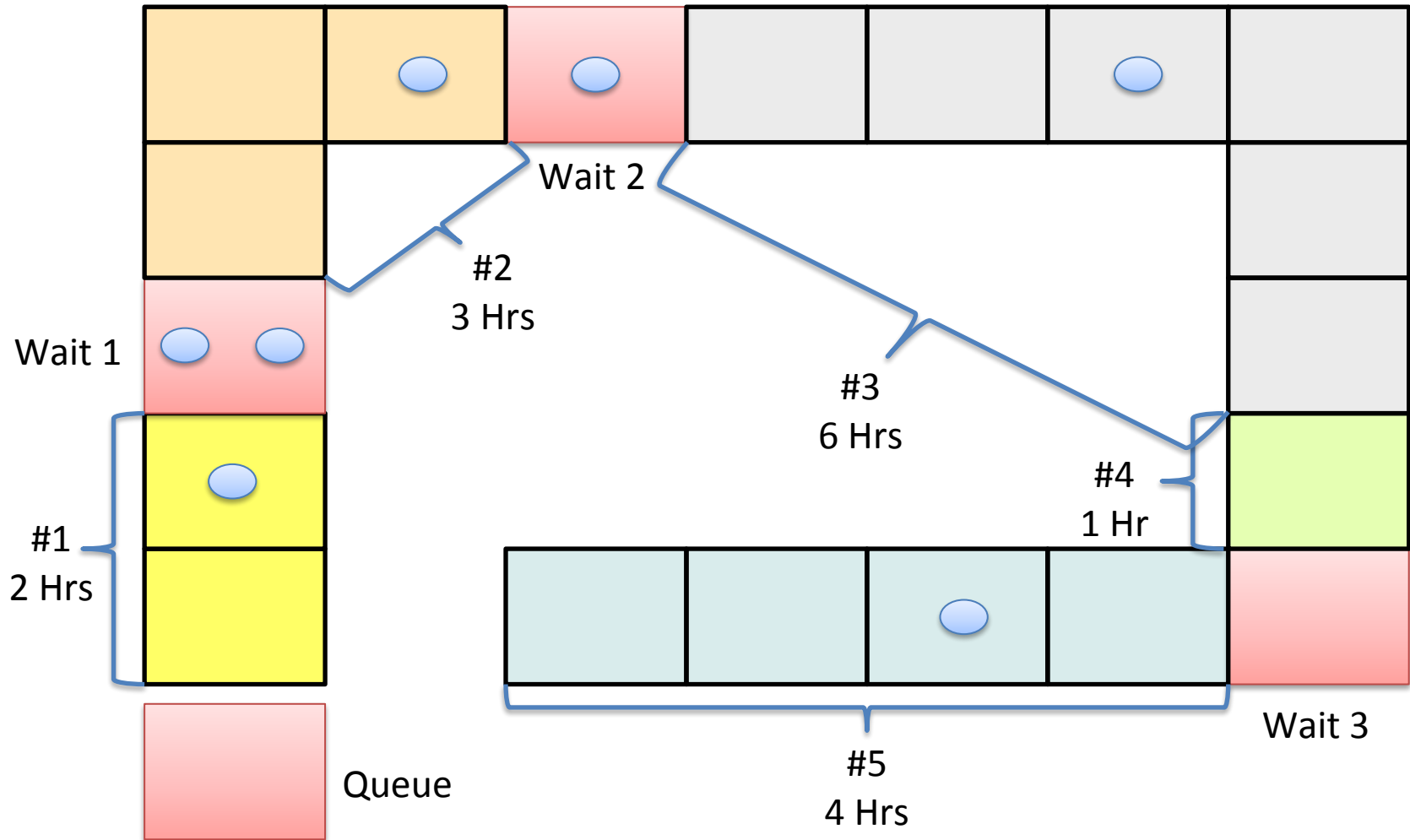


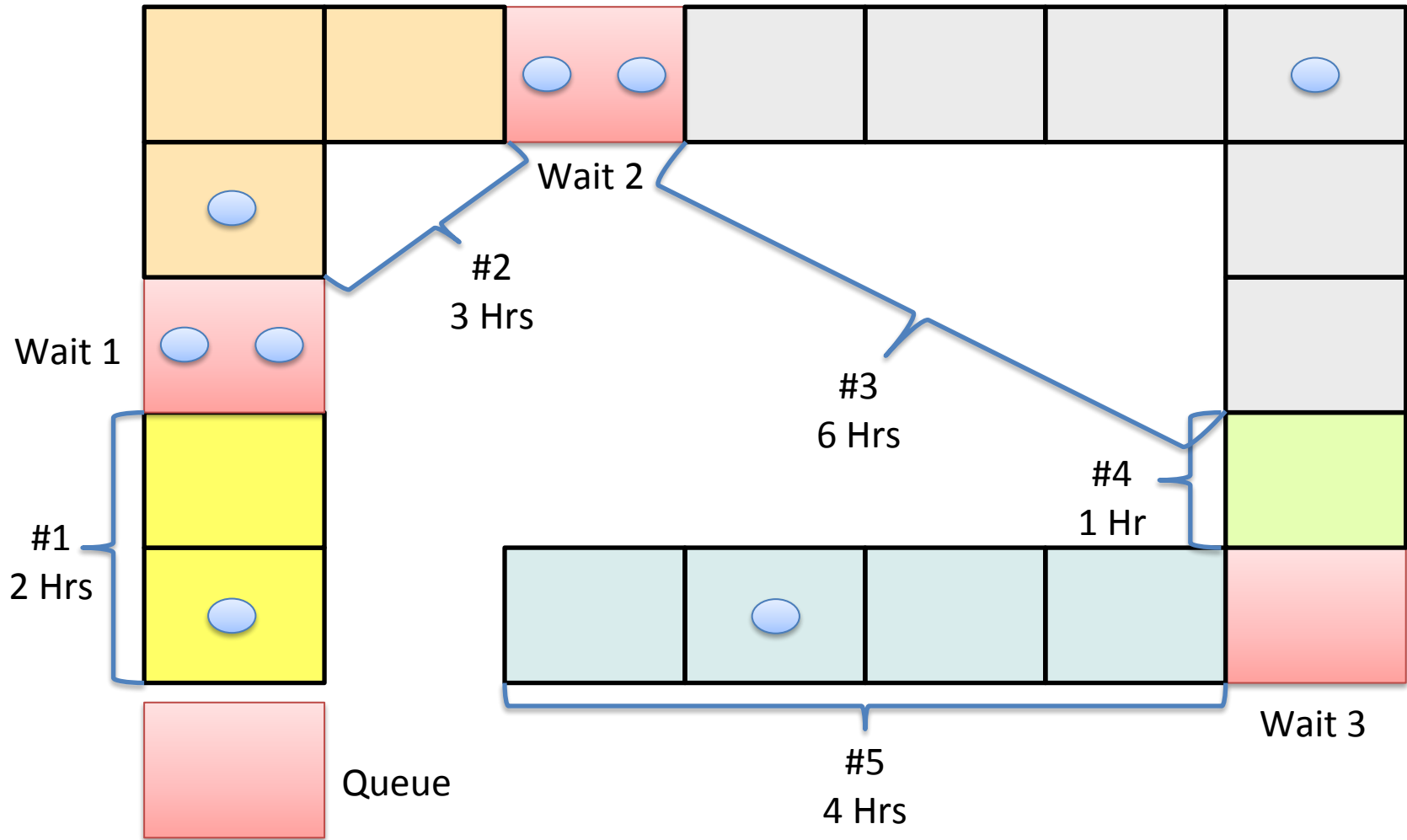


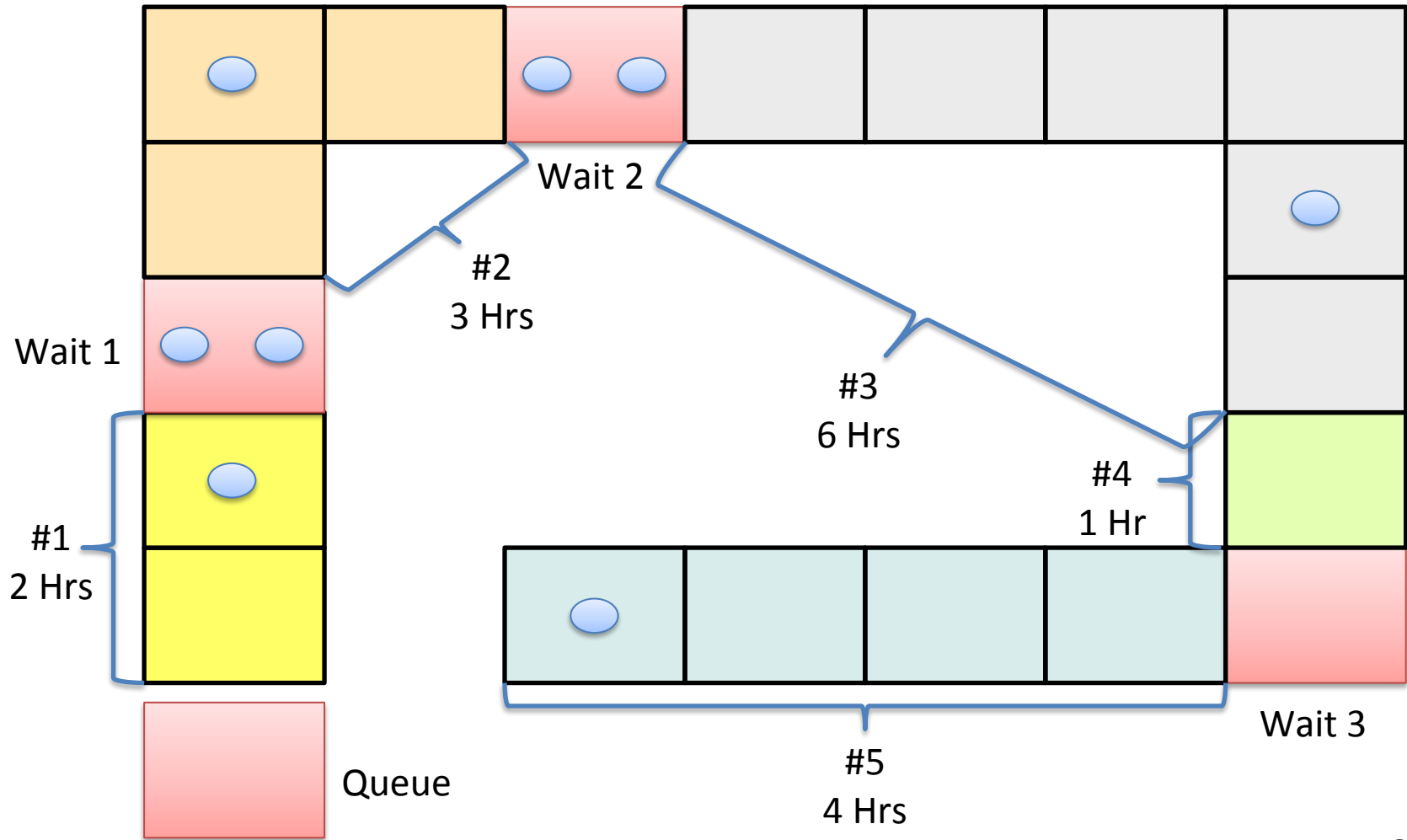




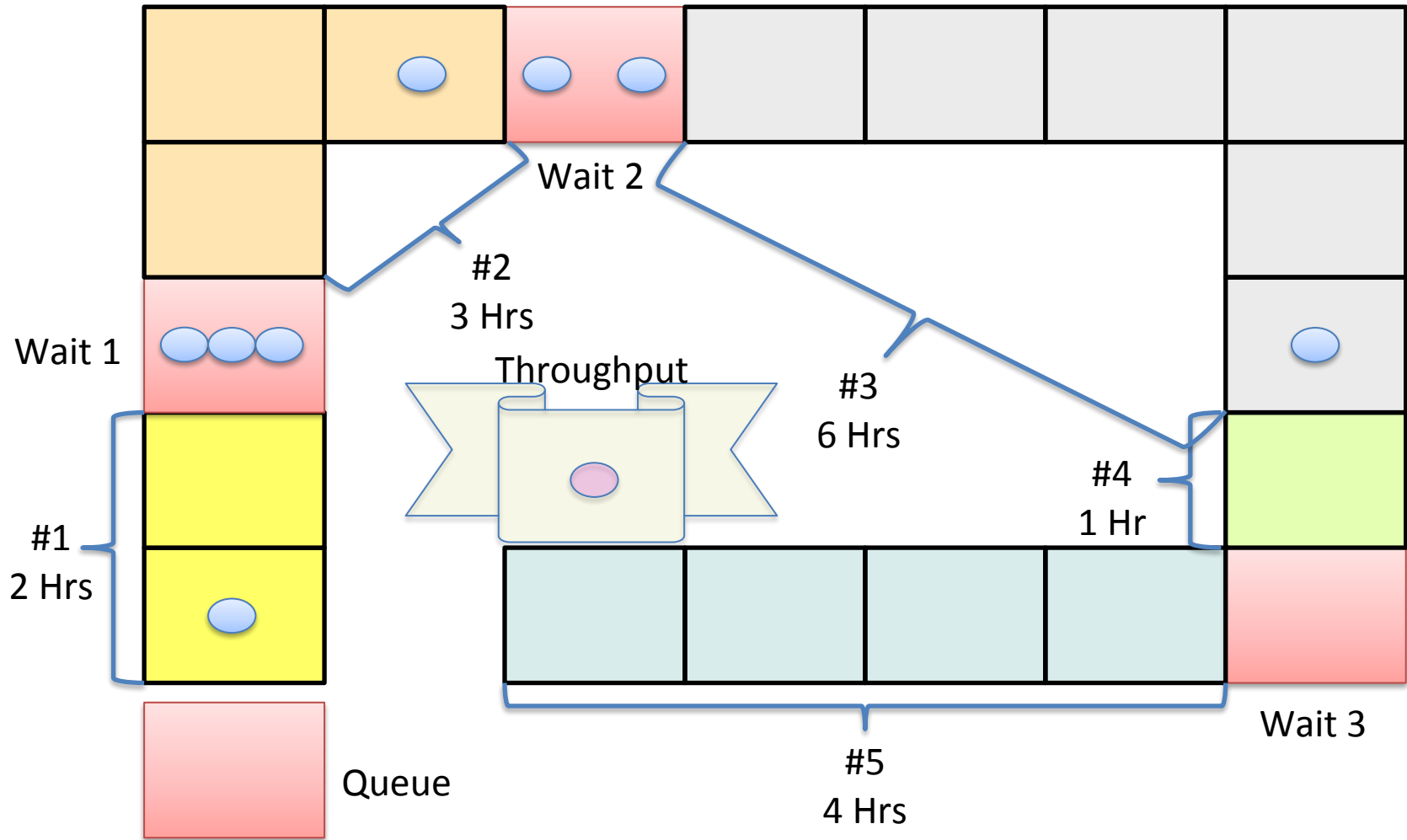




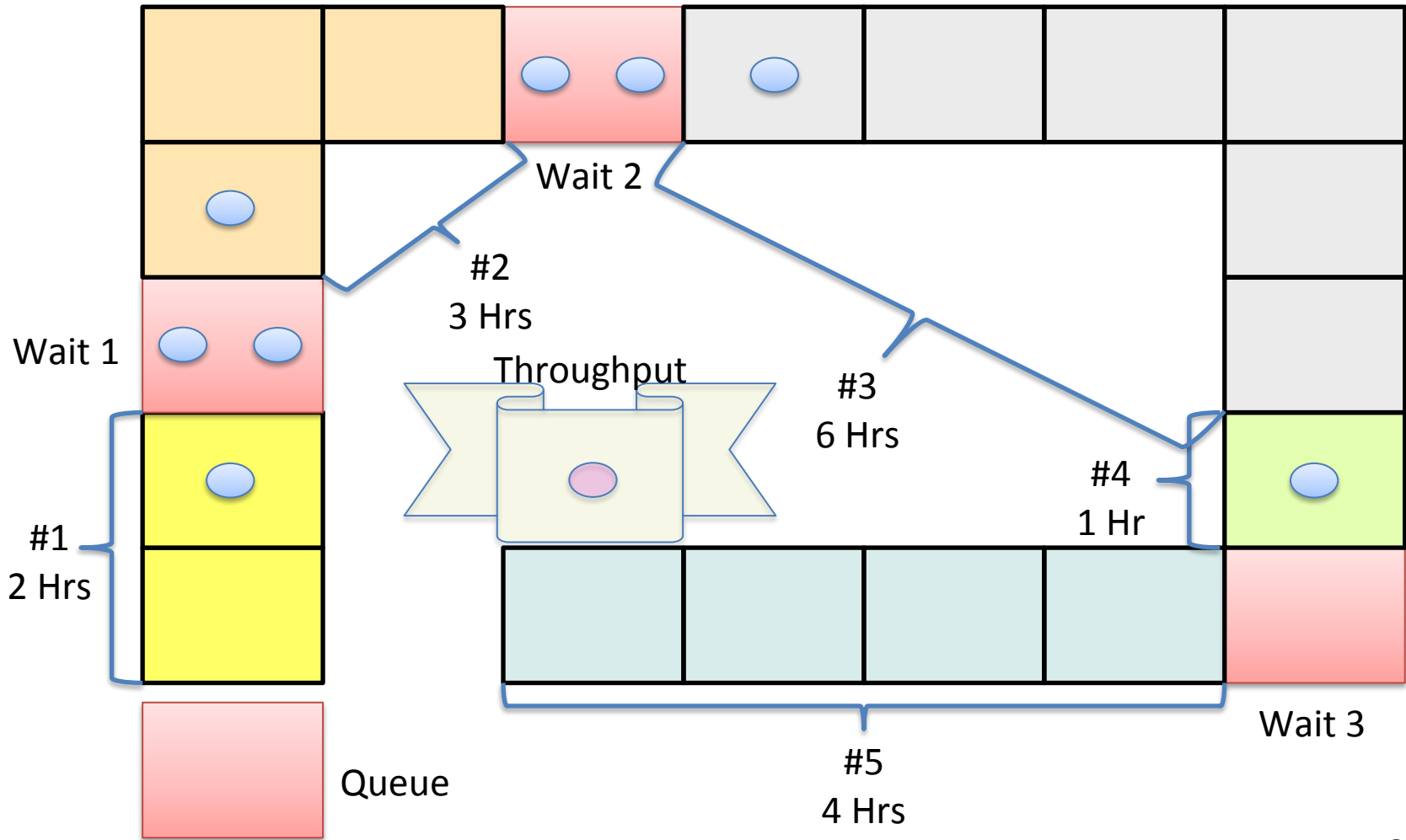


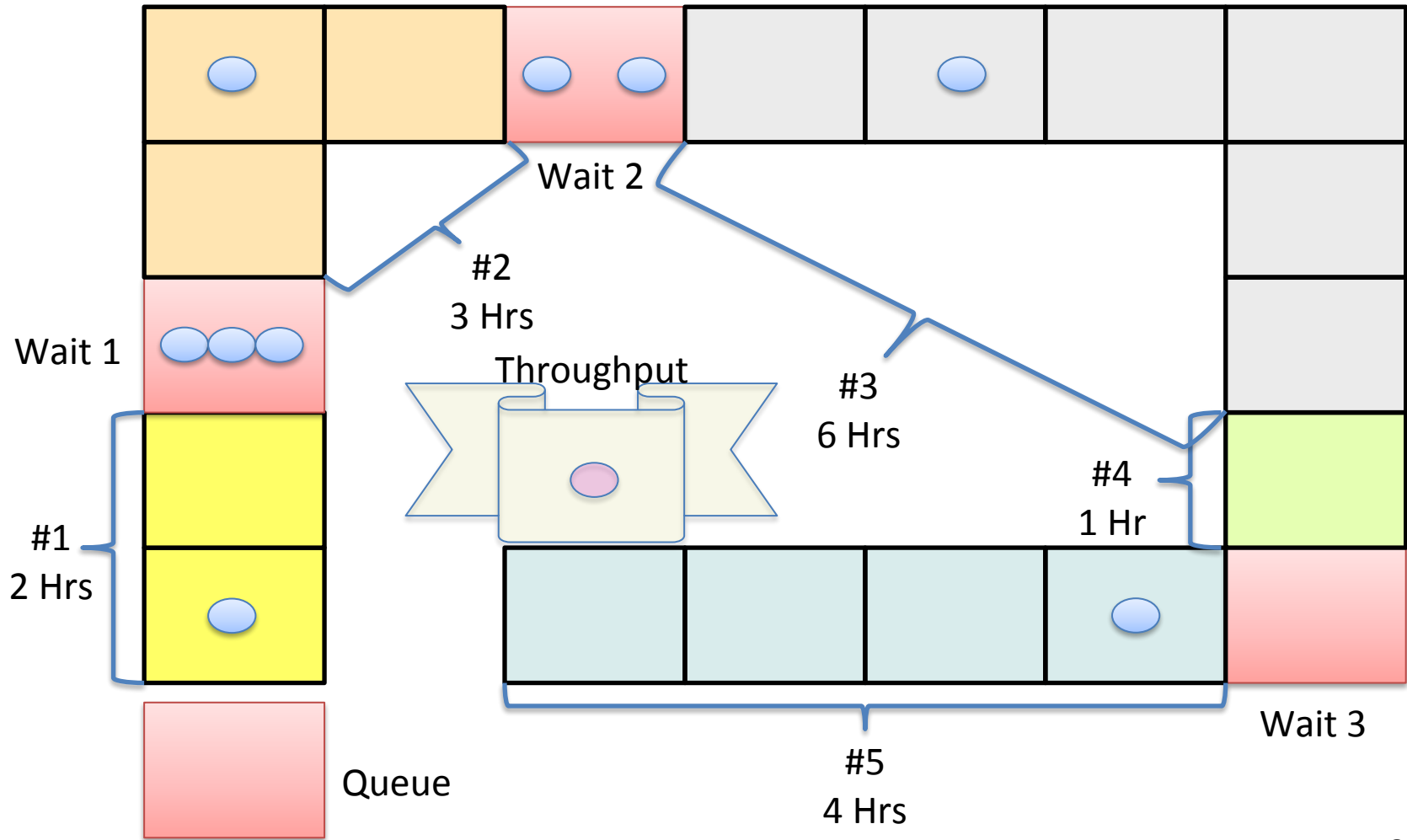


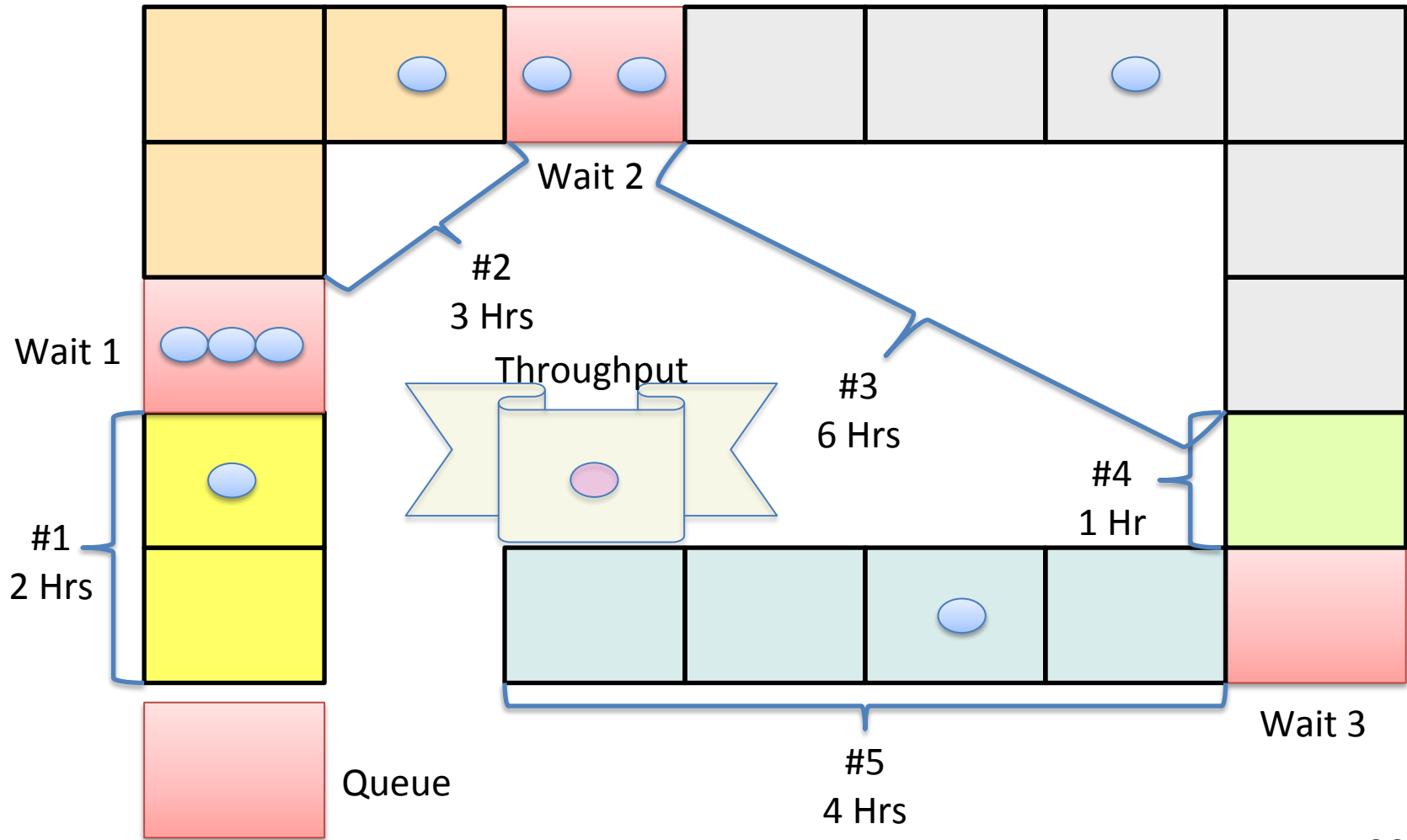
Hour 16



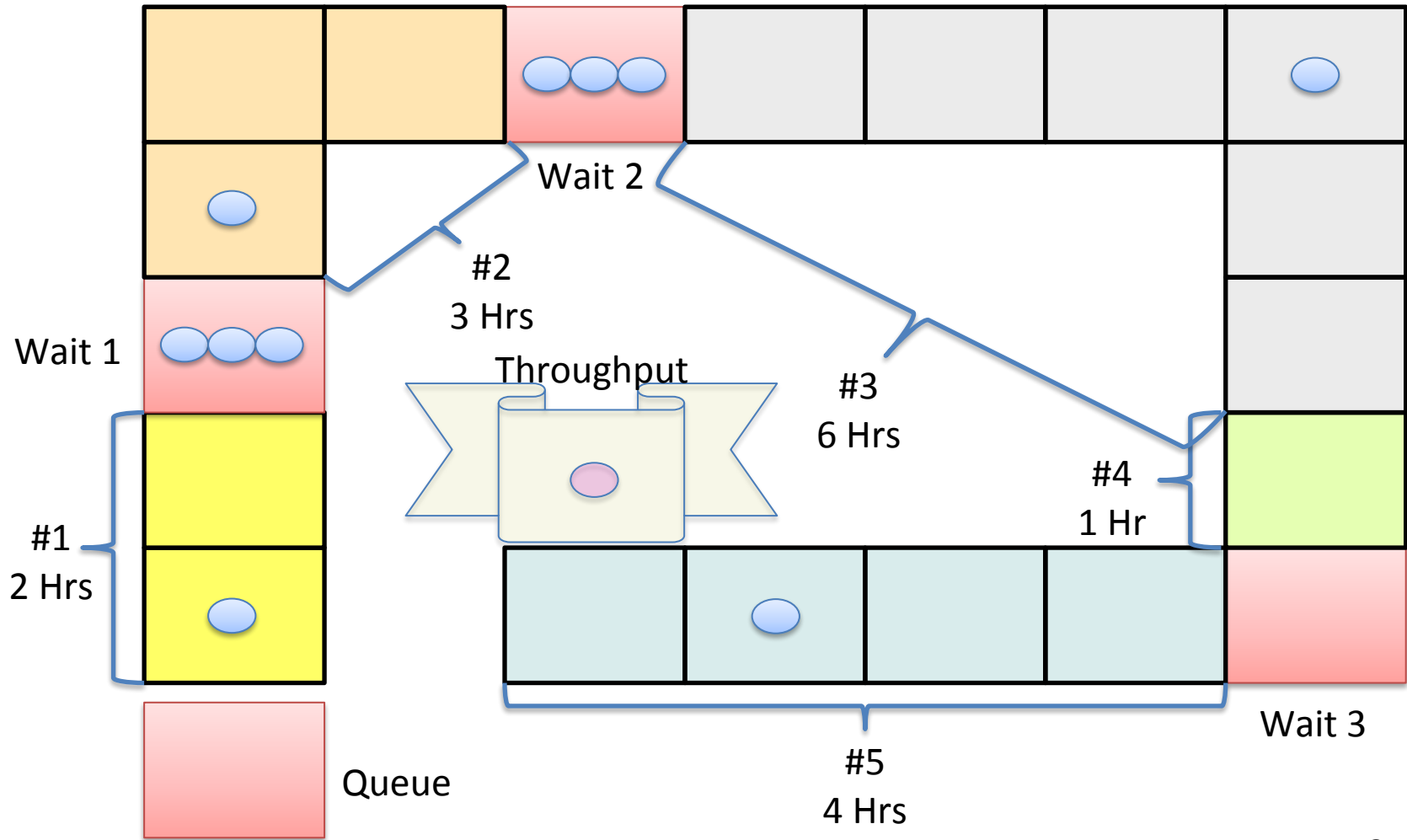
Hour 17

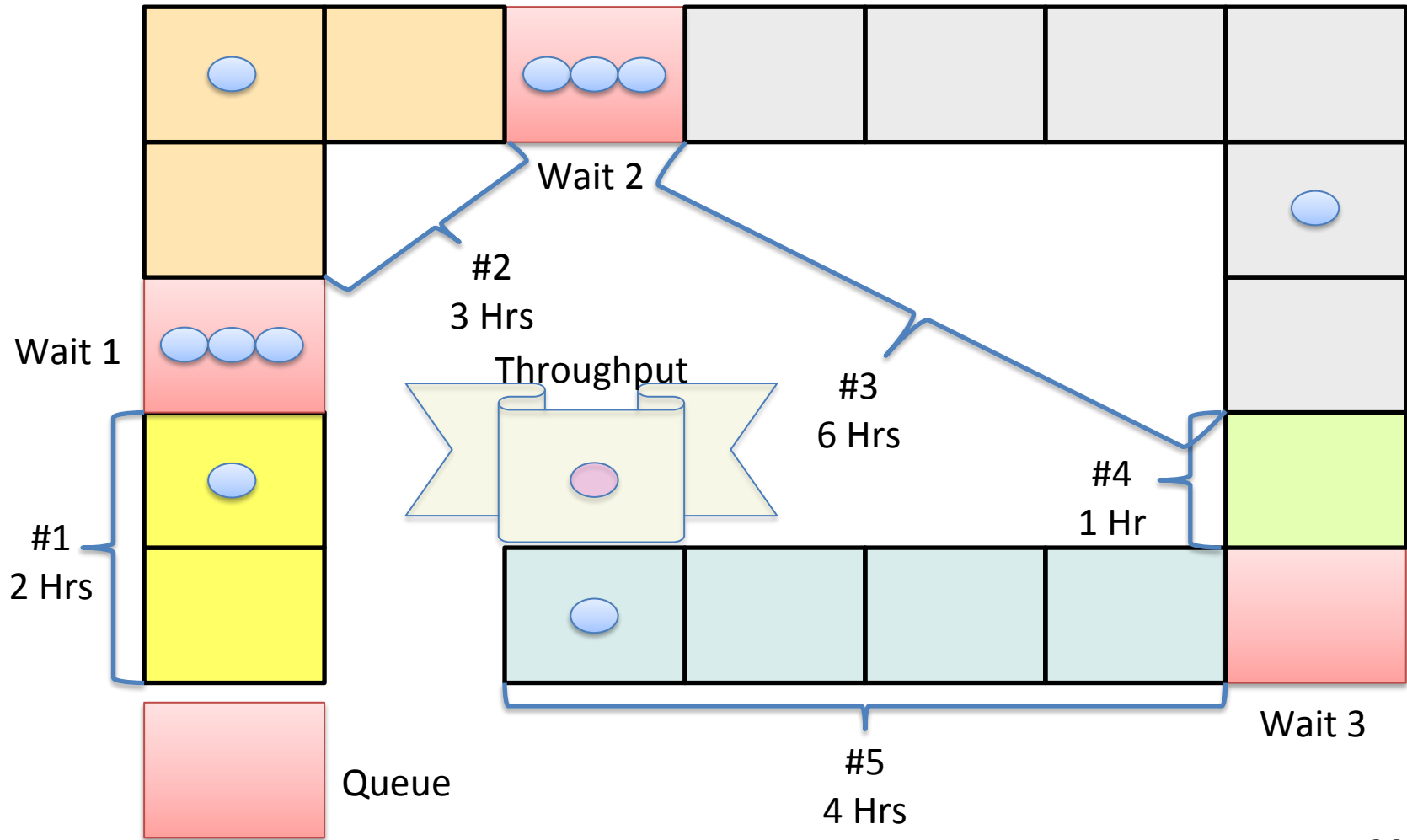




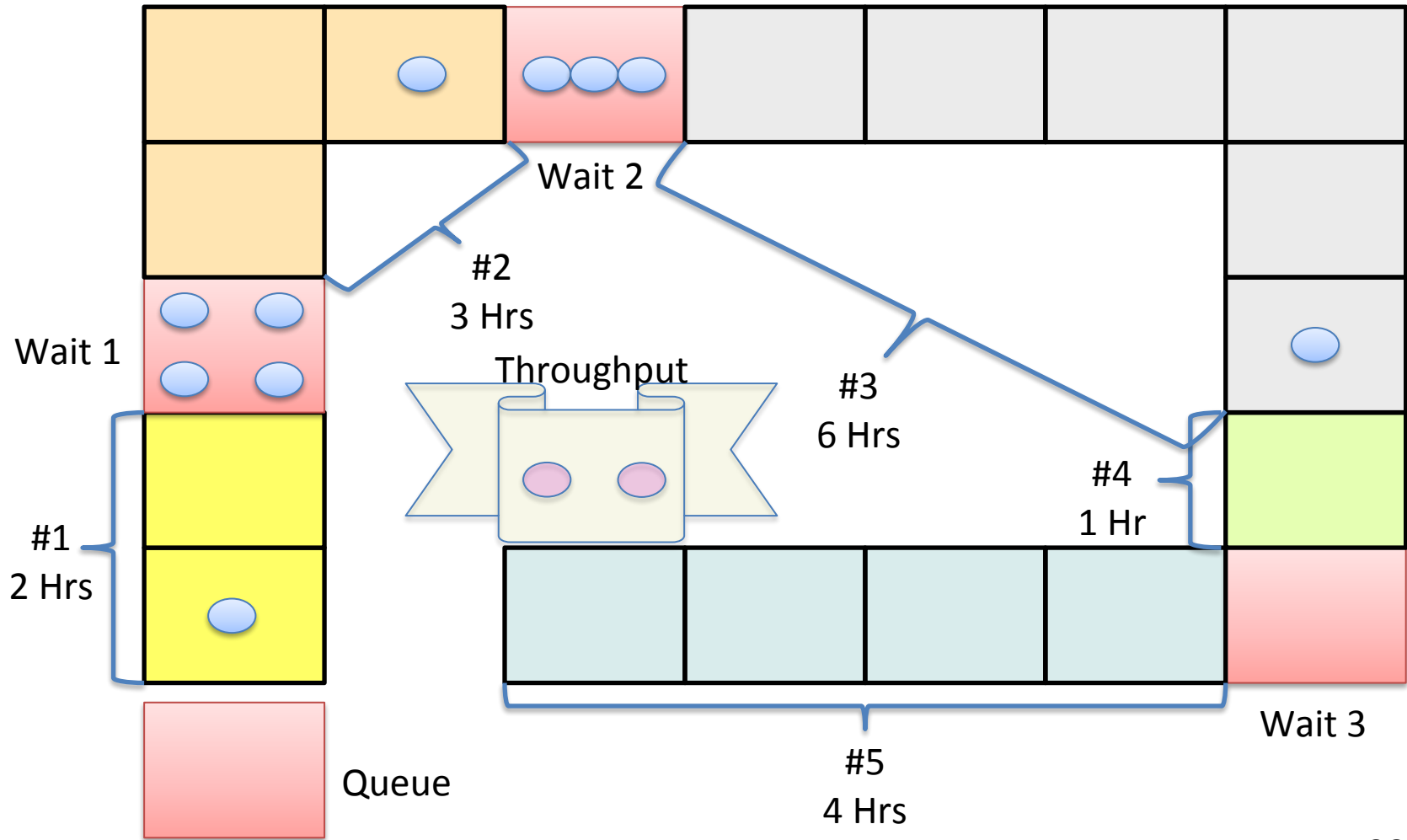


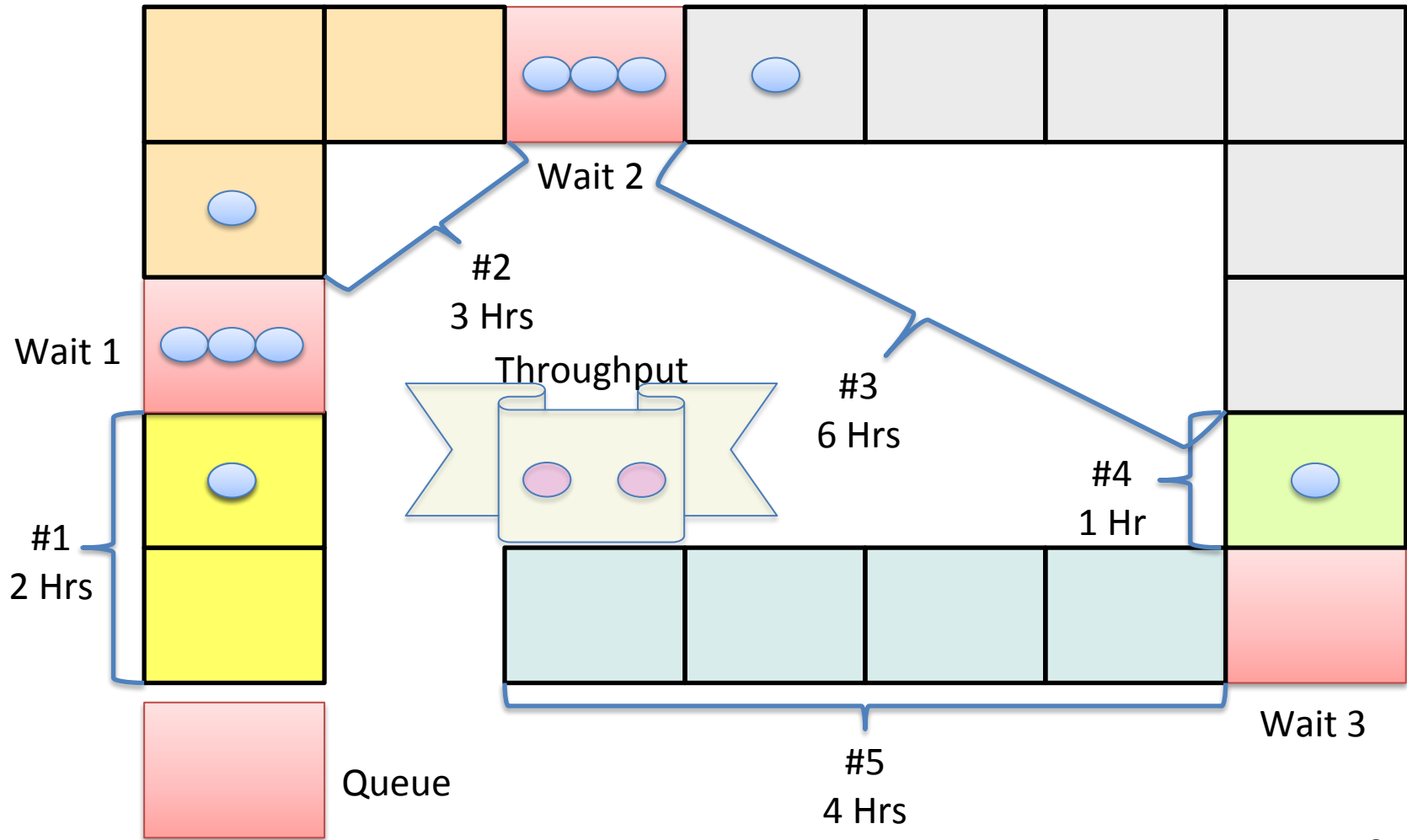
Hour 20

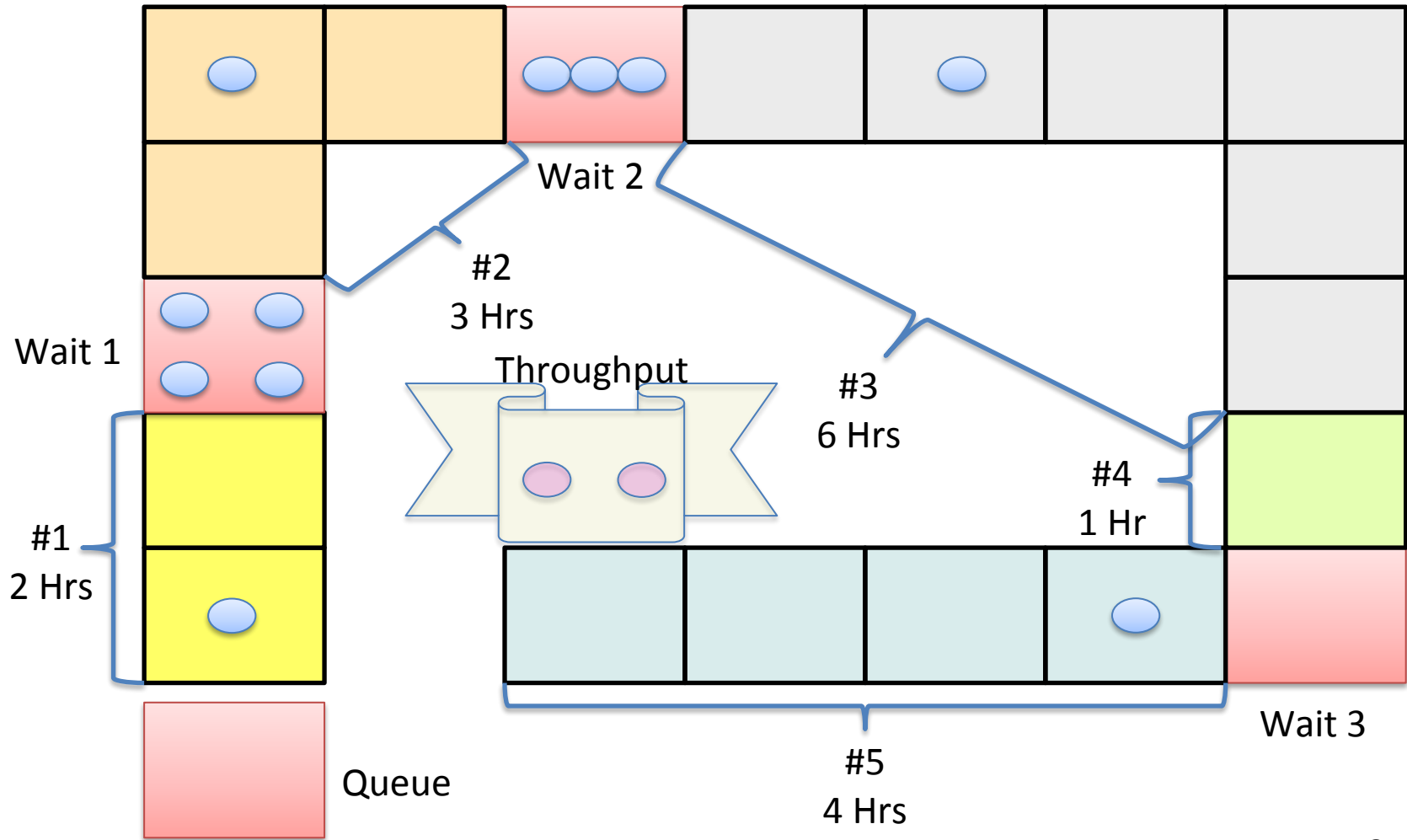


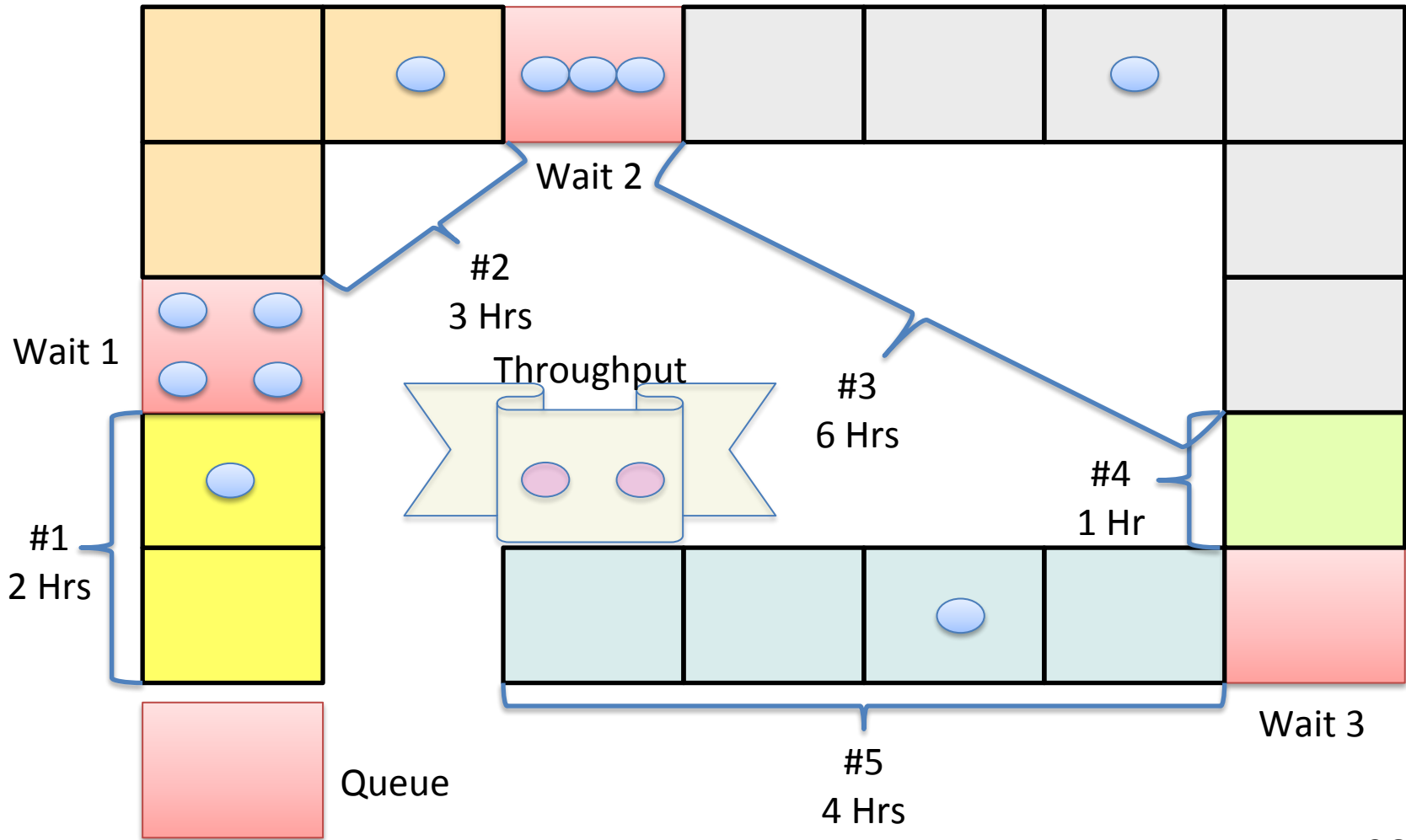


Hour 22

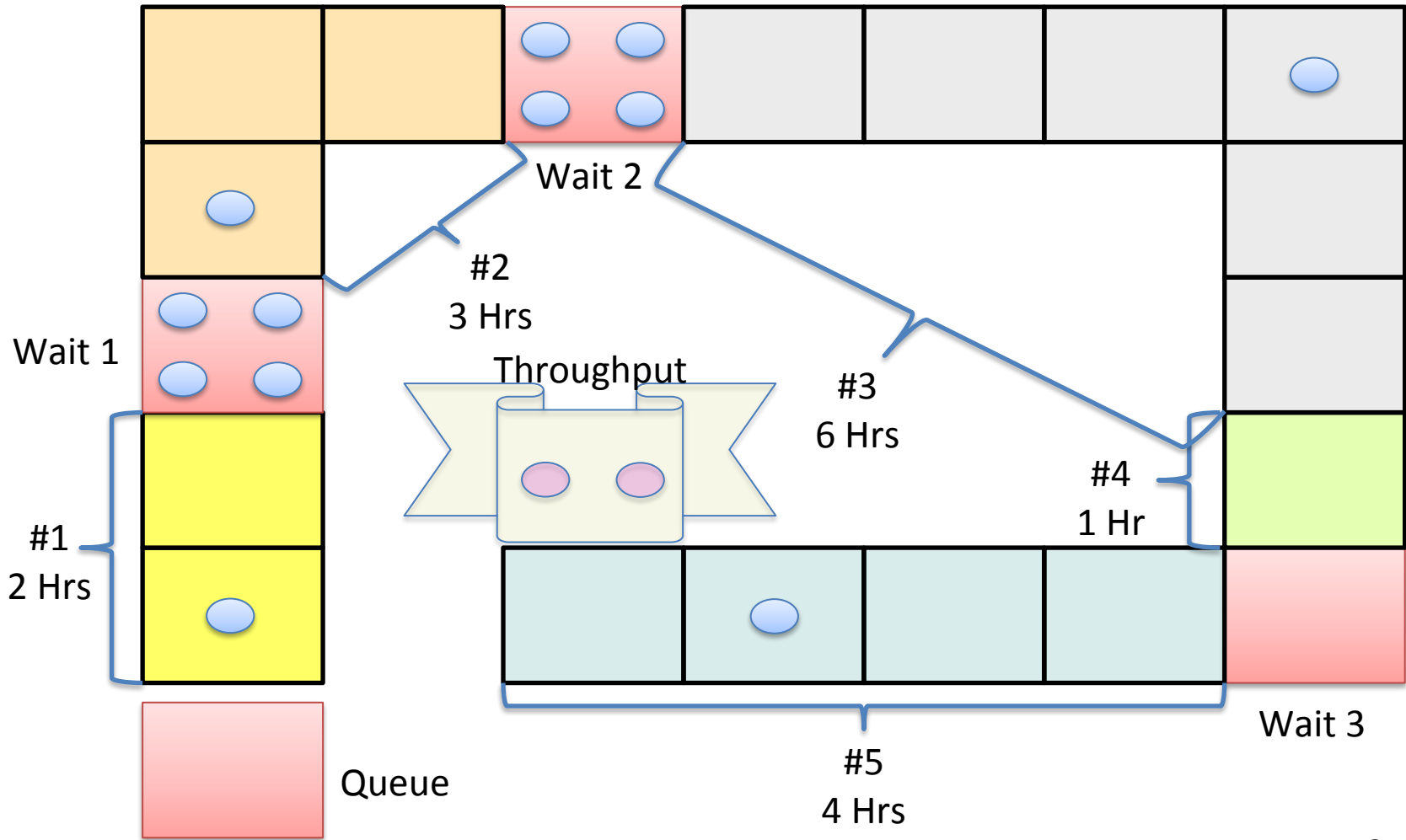




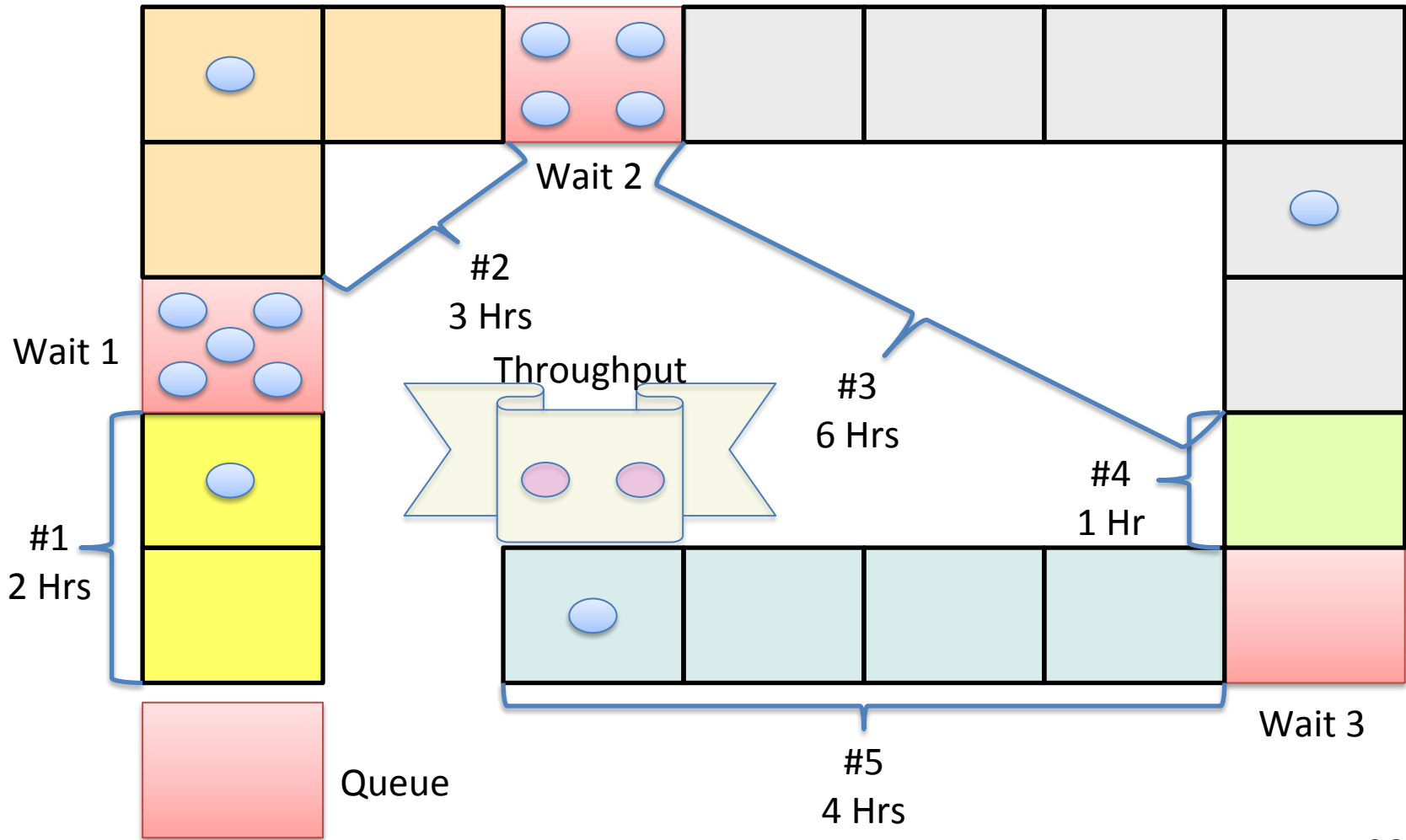


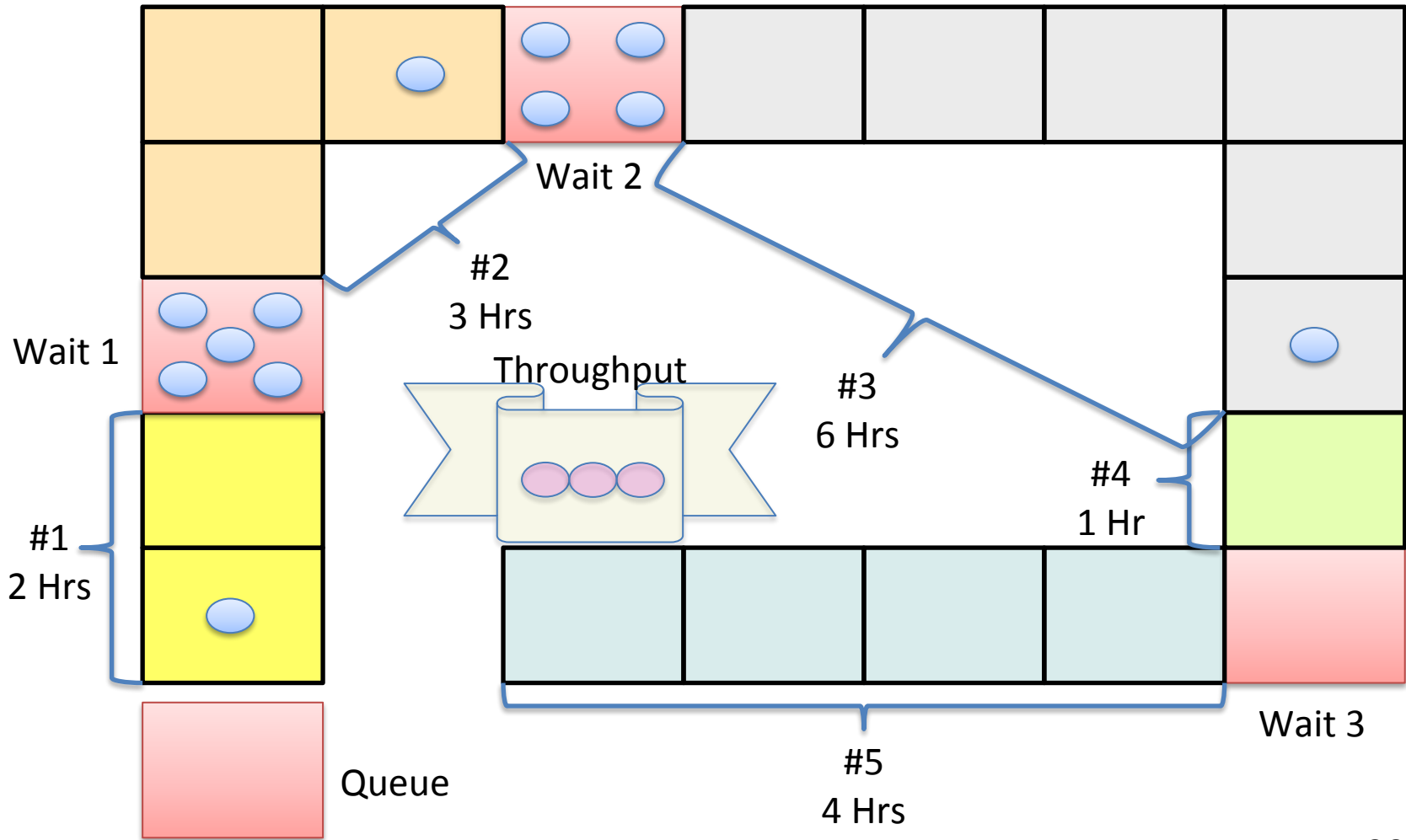


Hour 26

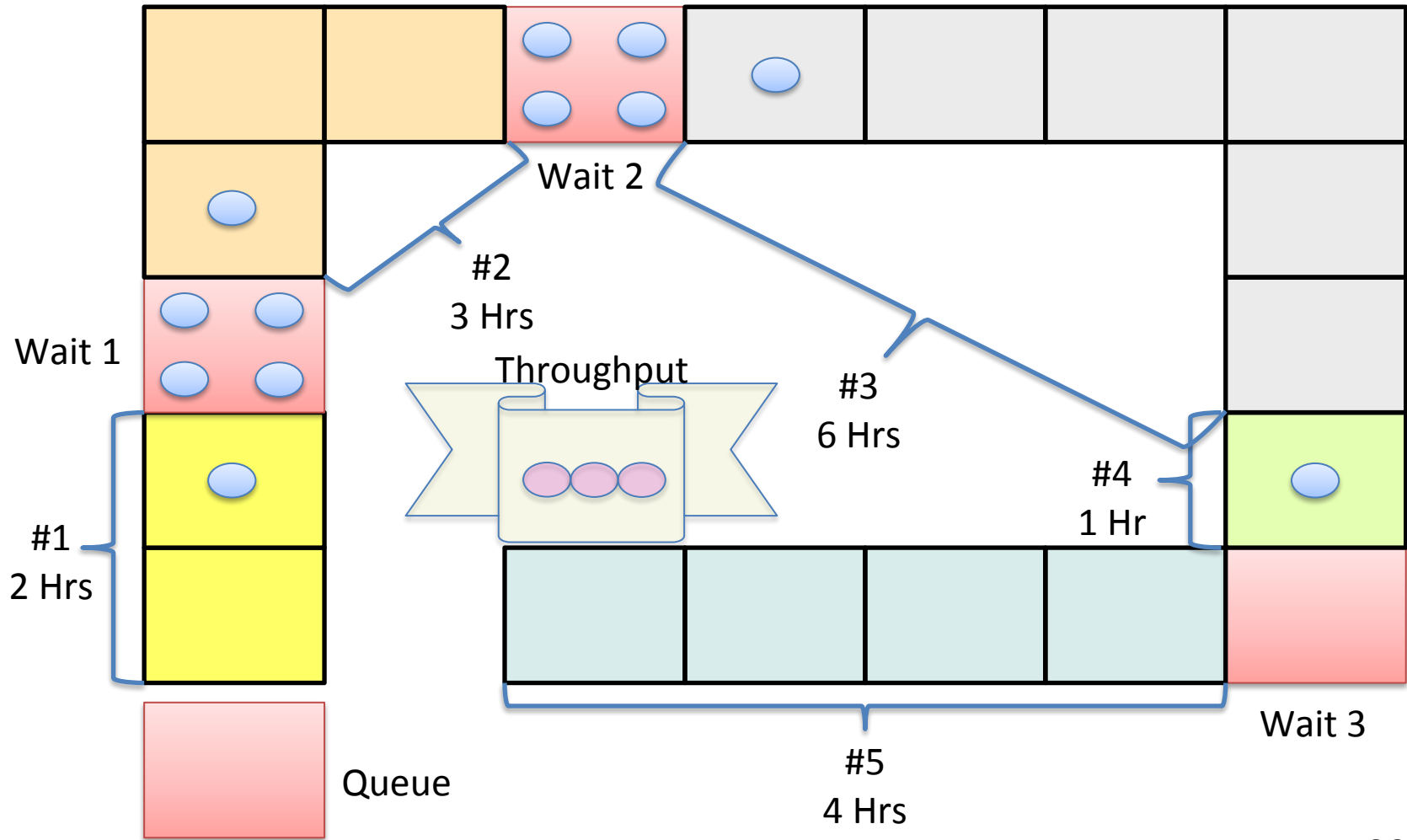


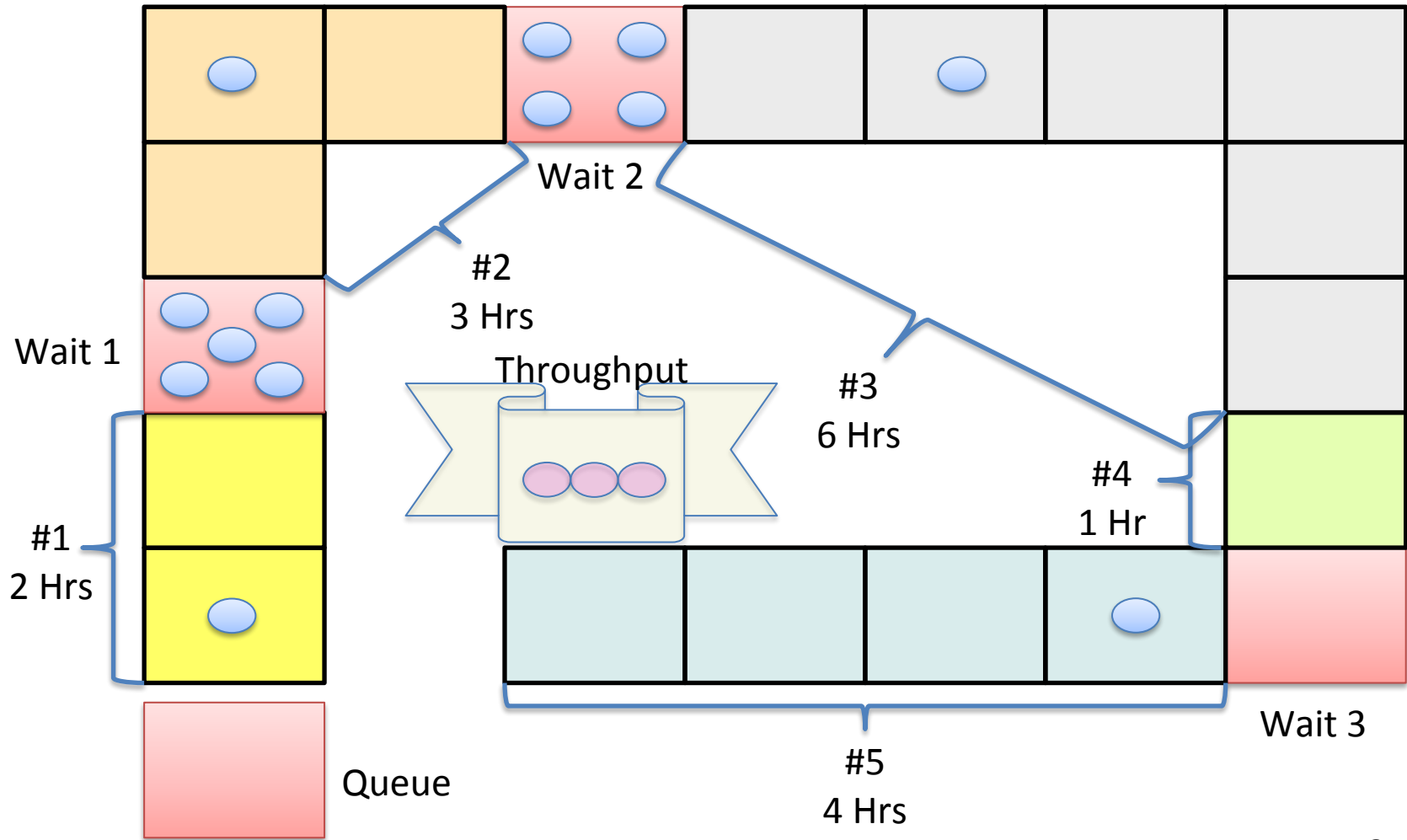
Hour 27



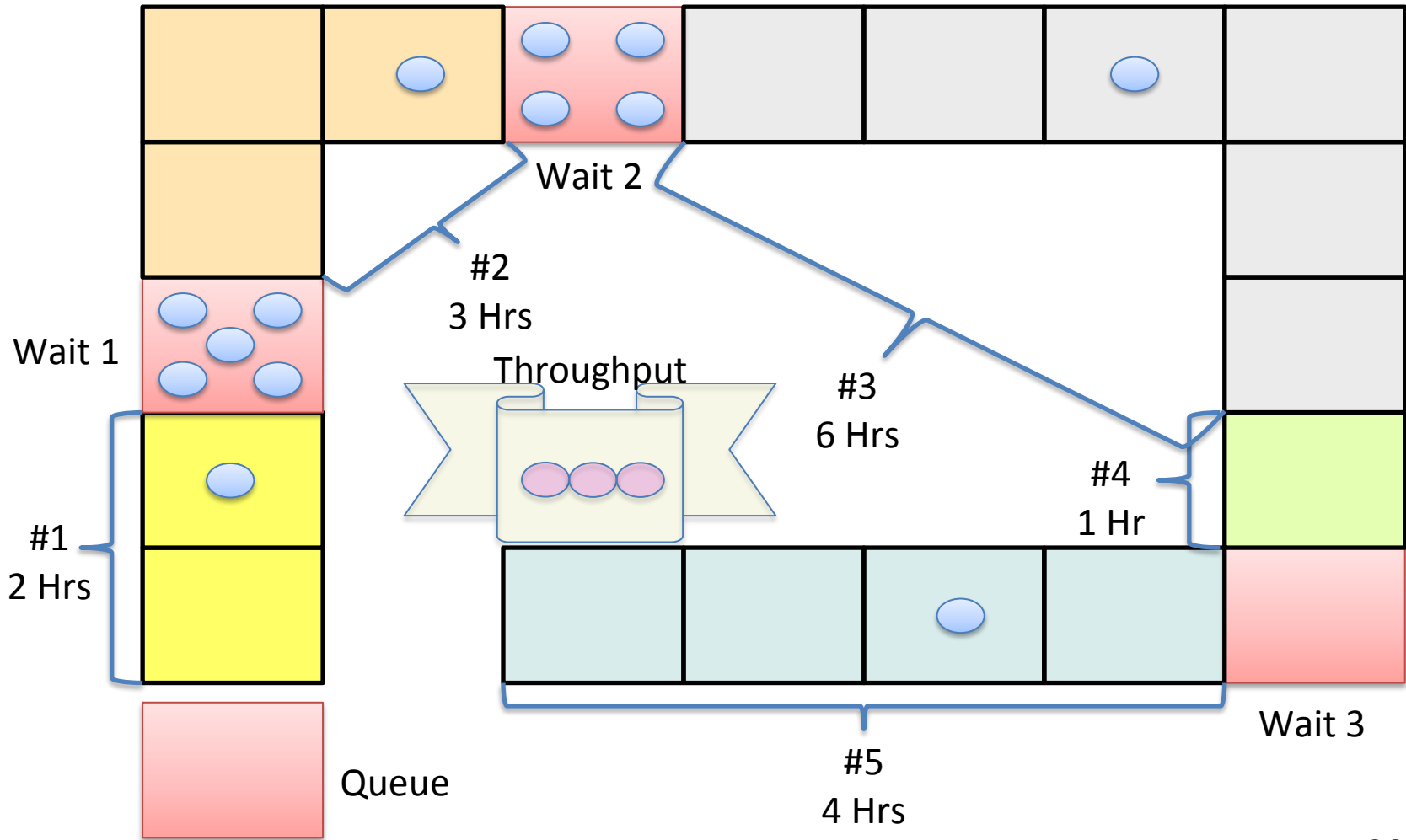


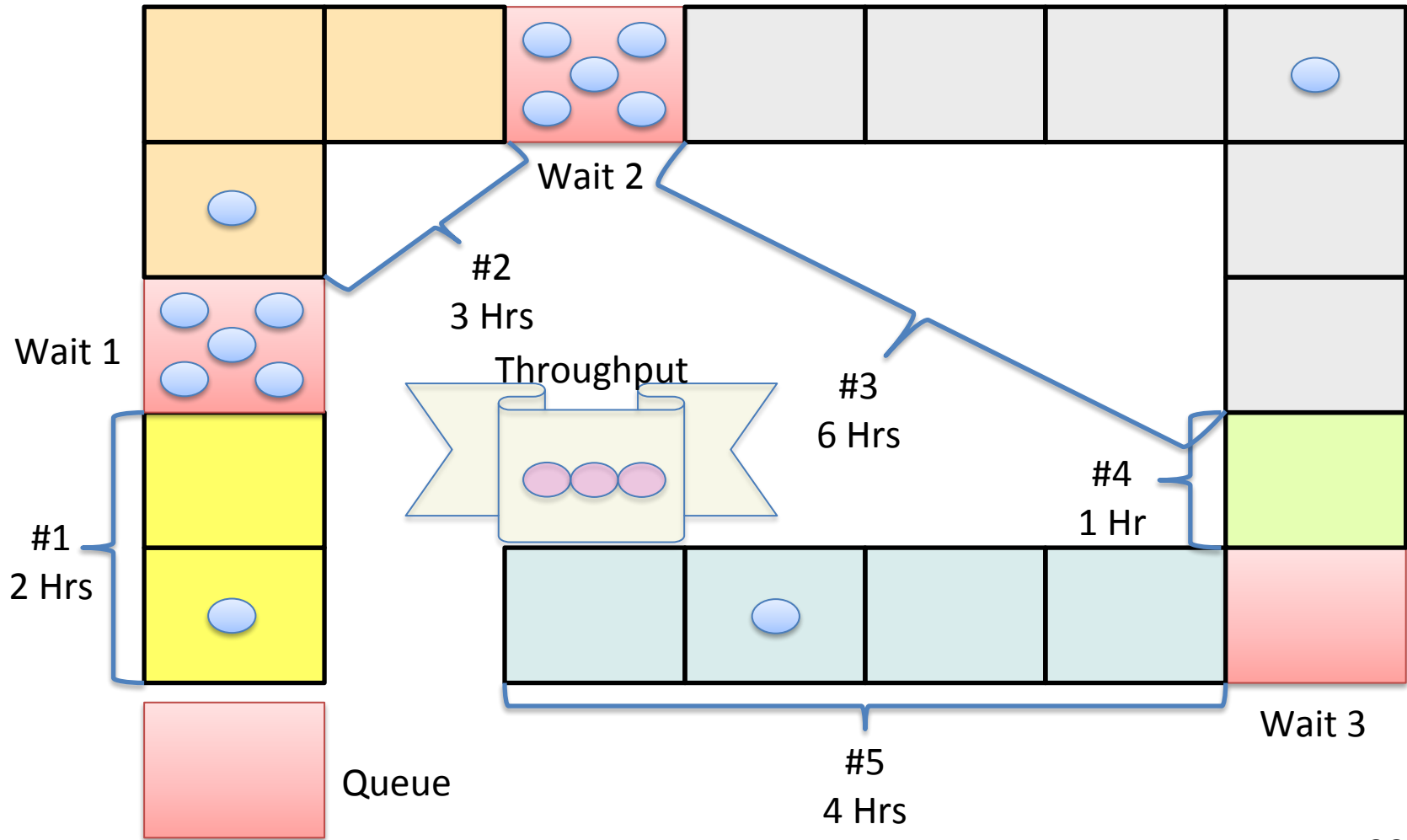
Hour 29



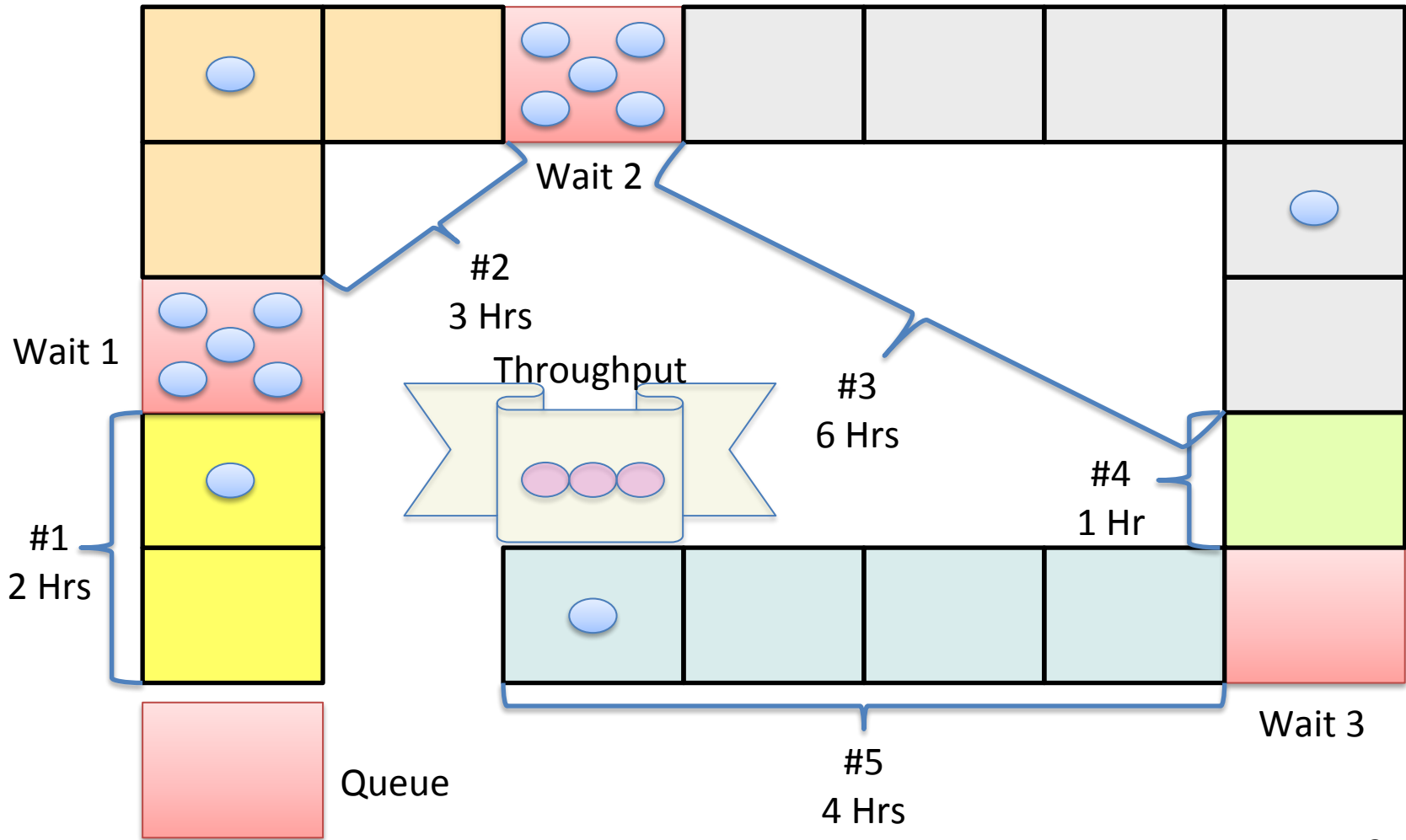


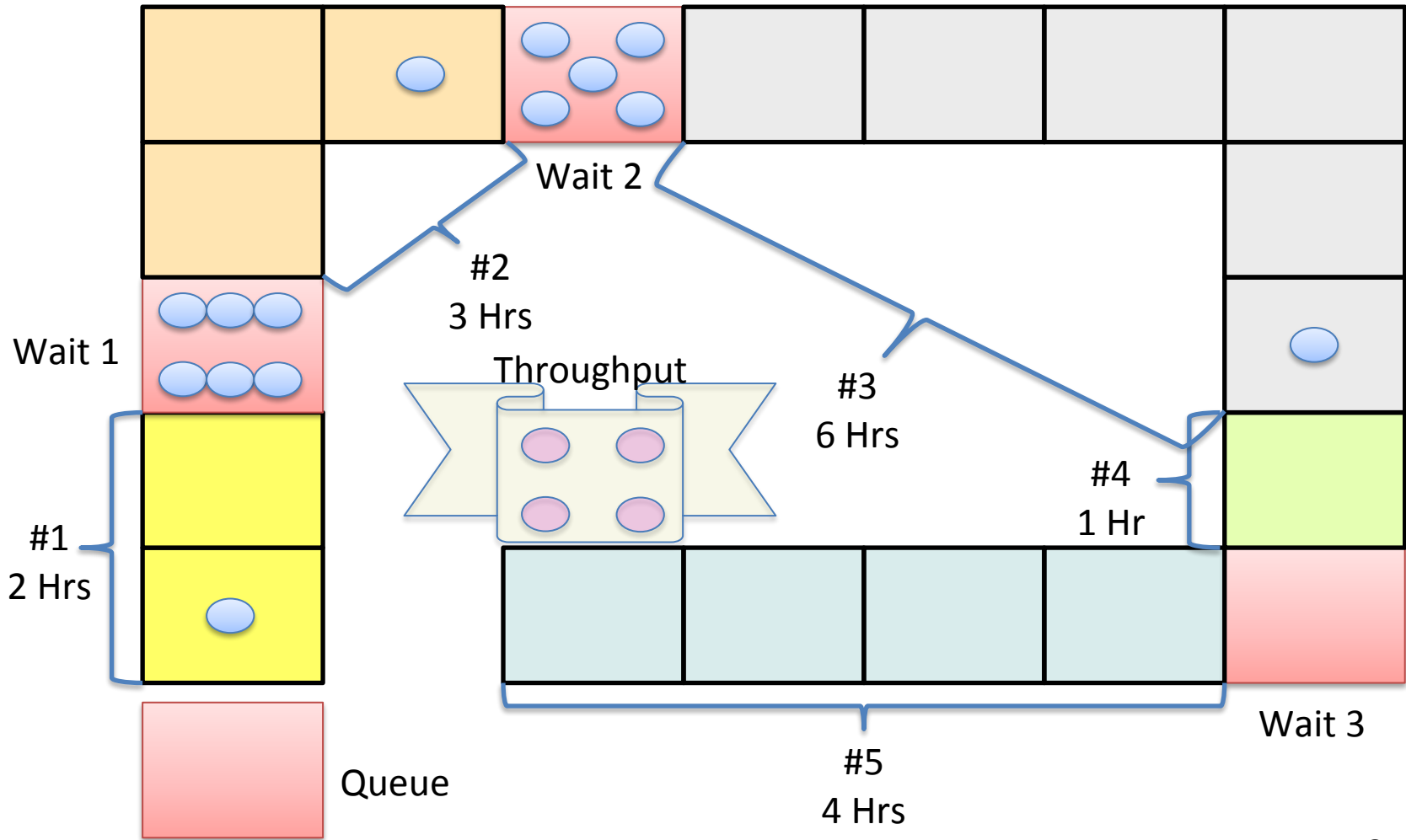
Hour 31



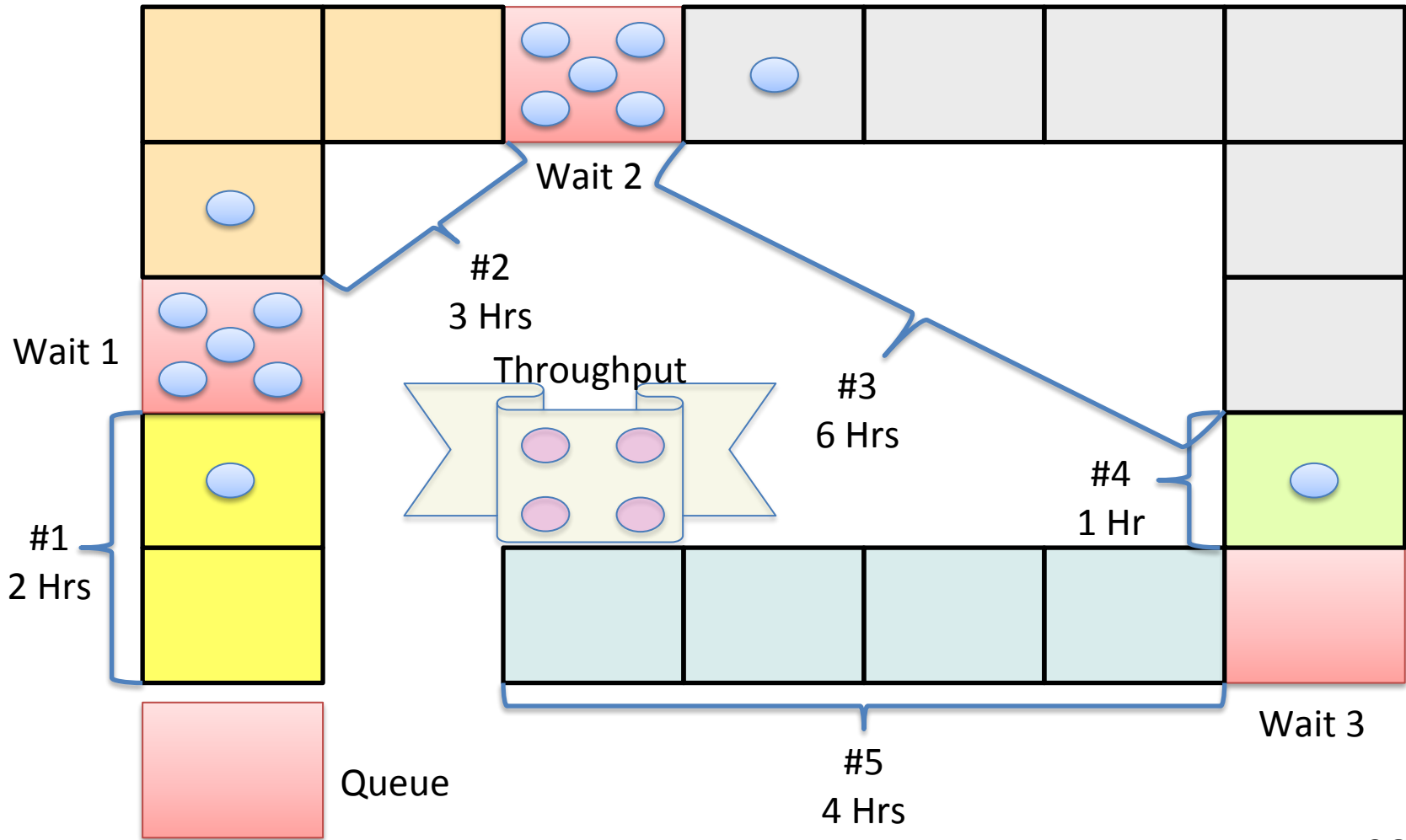


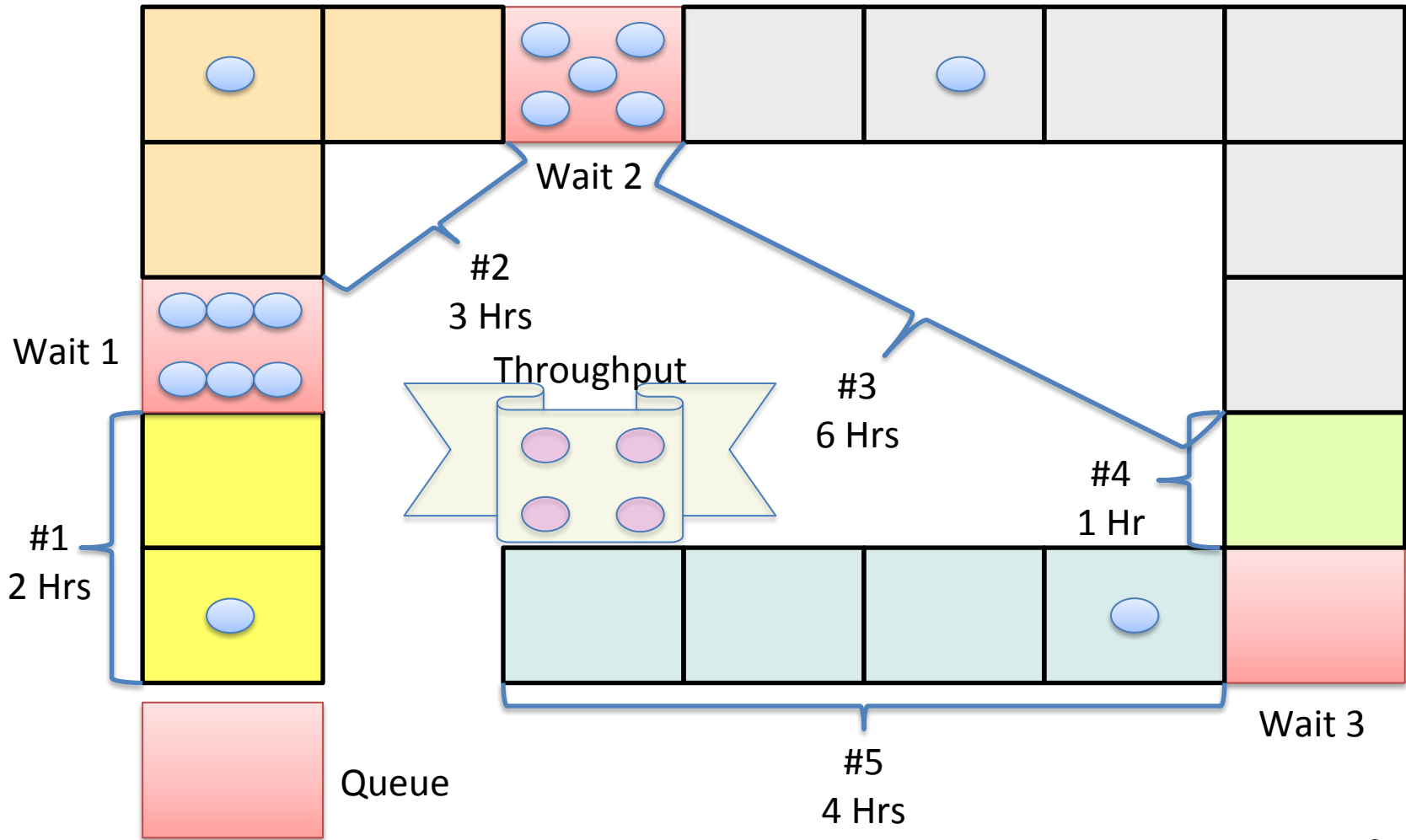
Hour 33



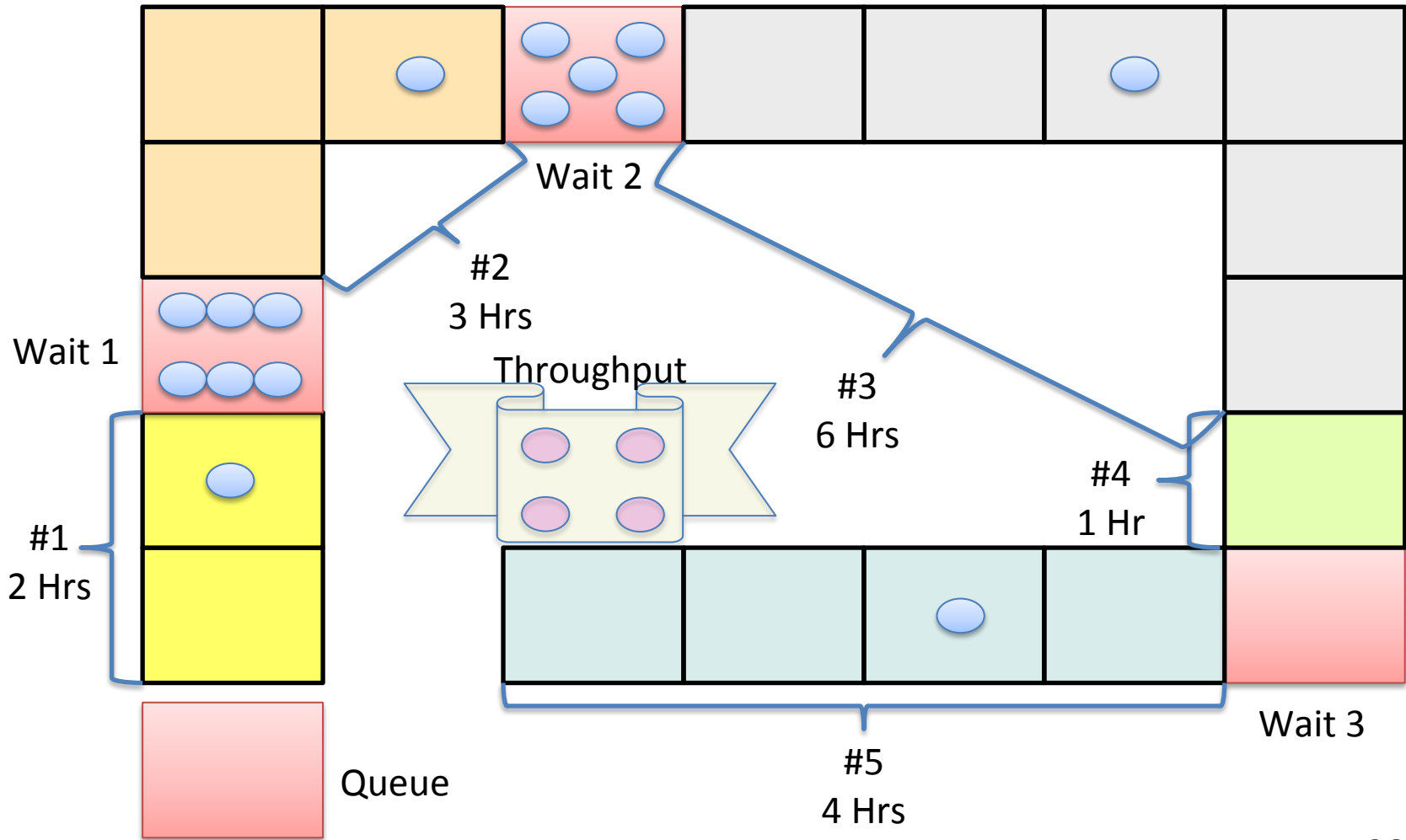


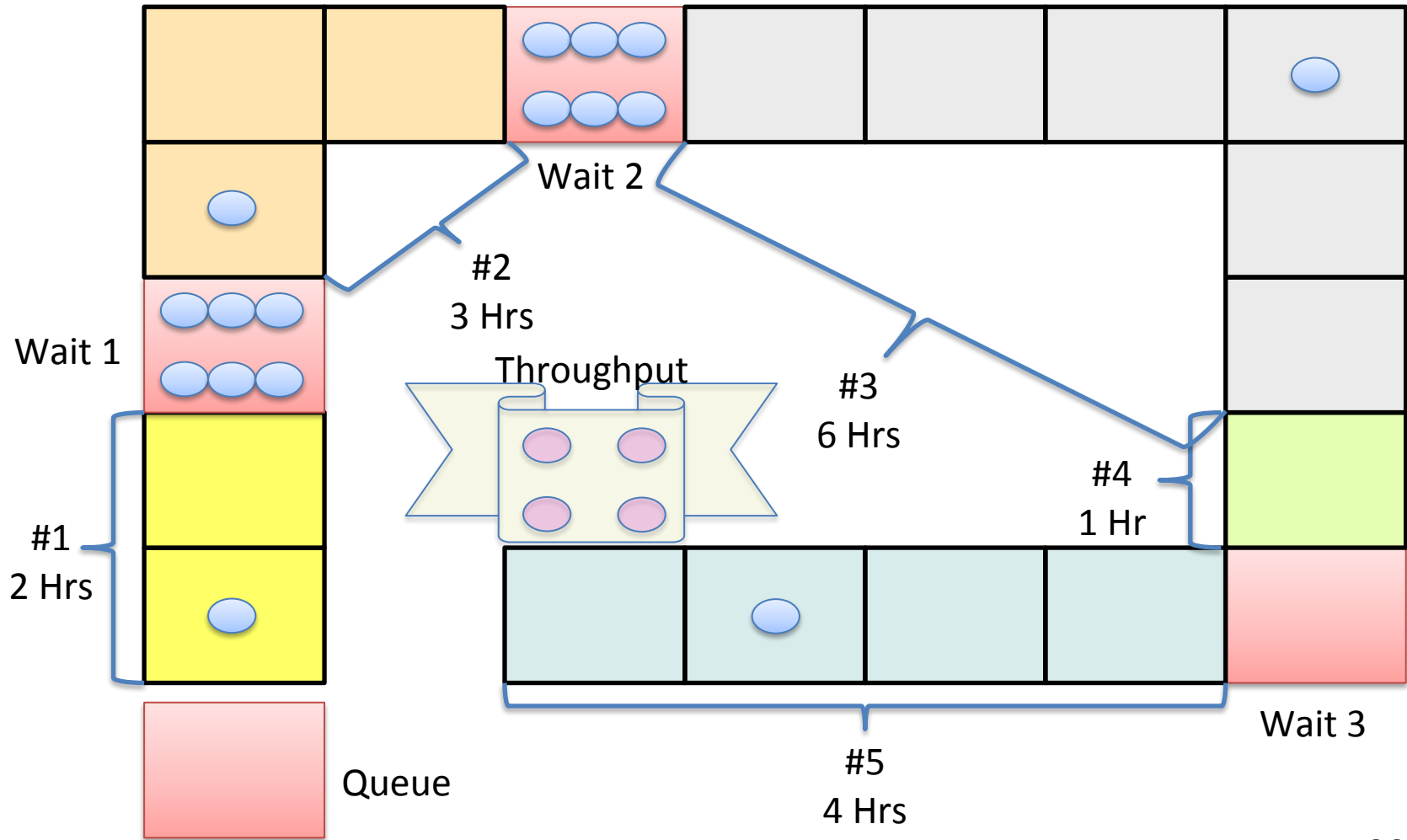
Hour 35



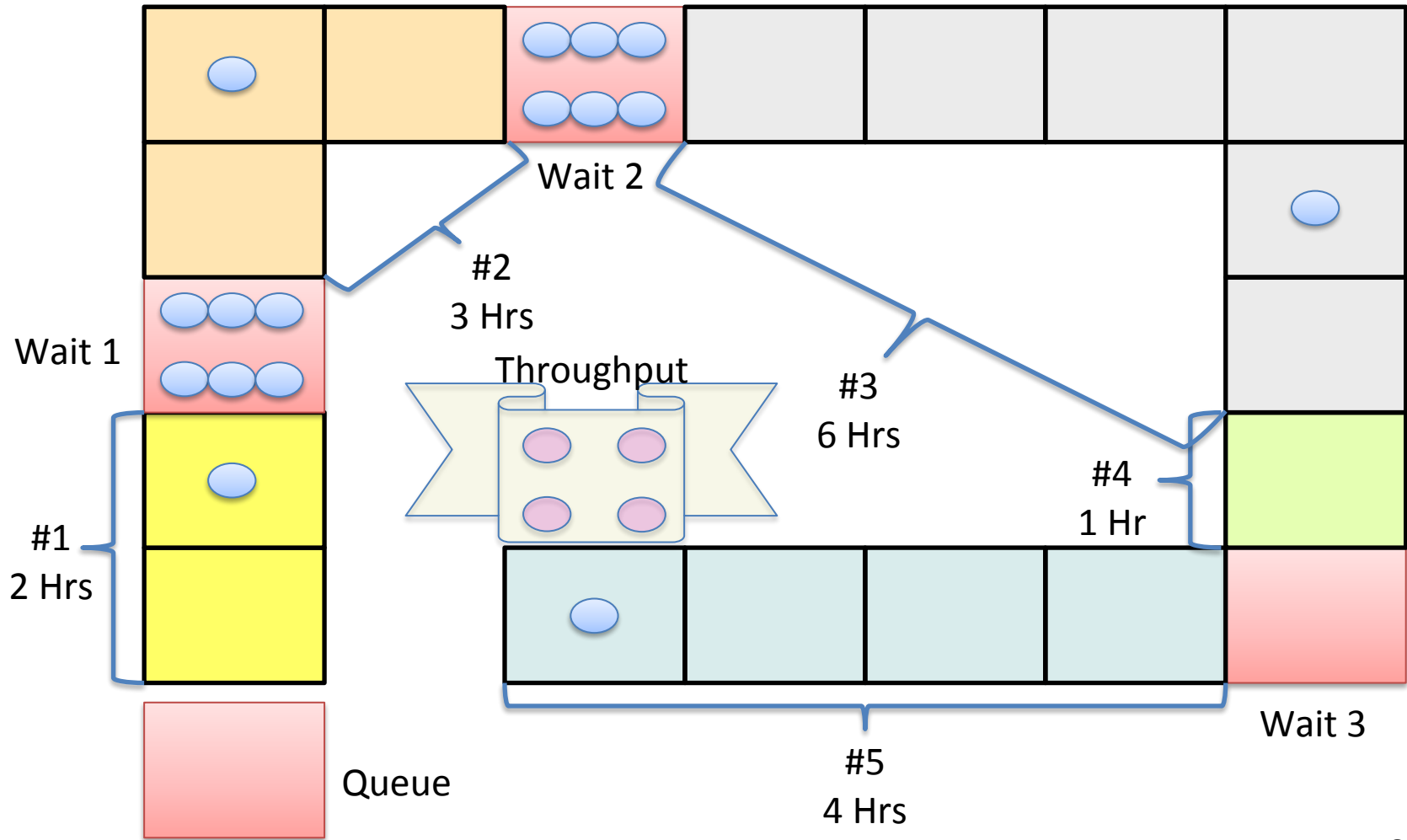


Hour 37

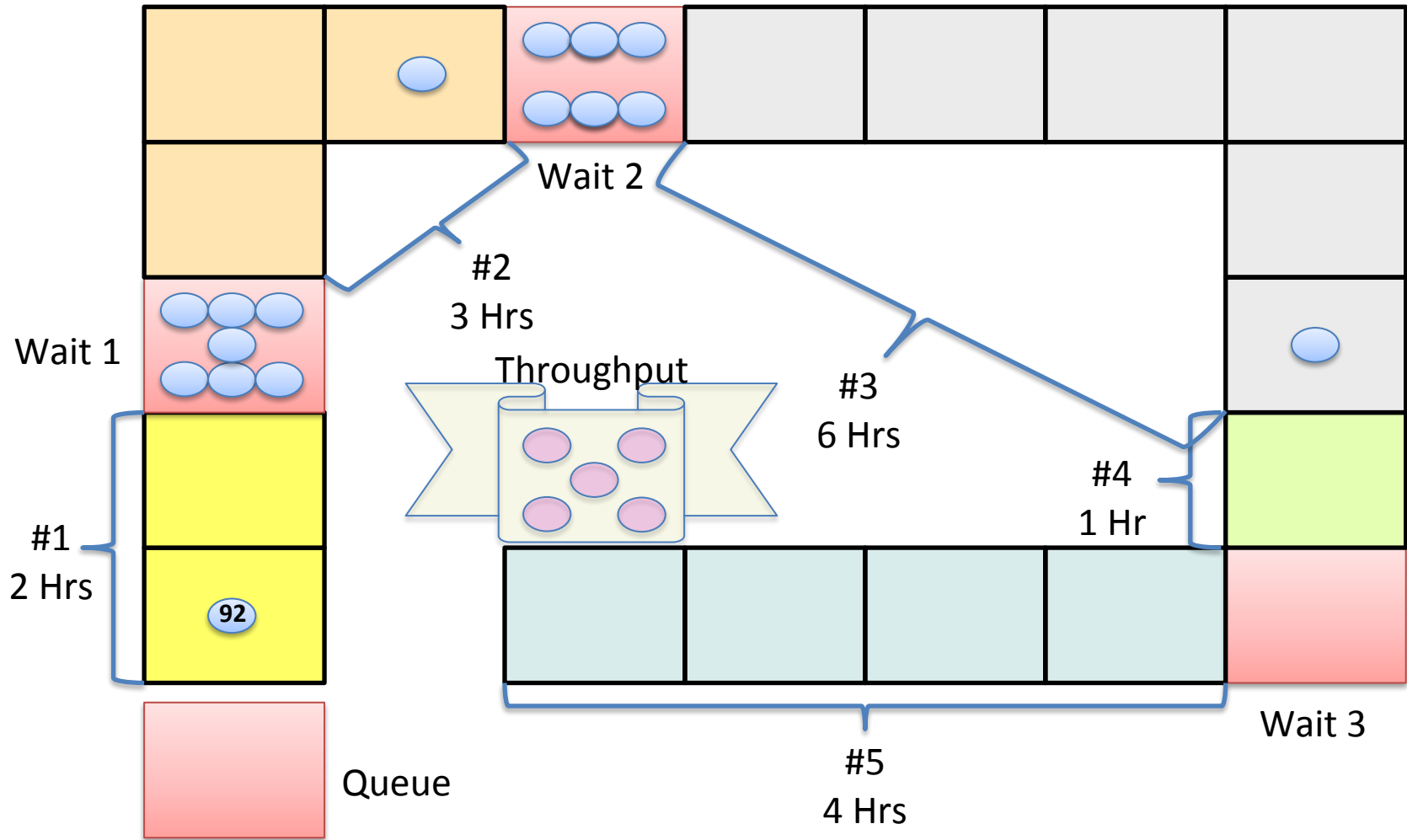




Hour 39



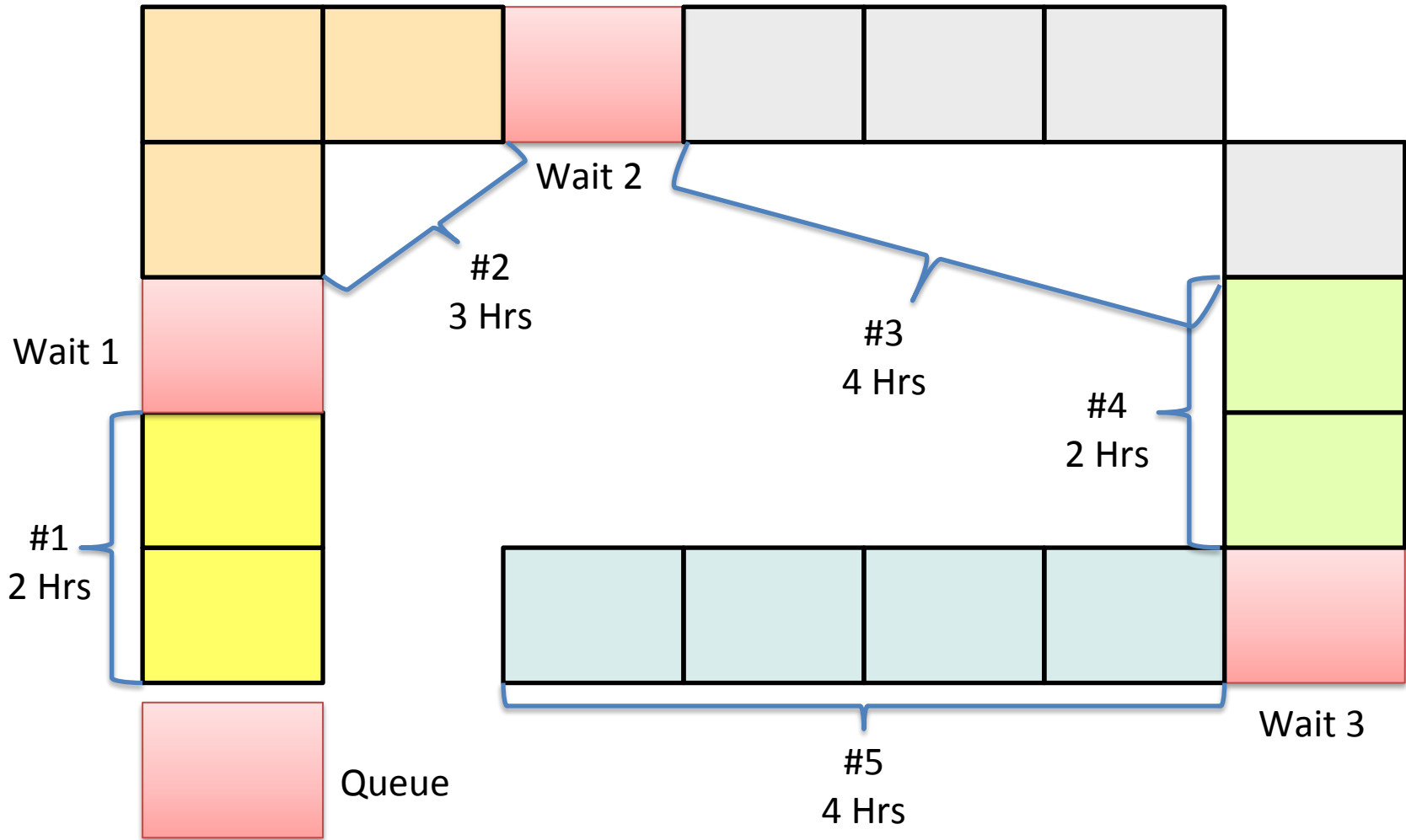
Hour 40

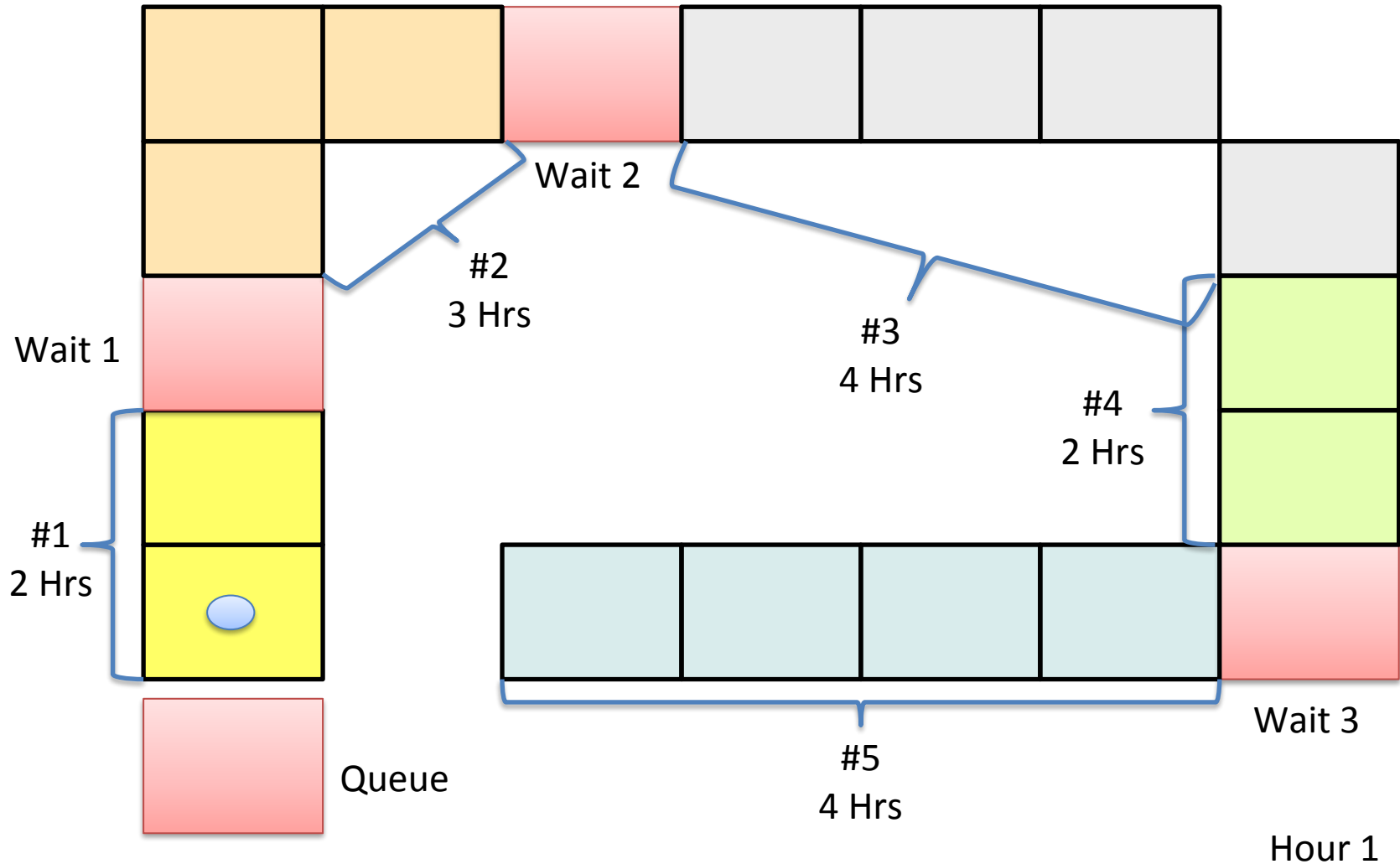


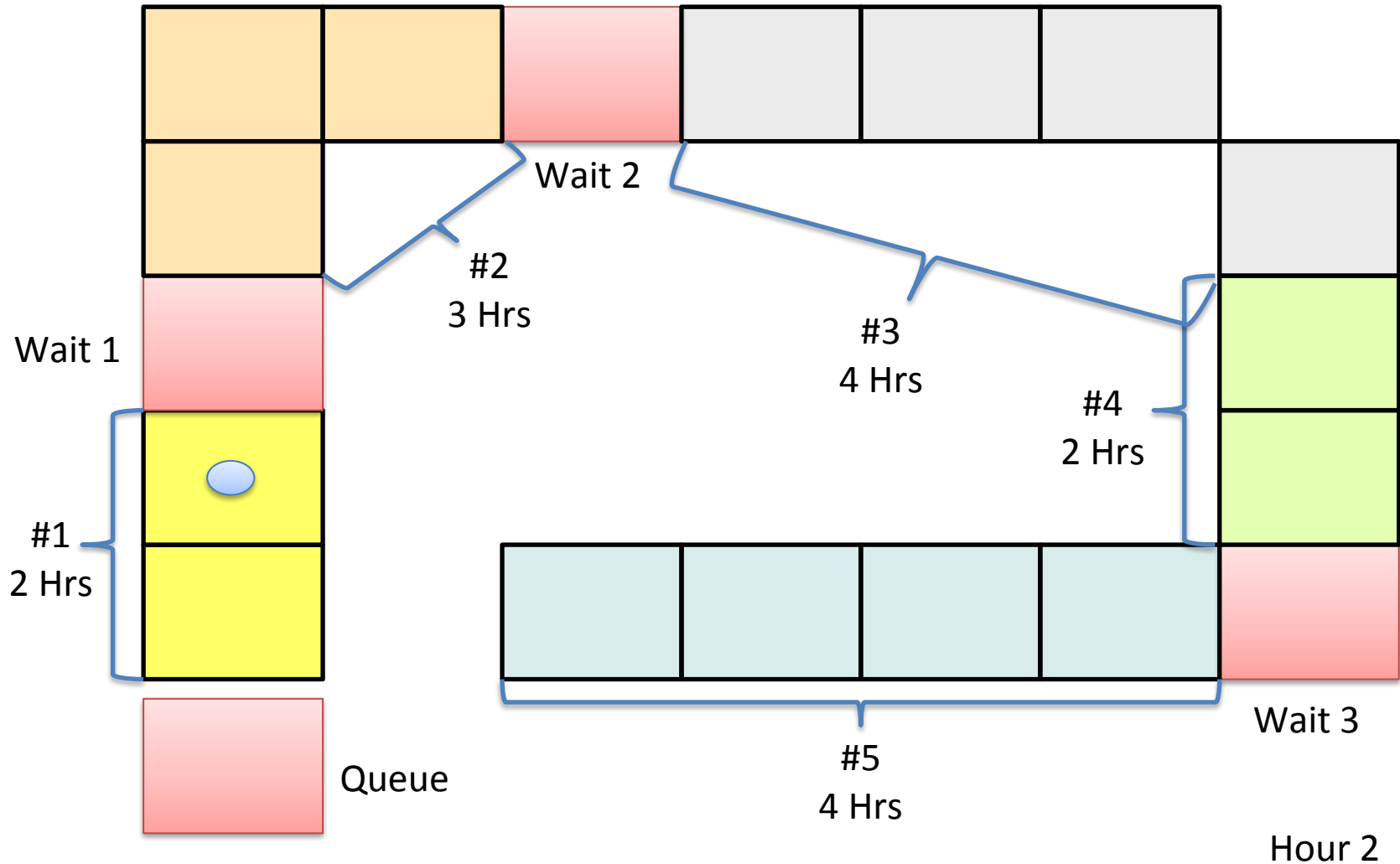
Hour 41

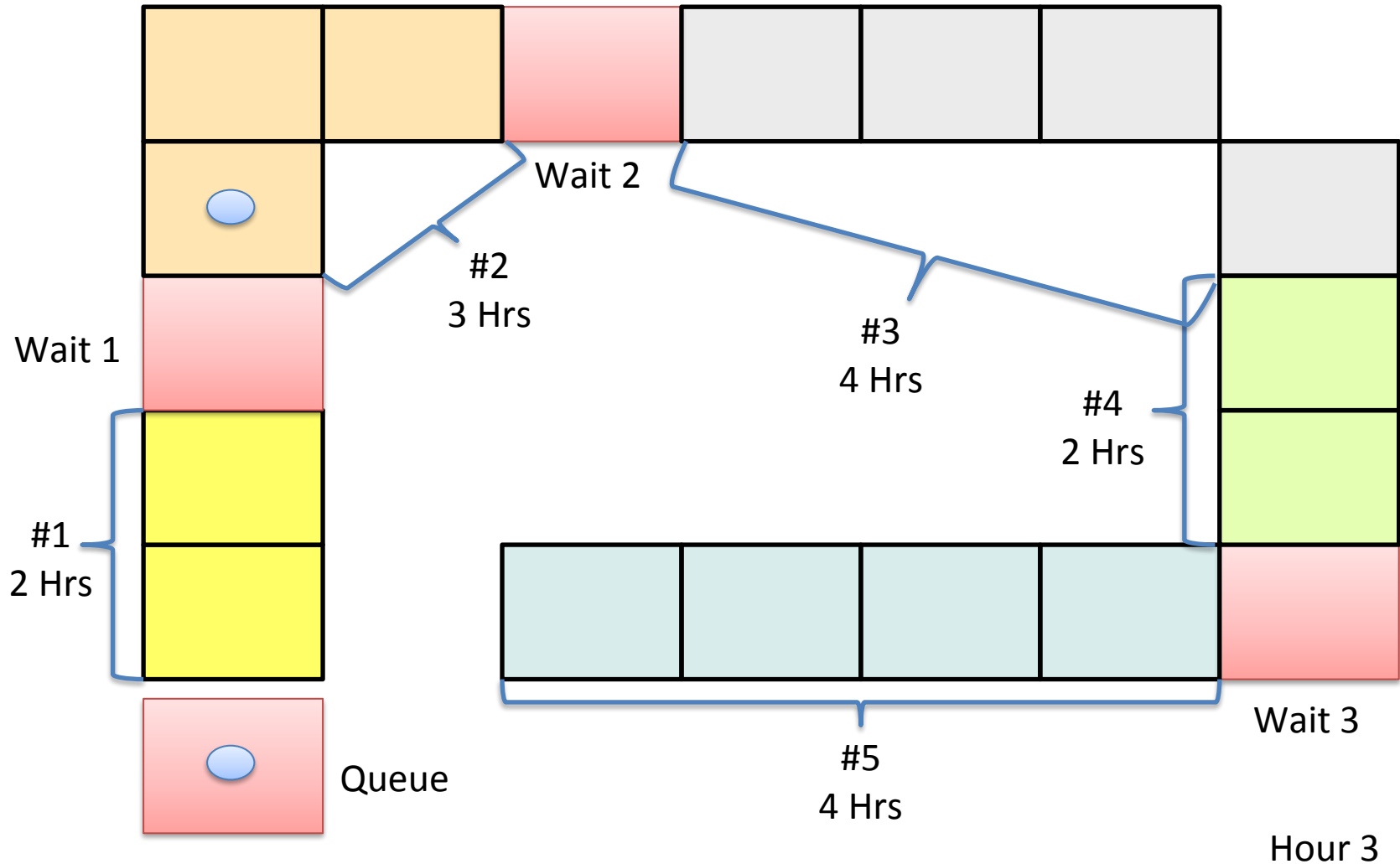
The way WIP and flow are managed impacts the fixed costs per unit. In the first simulation:

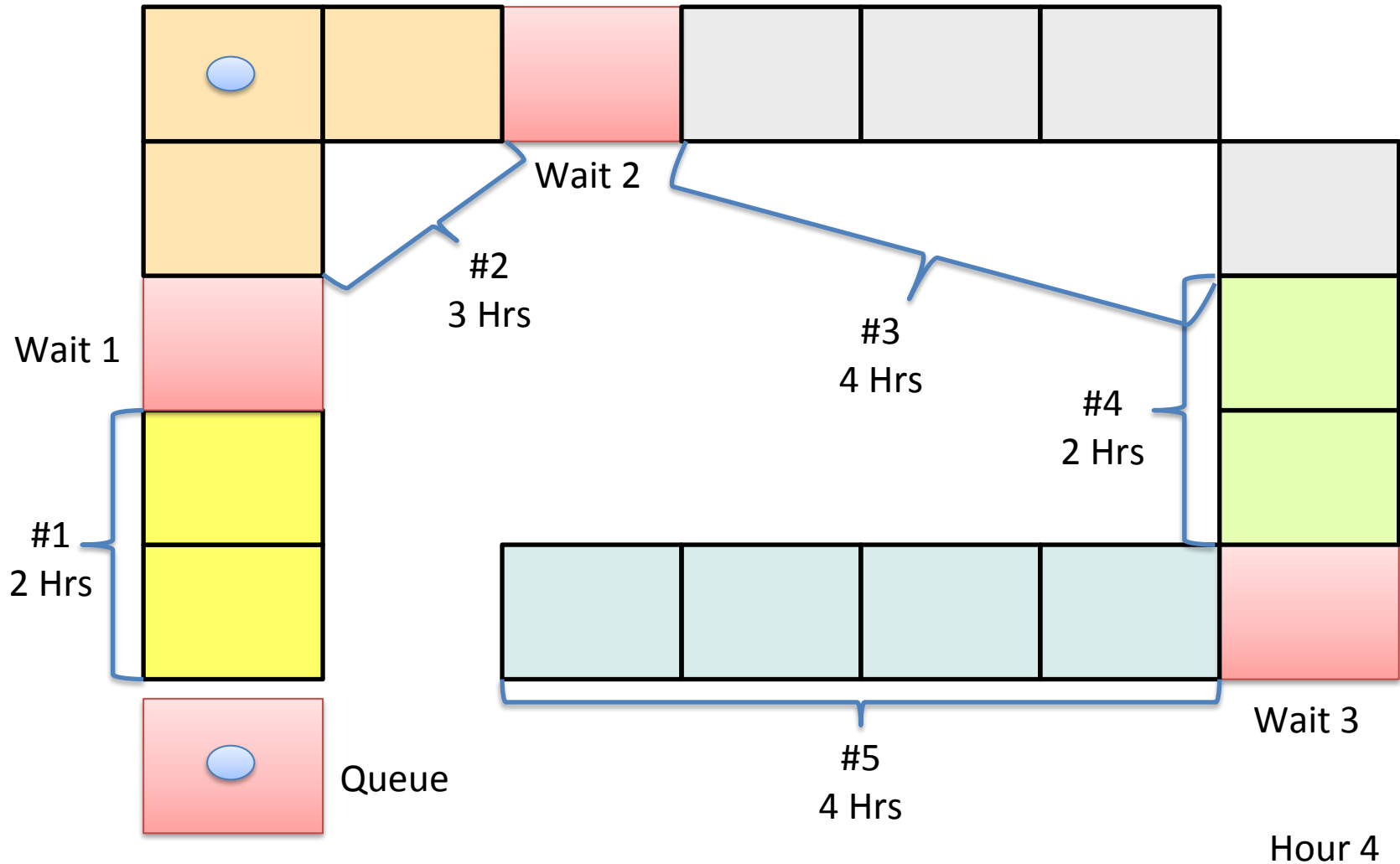
- Assume fixed costs for operating expenses based on 5 FTE's
- Assume the hourly rate is \$60 (includes overhead)
- Therefore, total fixed costs per week are \$12,000
- The throughput rate is one unit every six hours or 6.67 units per week (40 / 6)
- The cost per unit is \$1,800 ($\$12,000 / 6.67$)

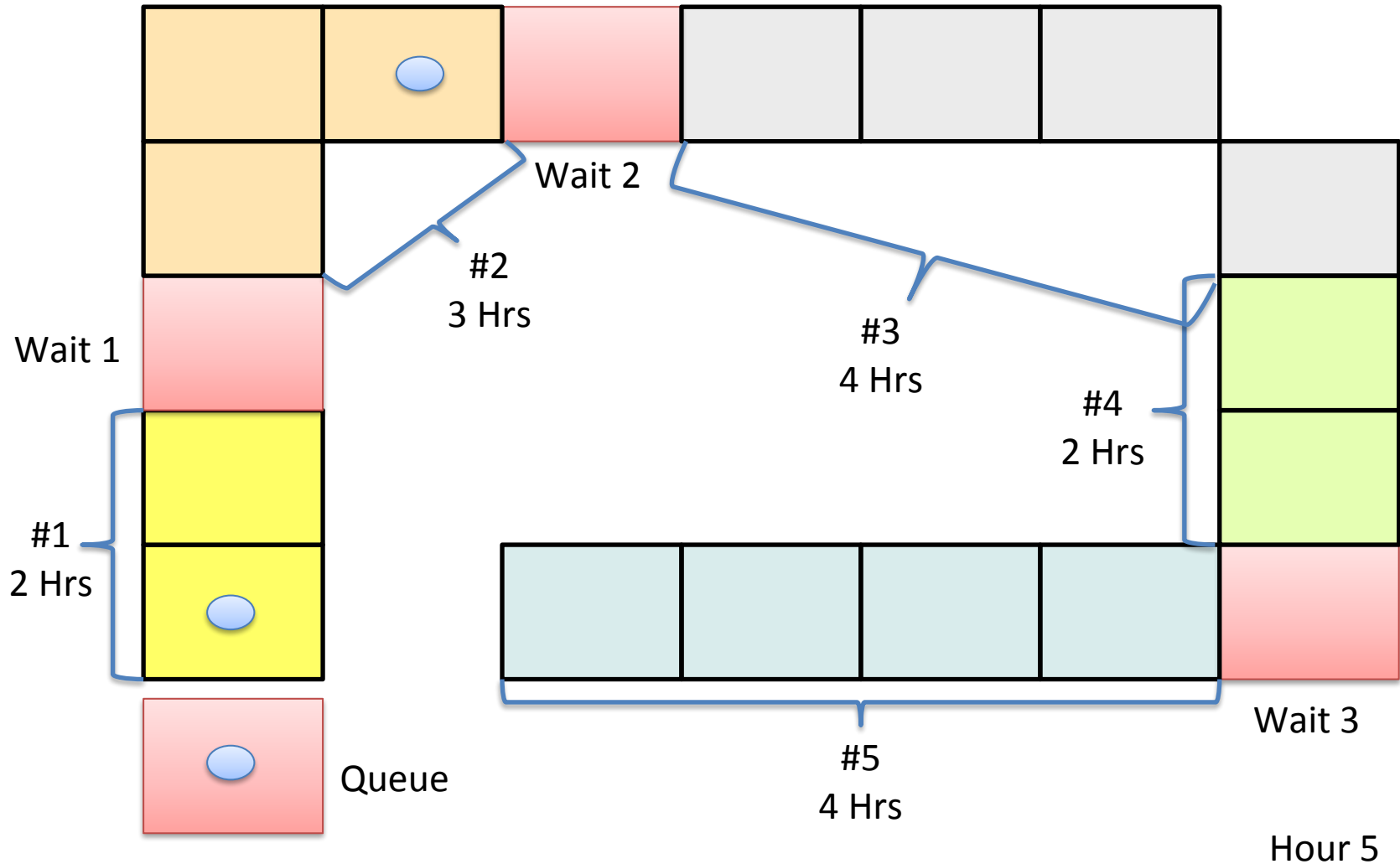


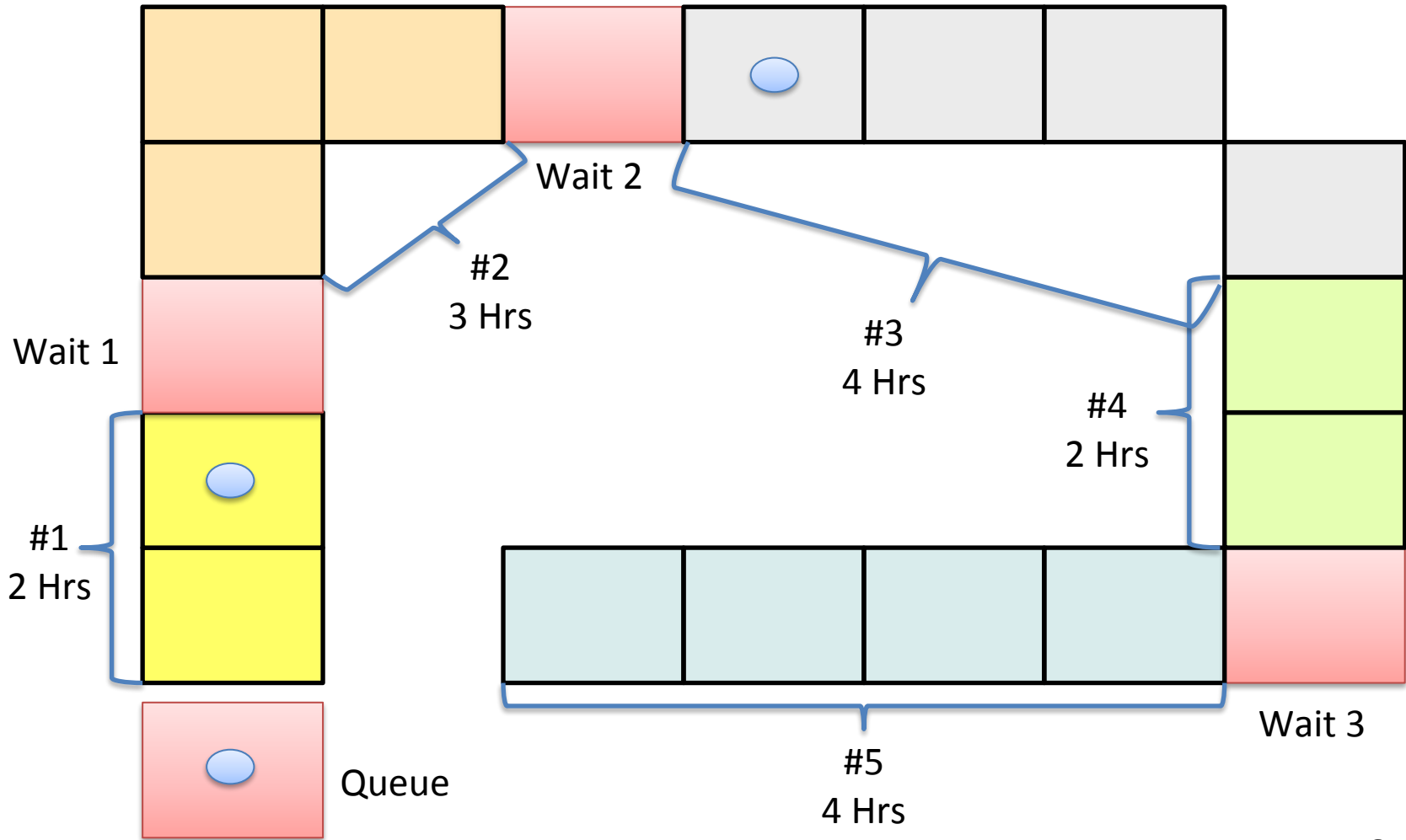


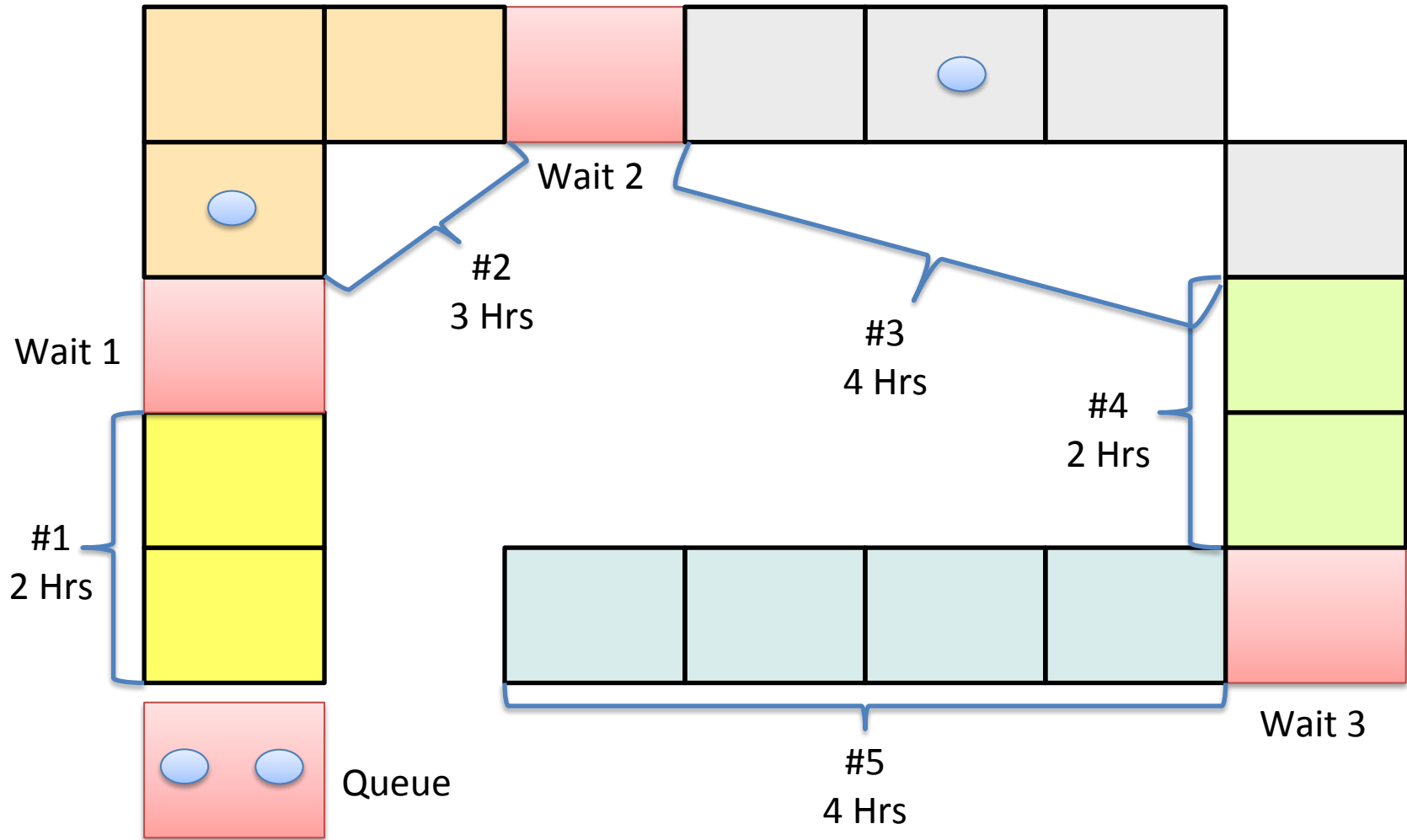


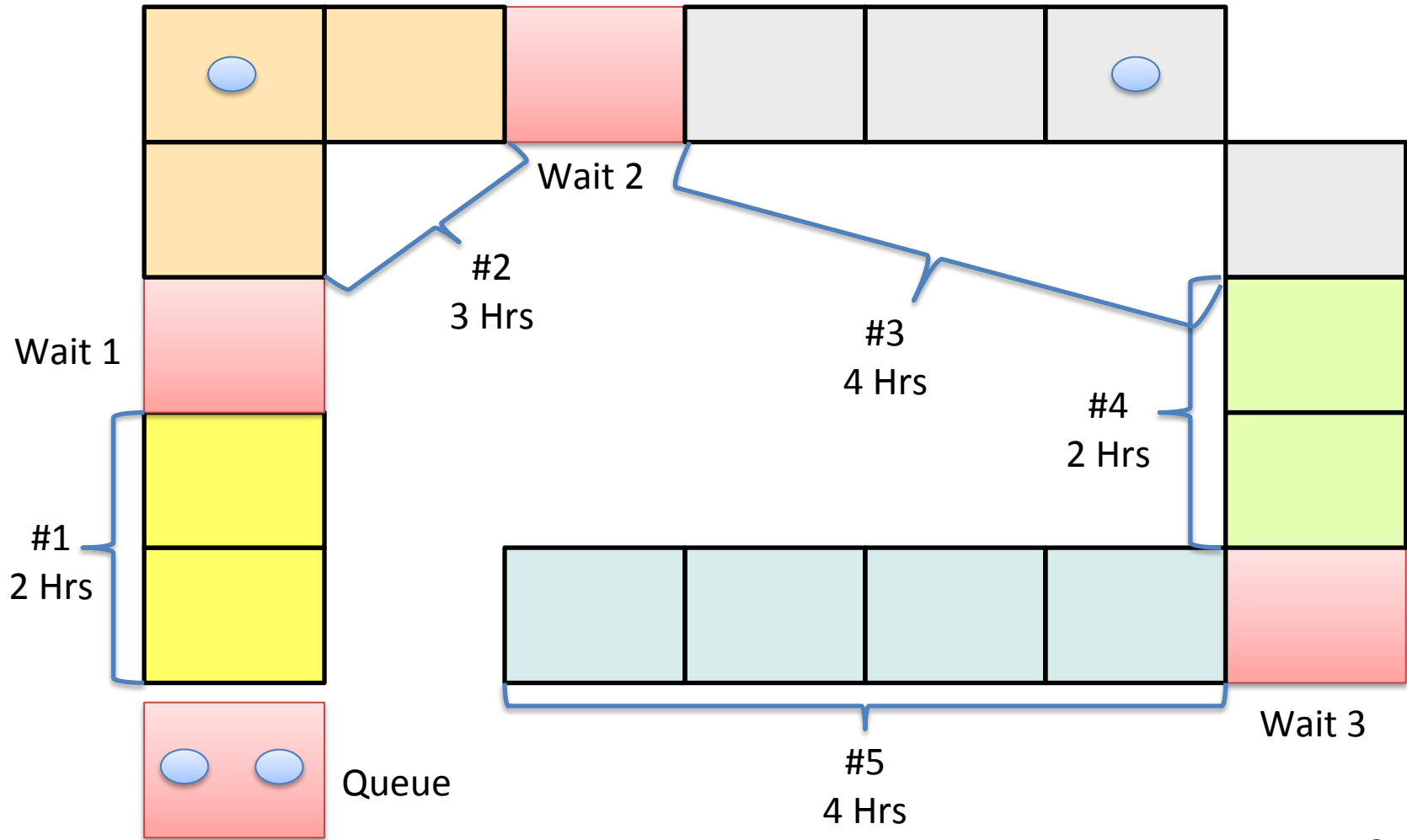


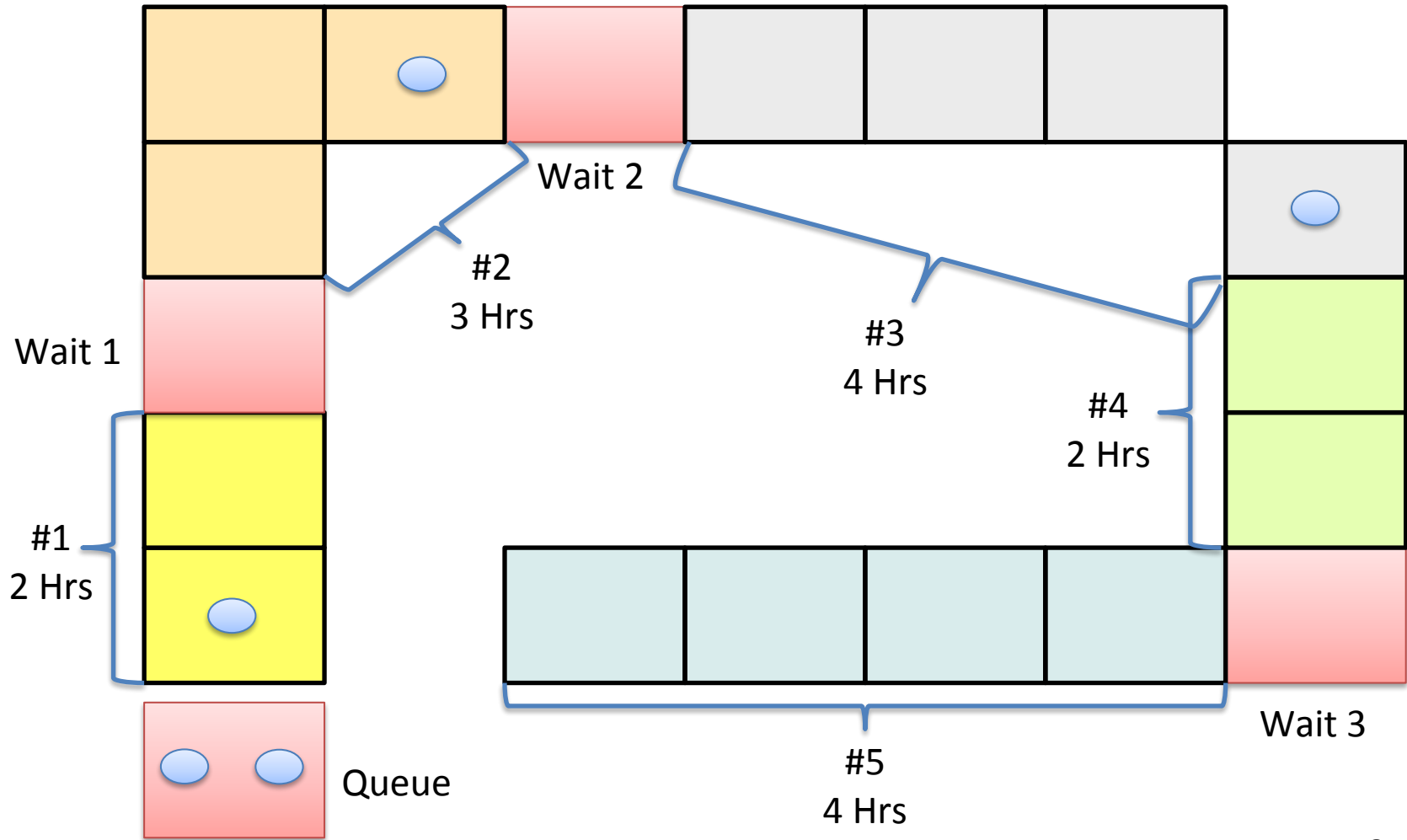


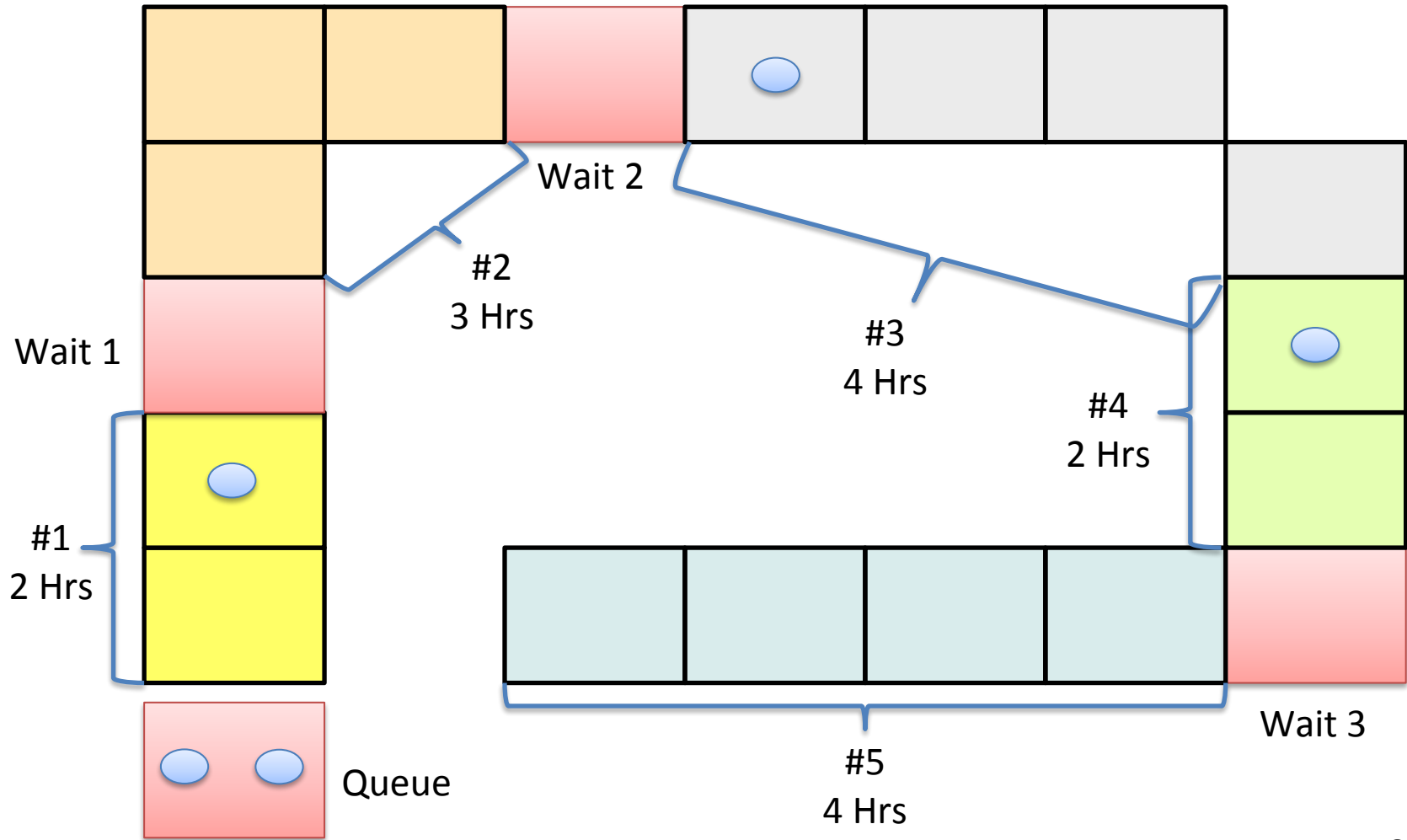


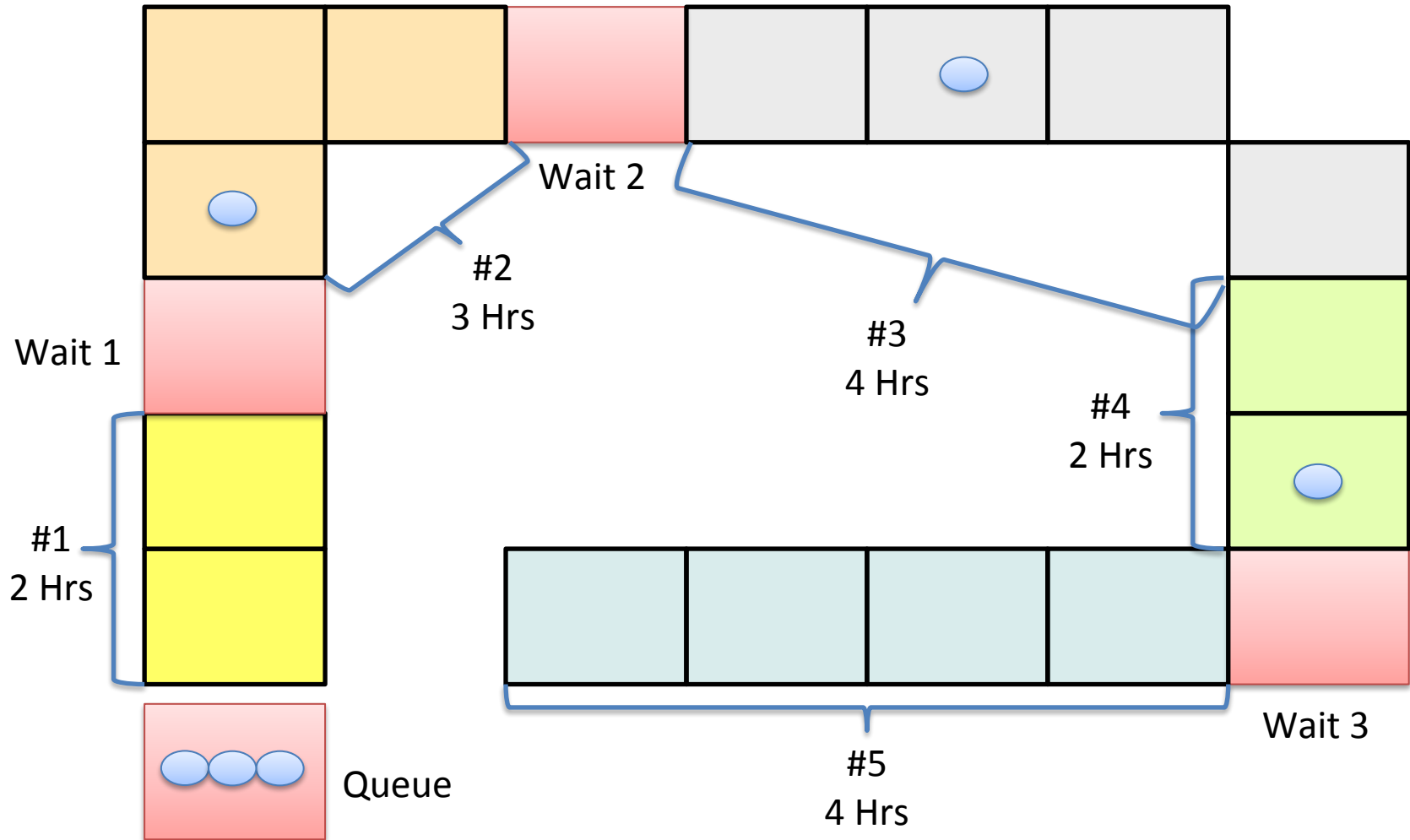


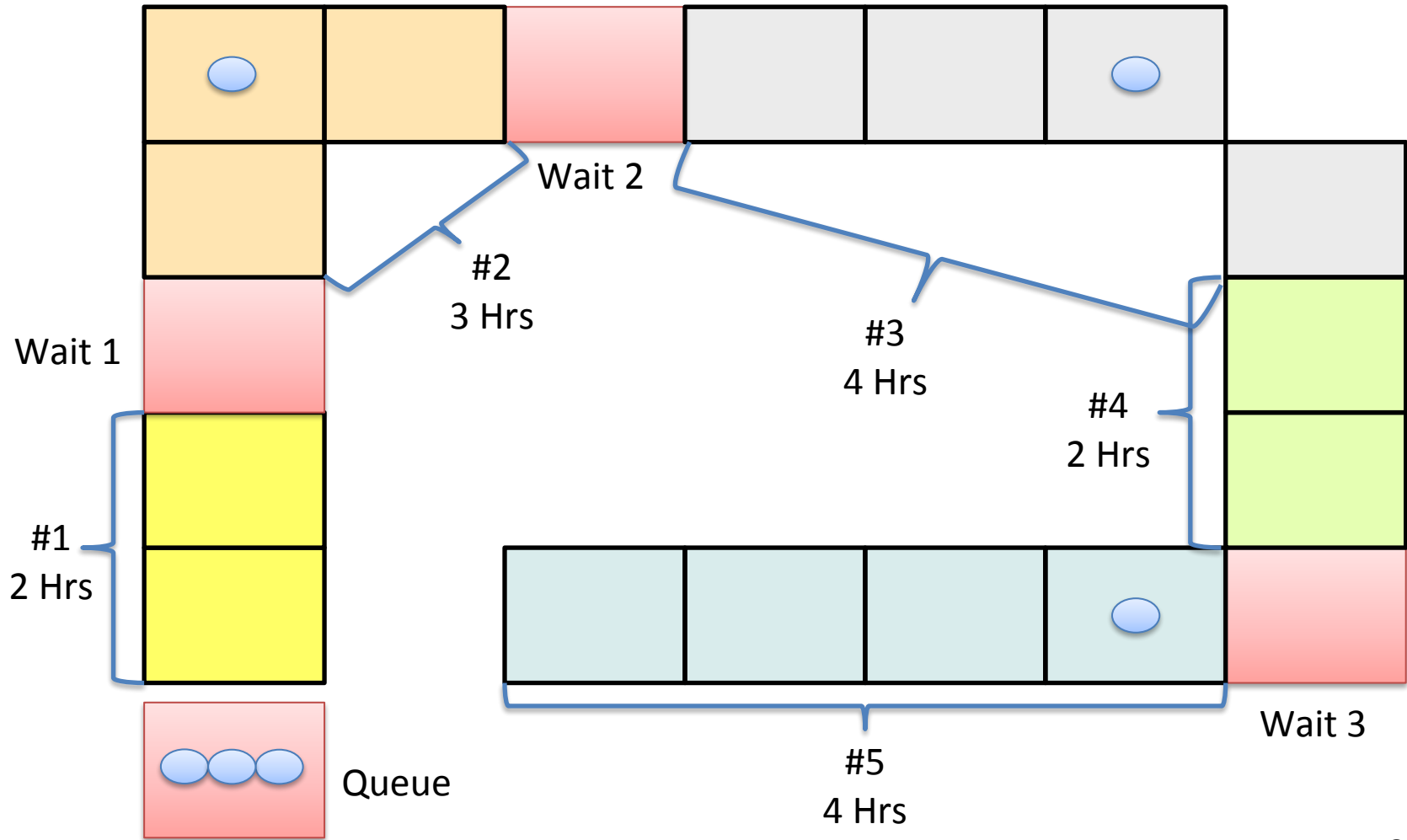


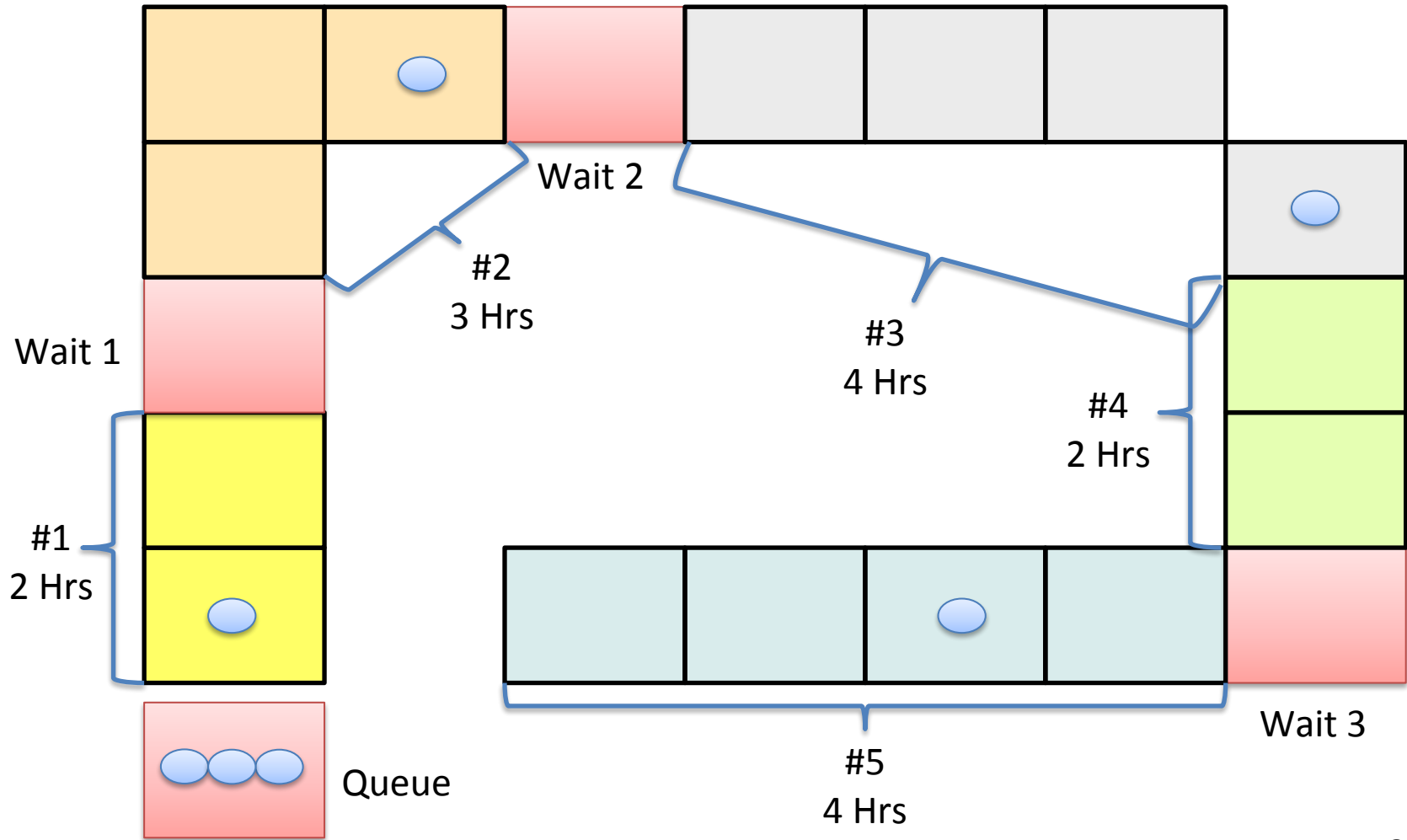


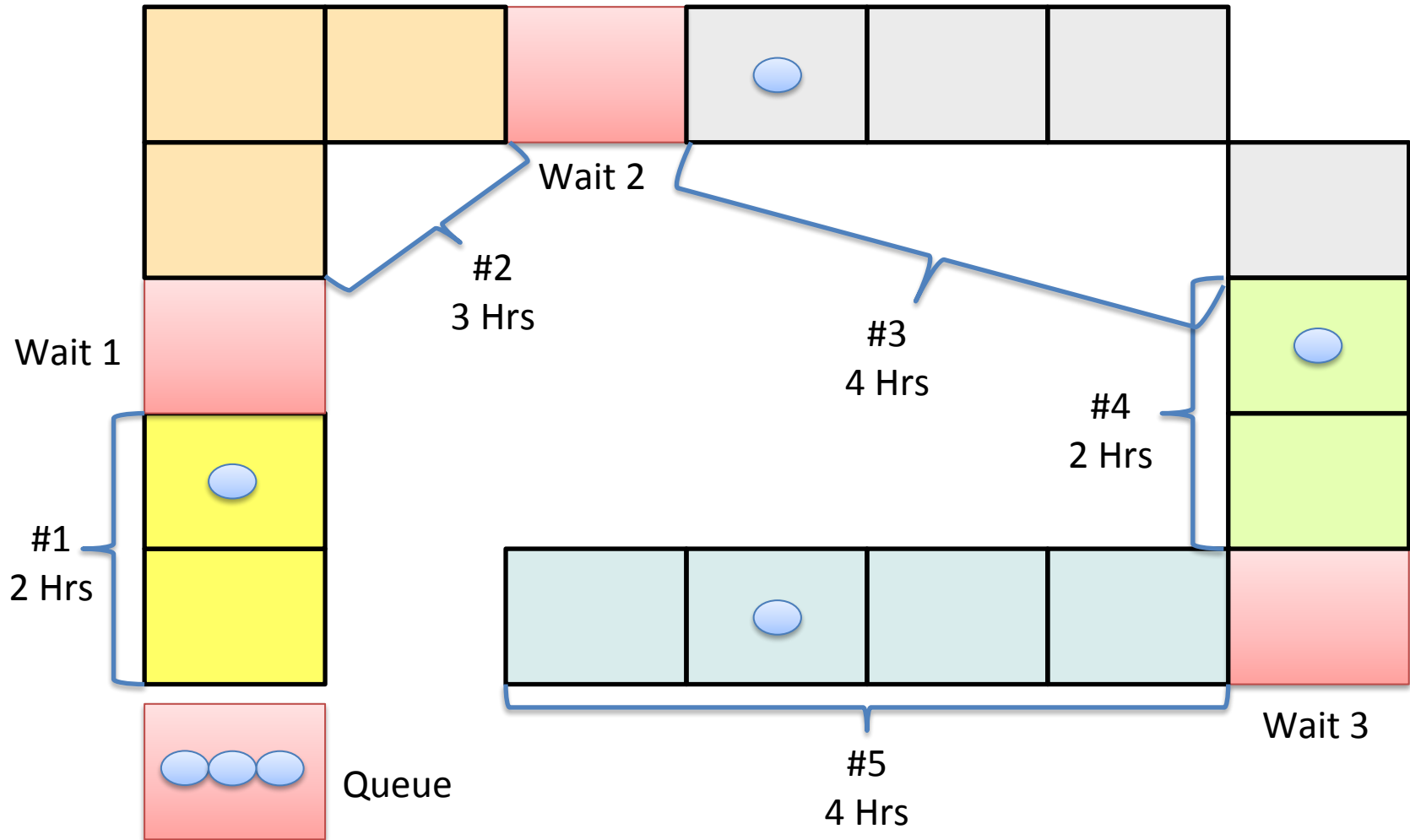


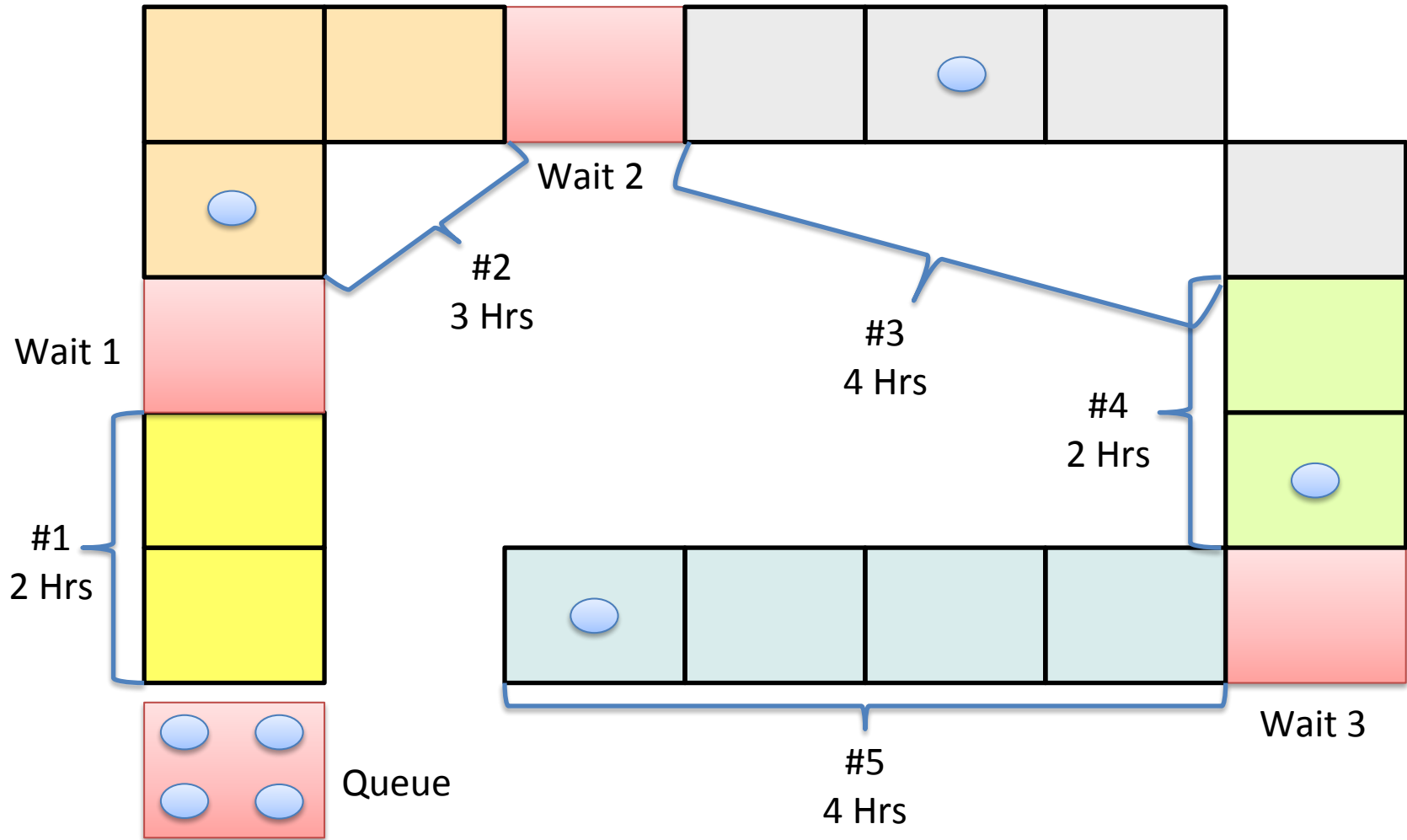


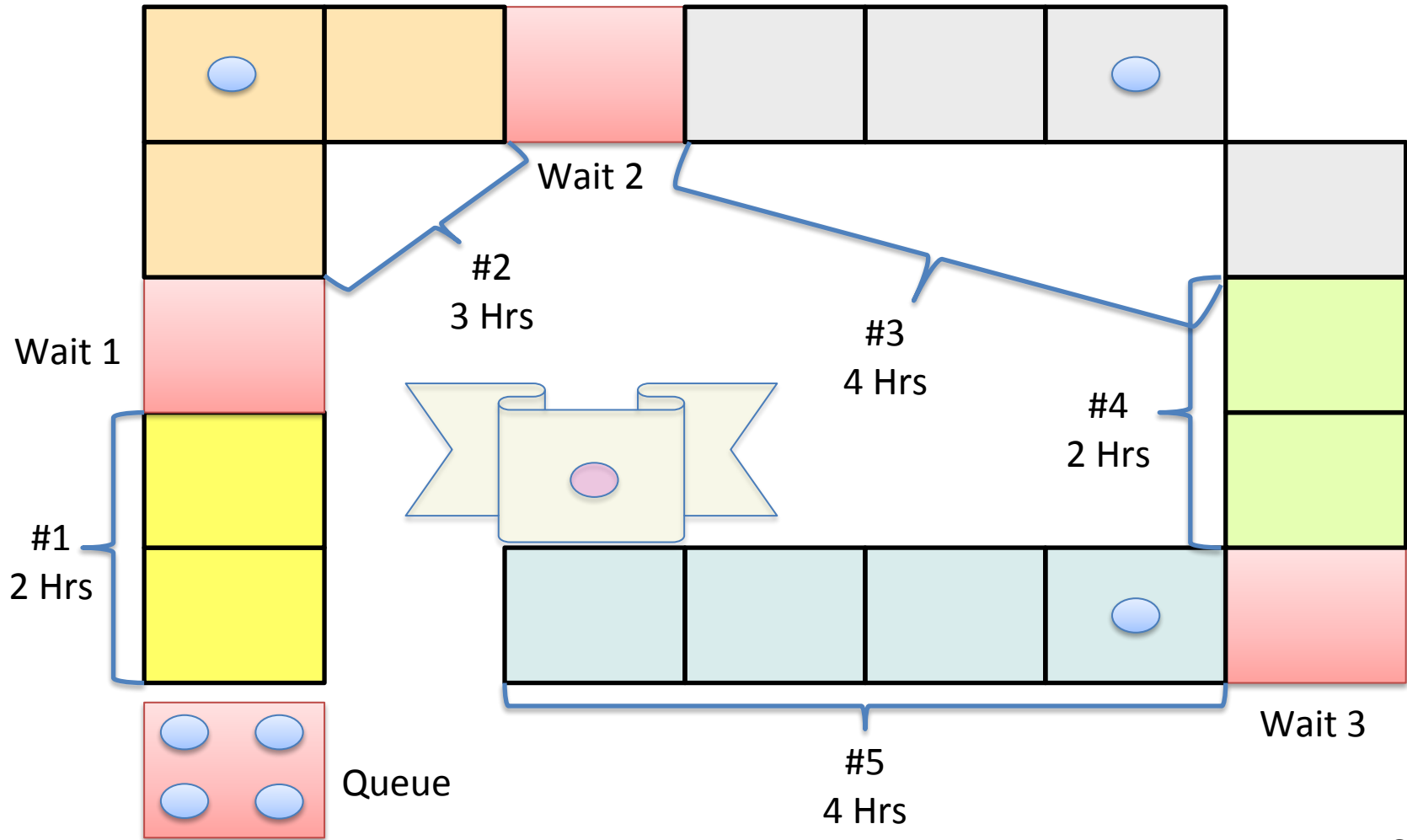




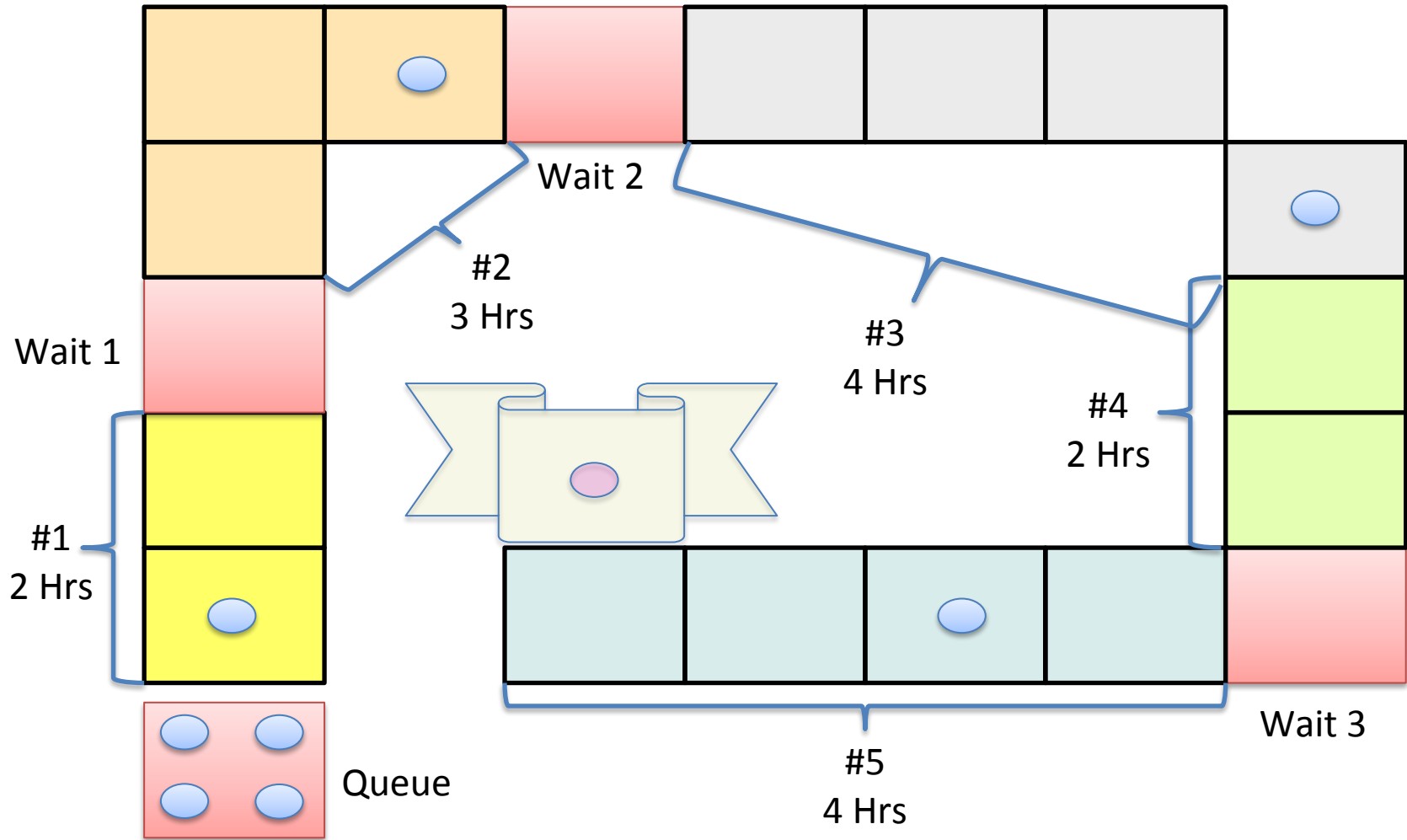


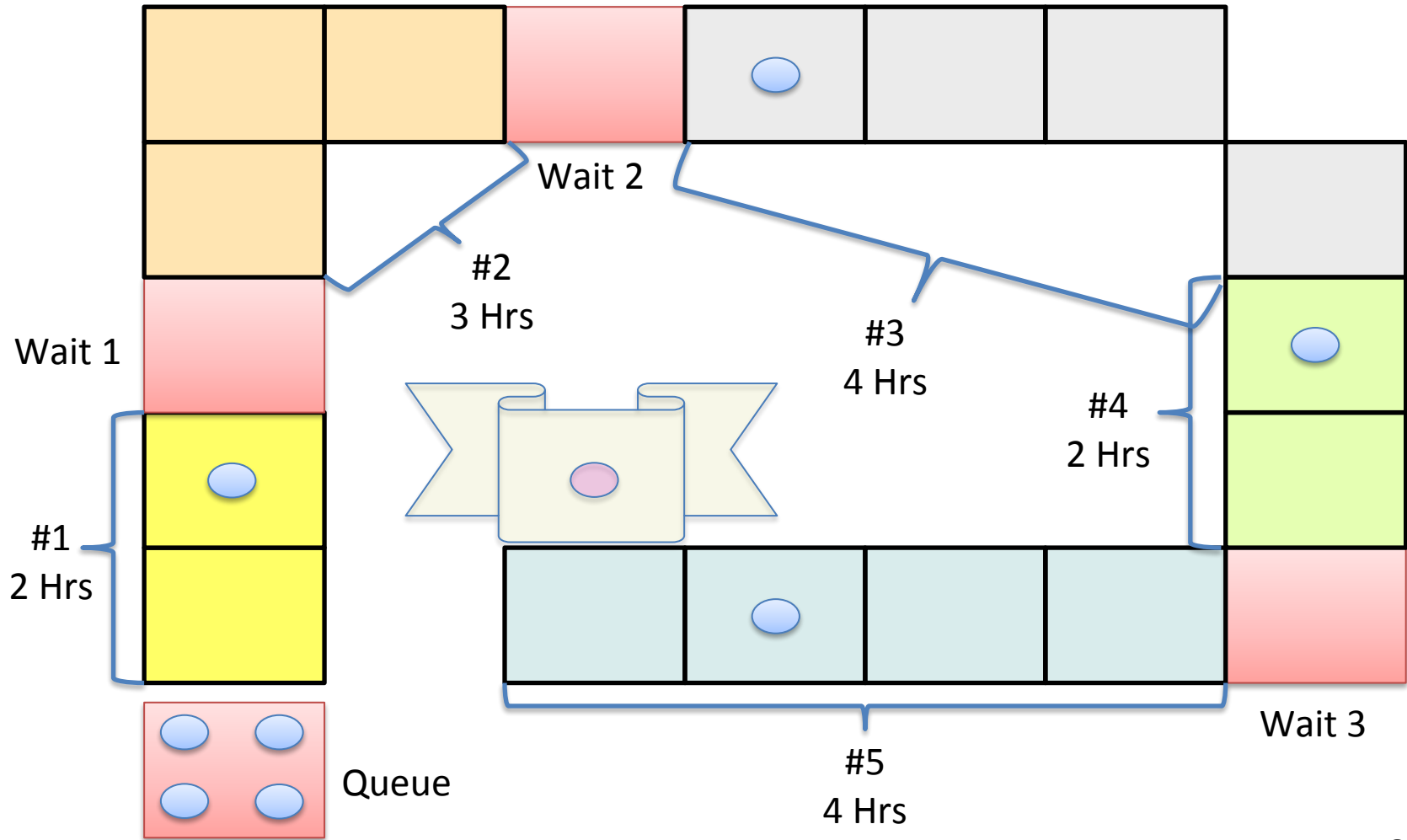




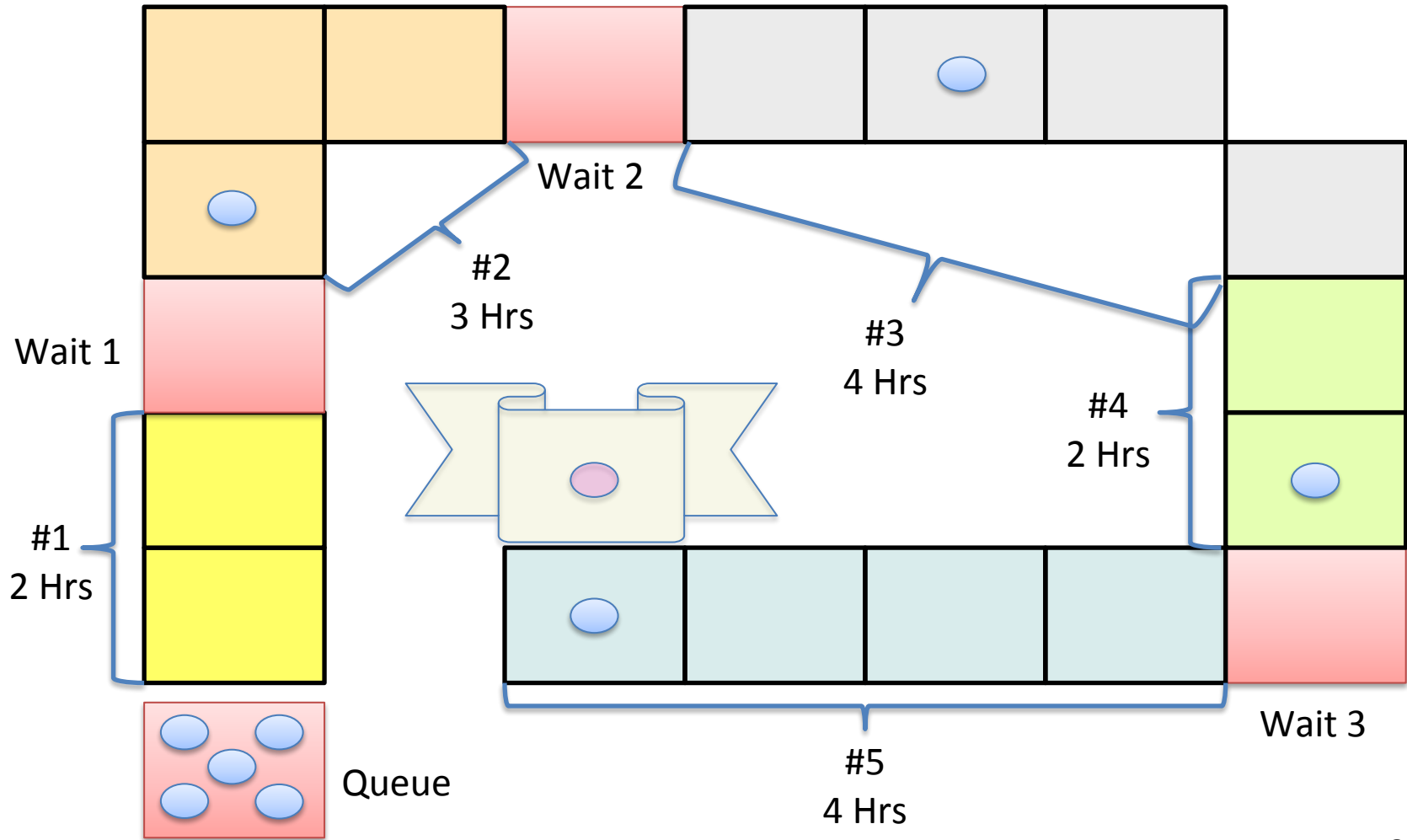


Hour 16

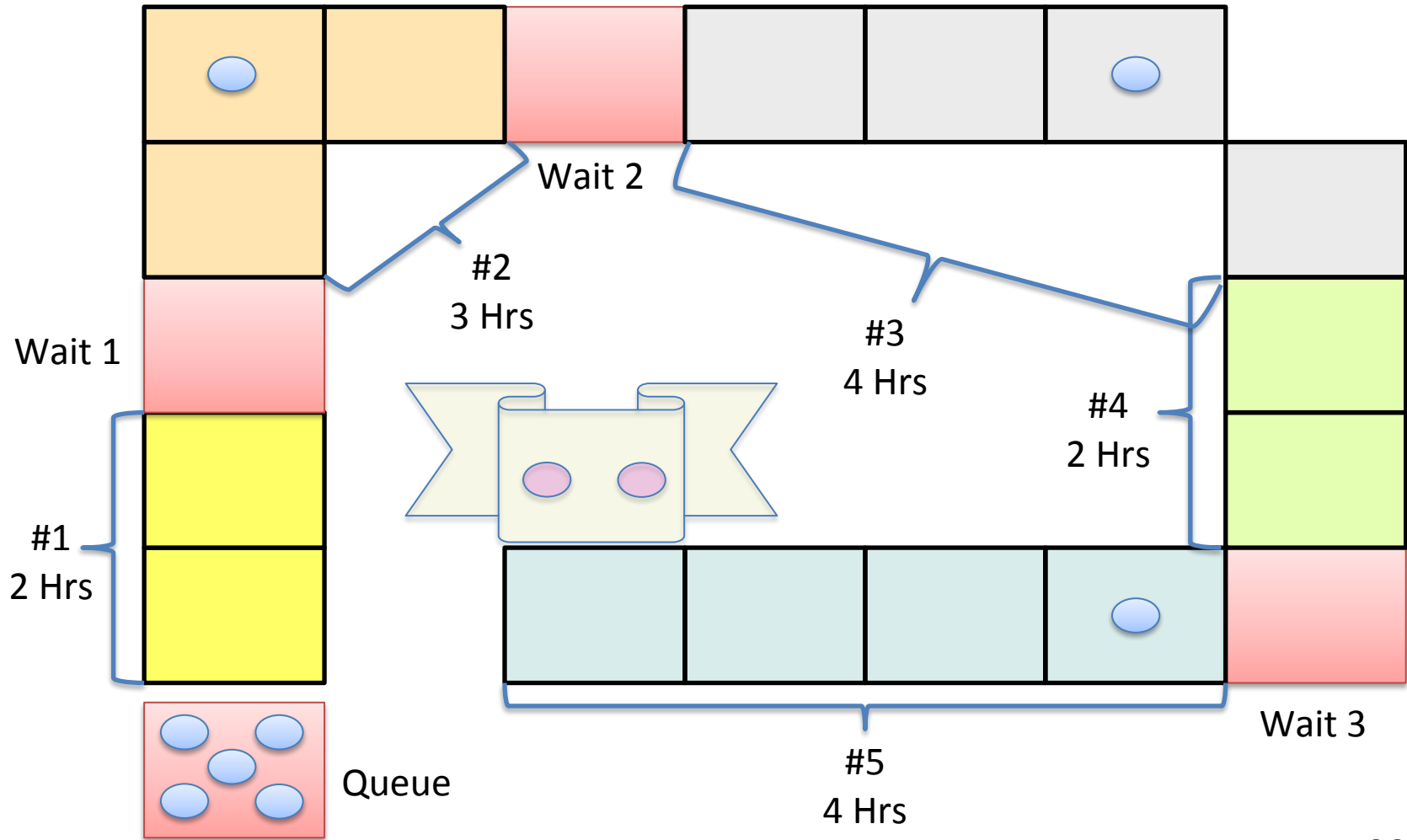


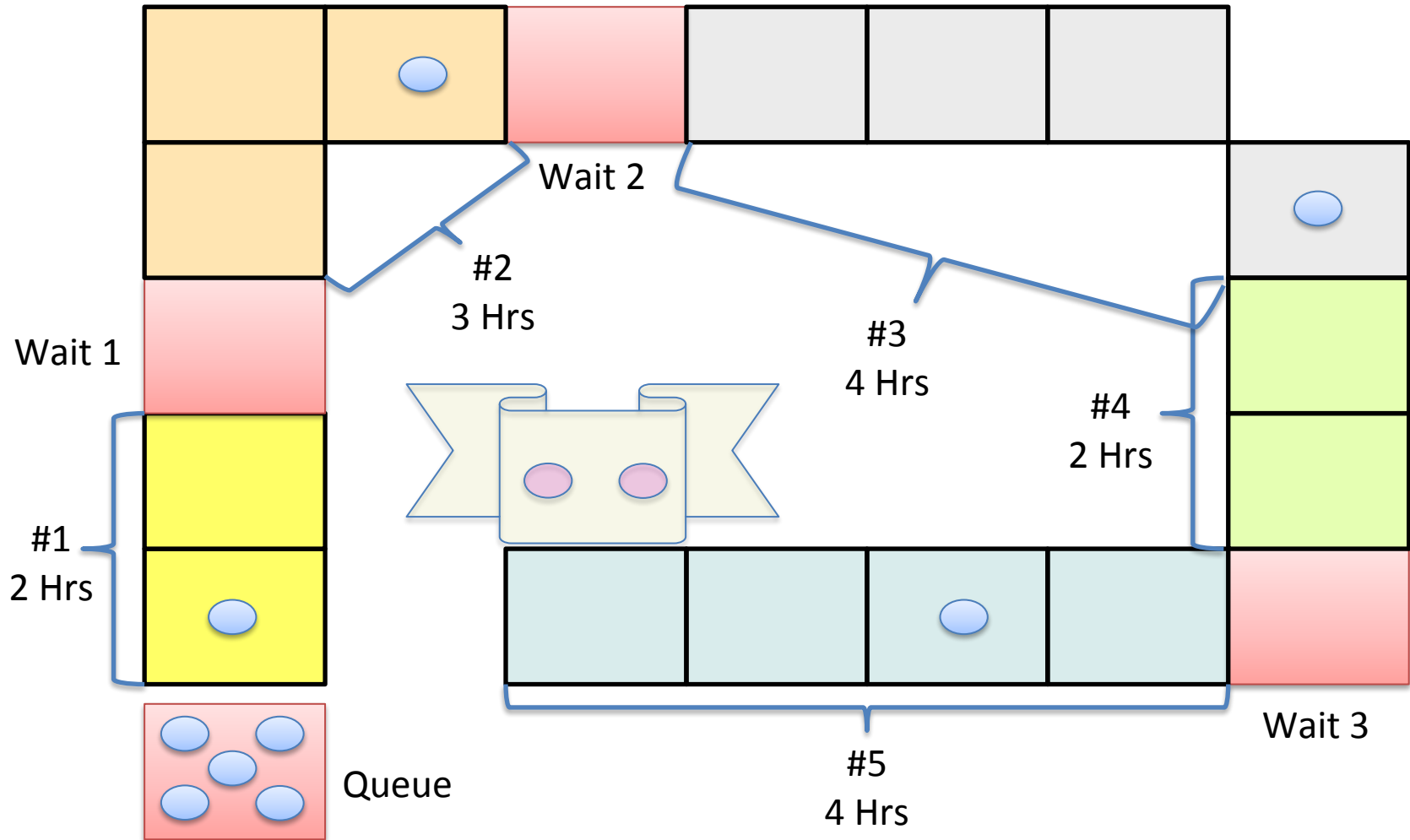


Hour 18

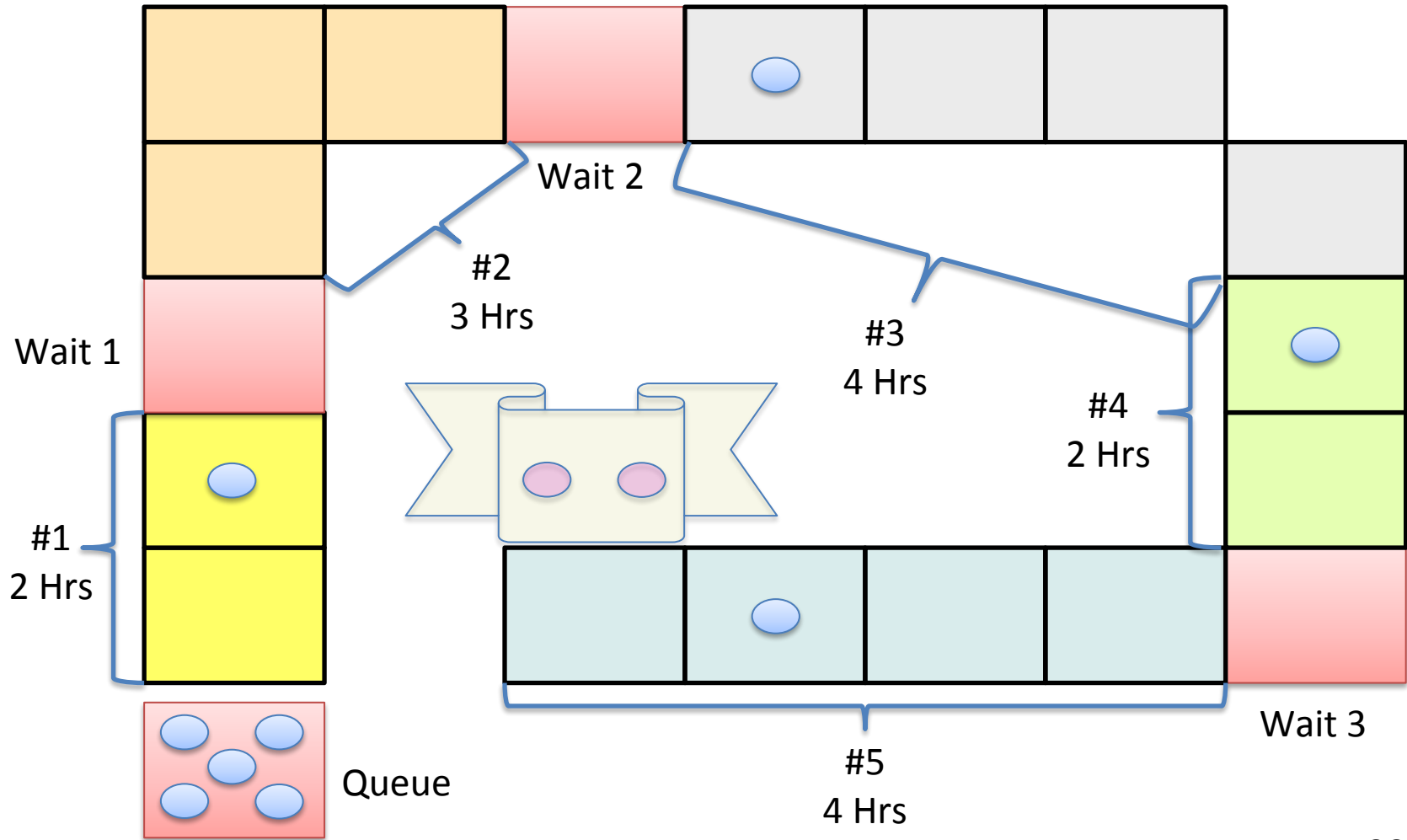


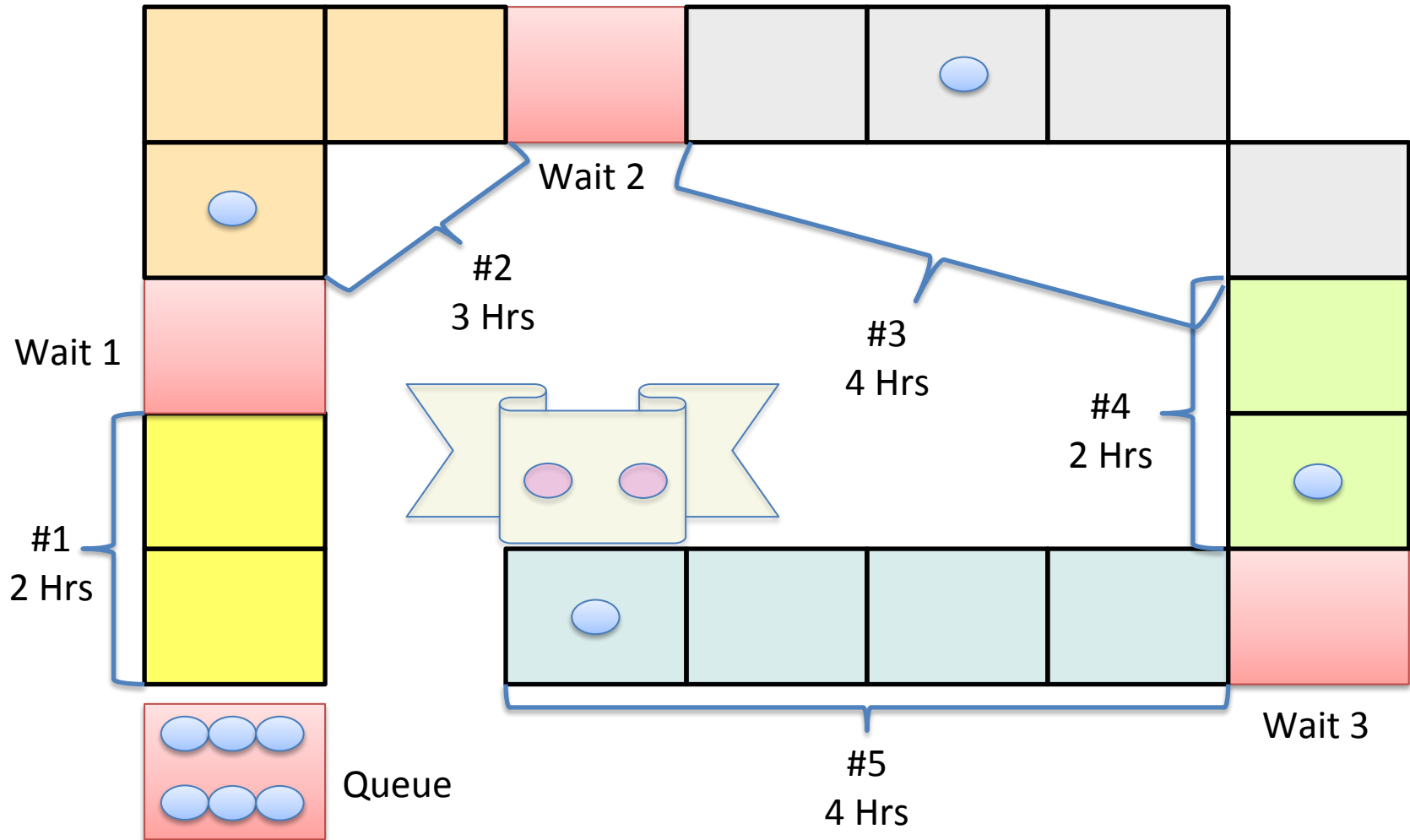
Hour 19

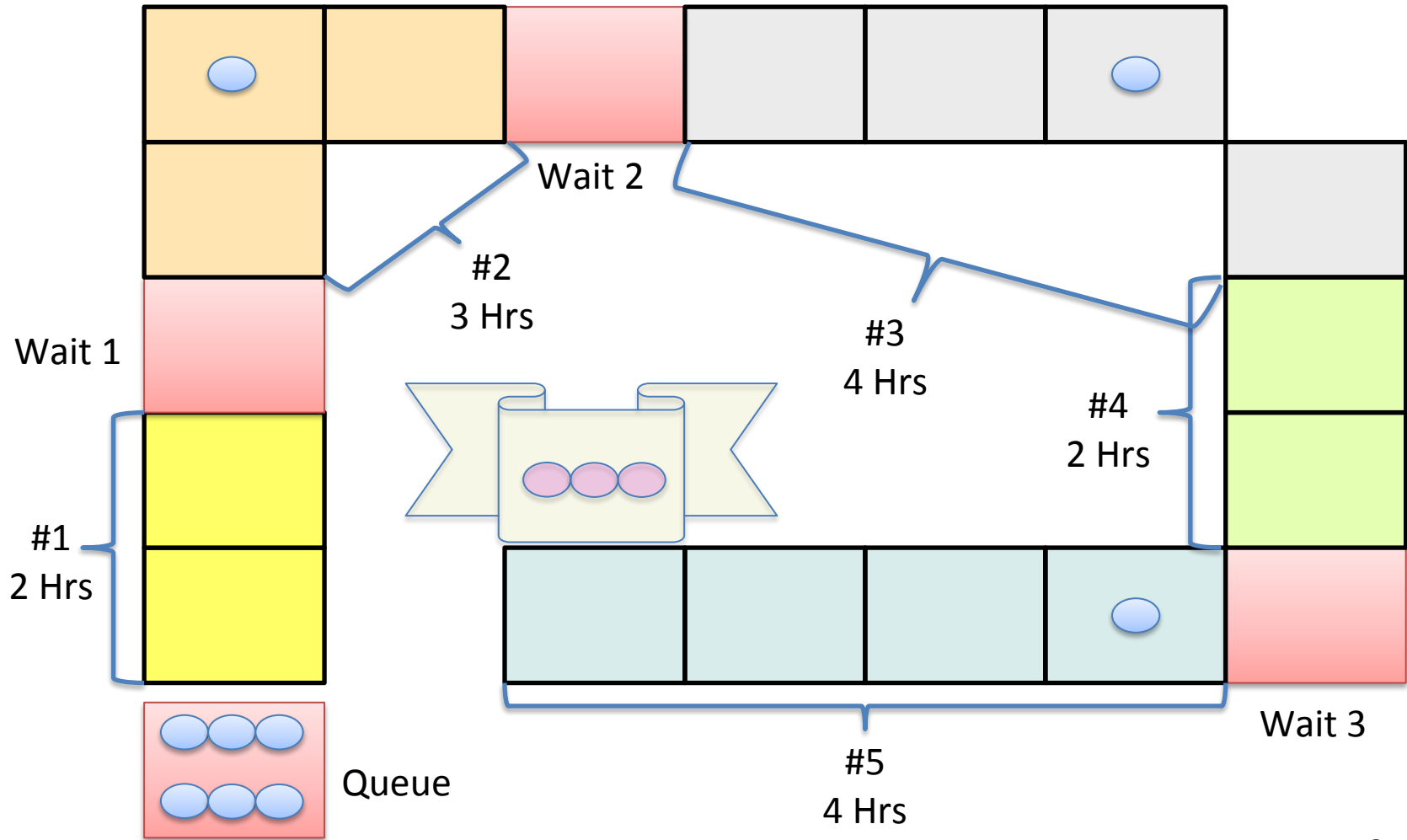




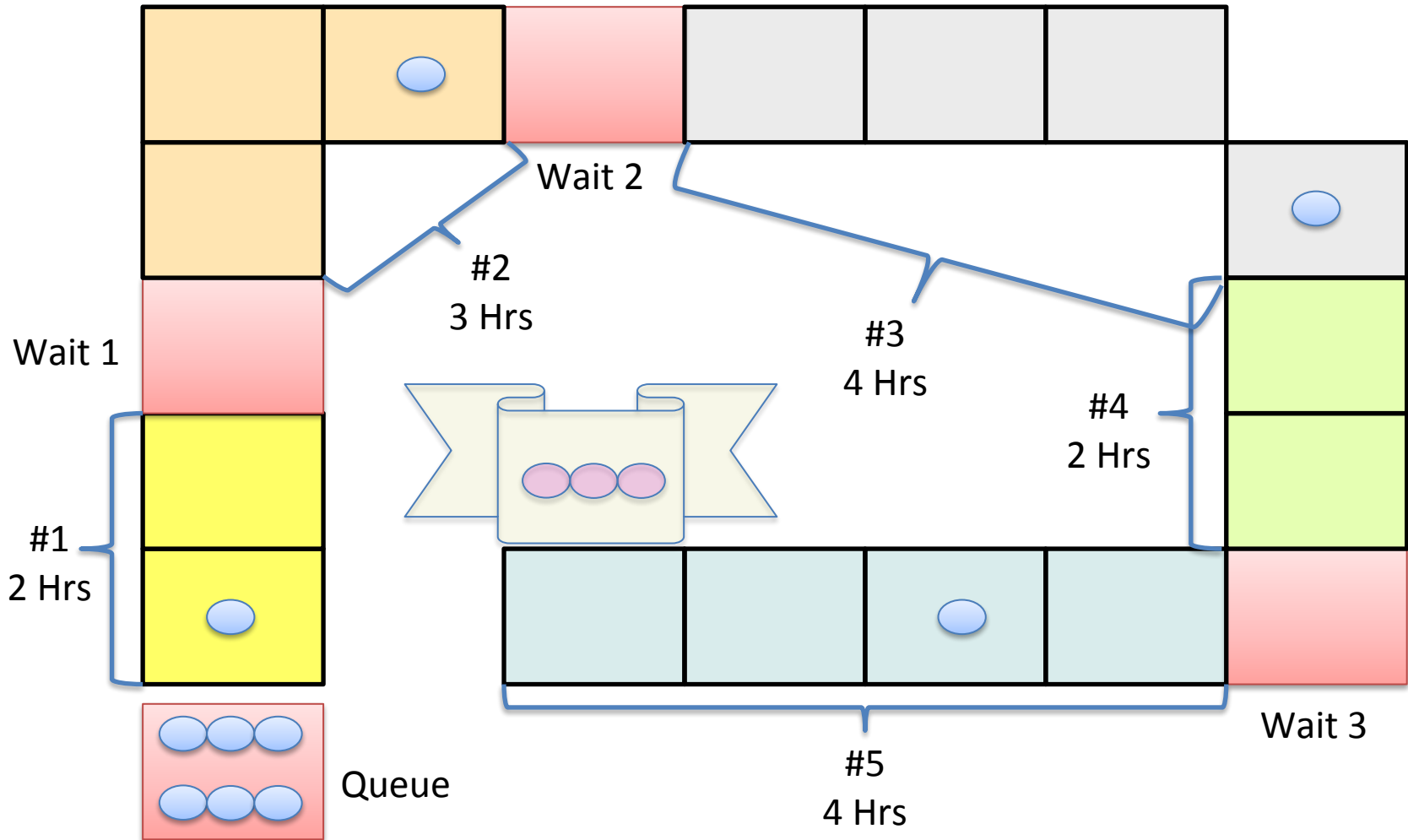
Hour 21

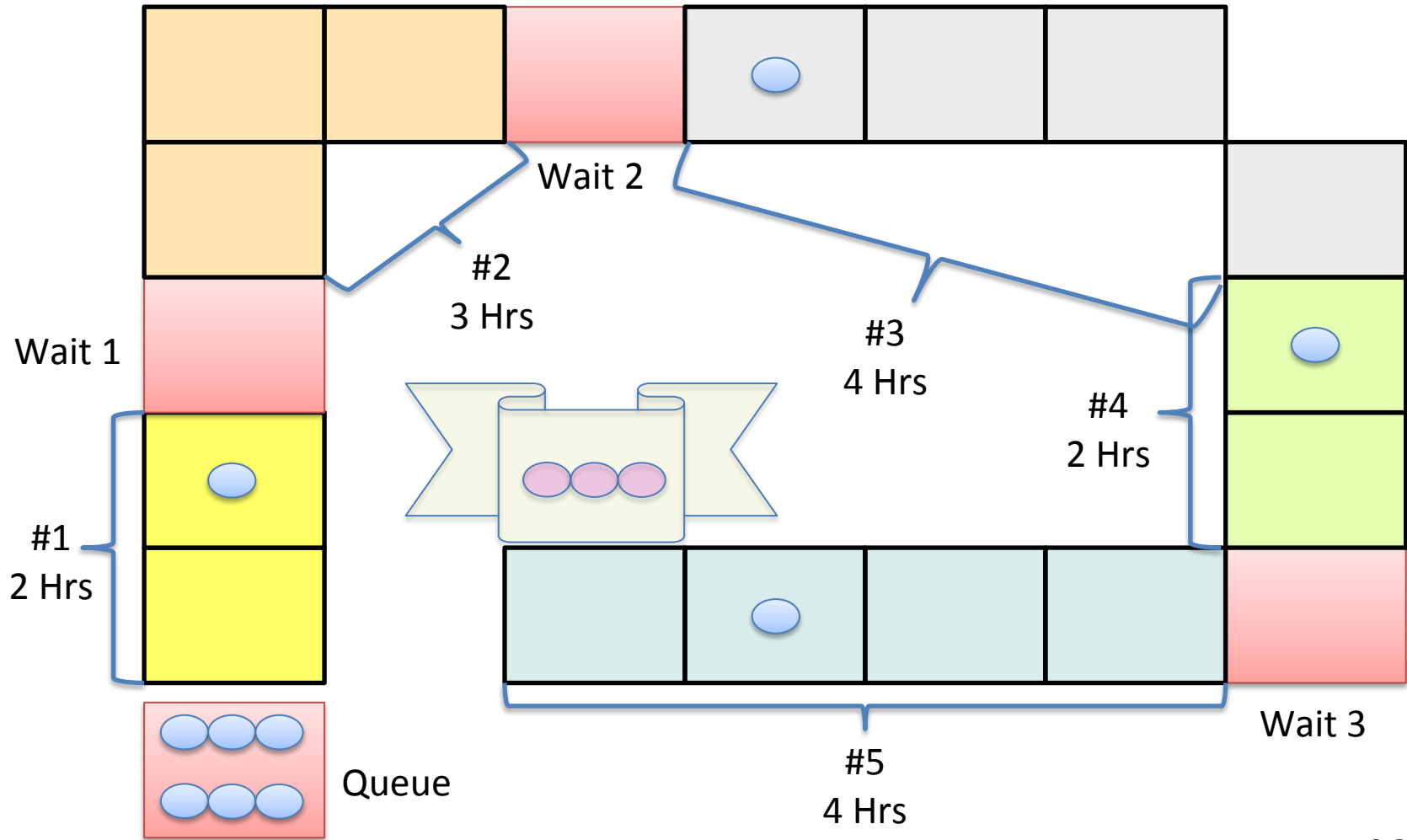


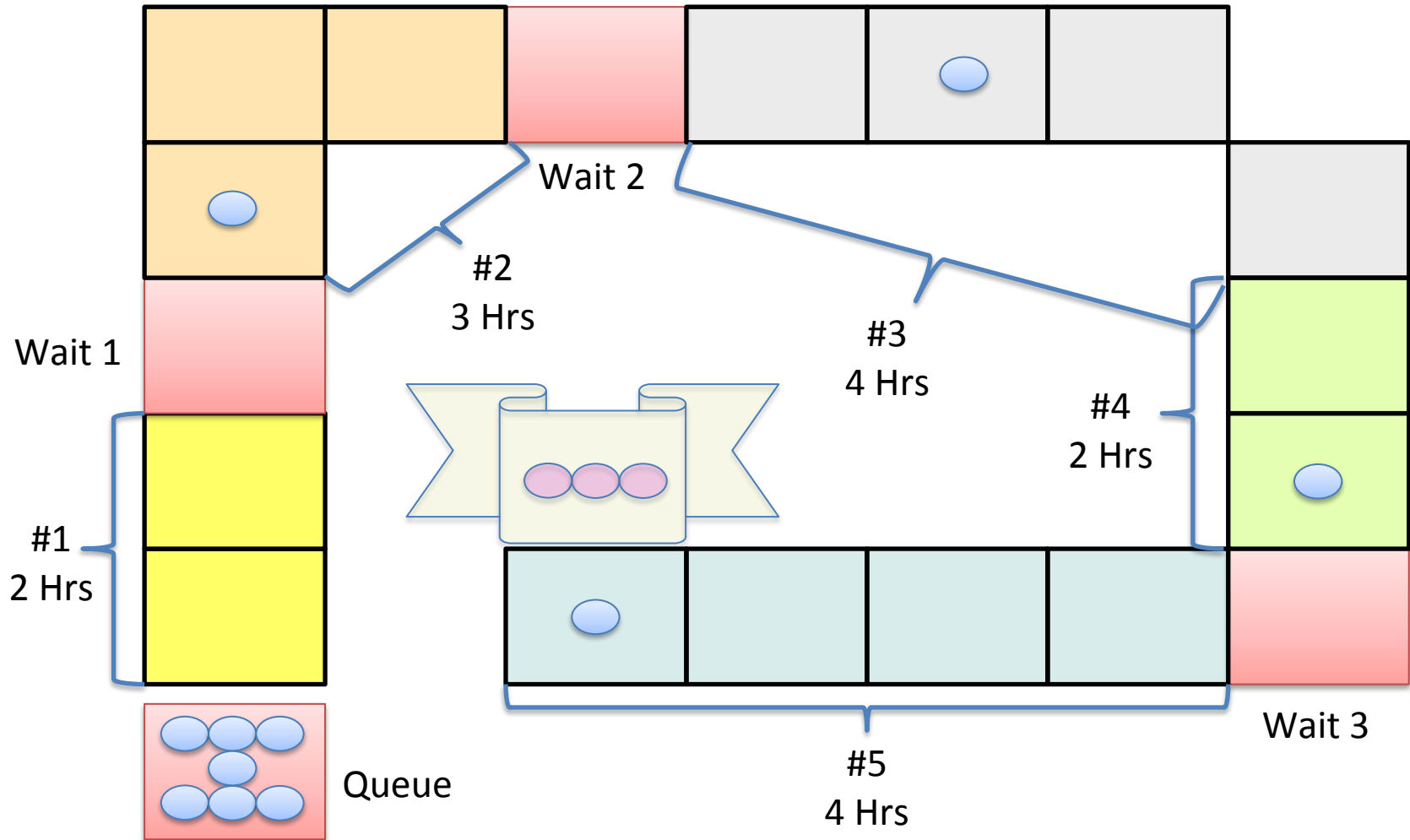




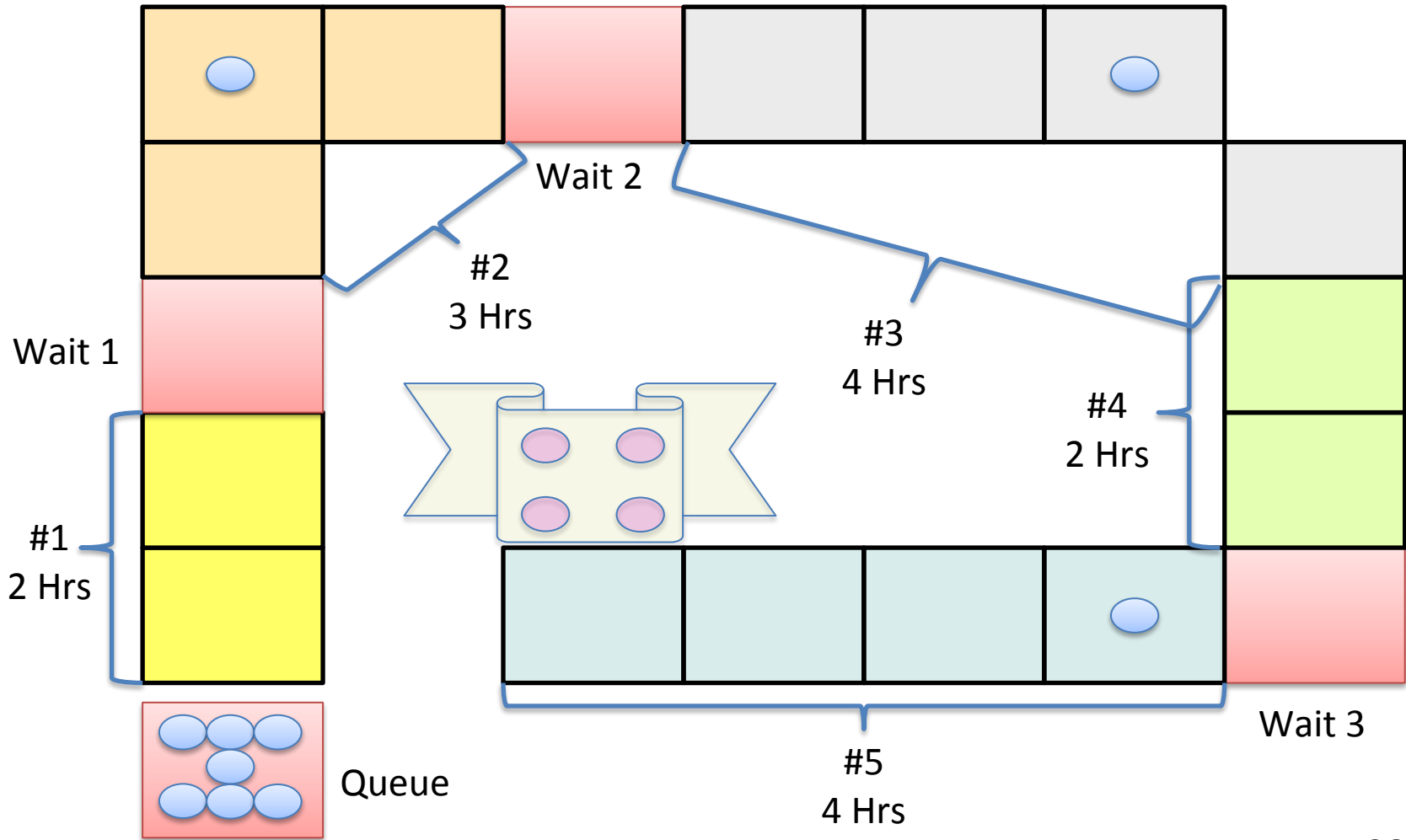
Hour 24



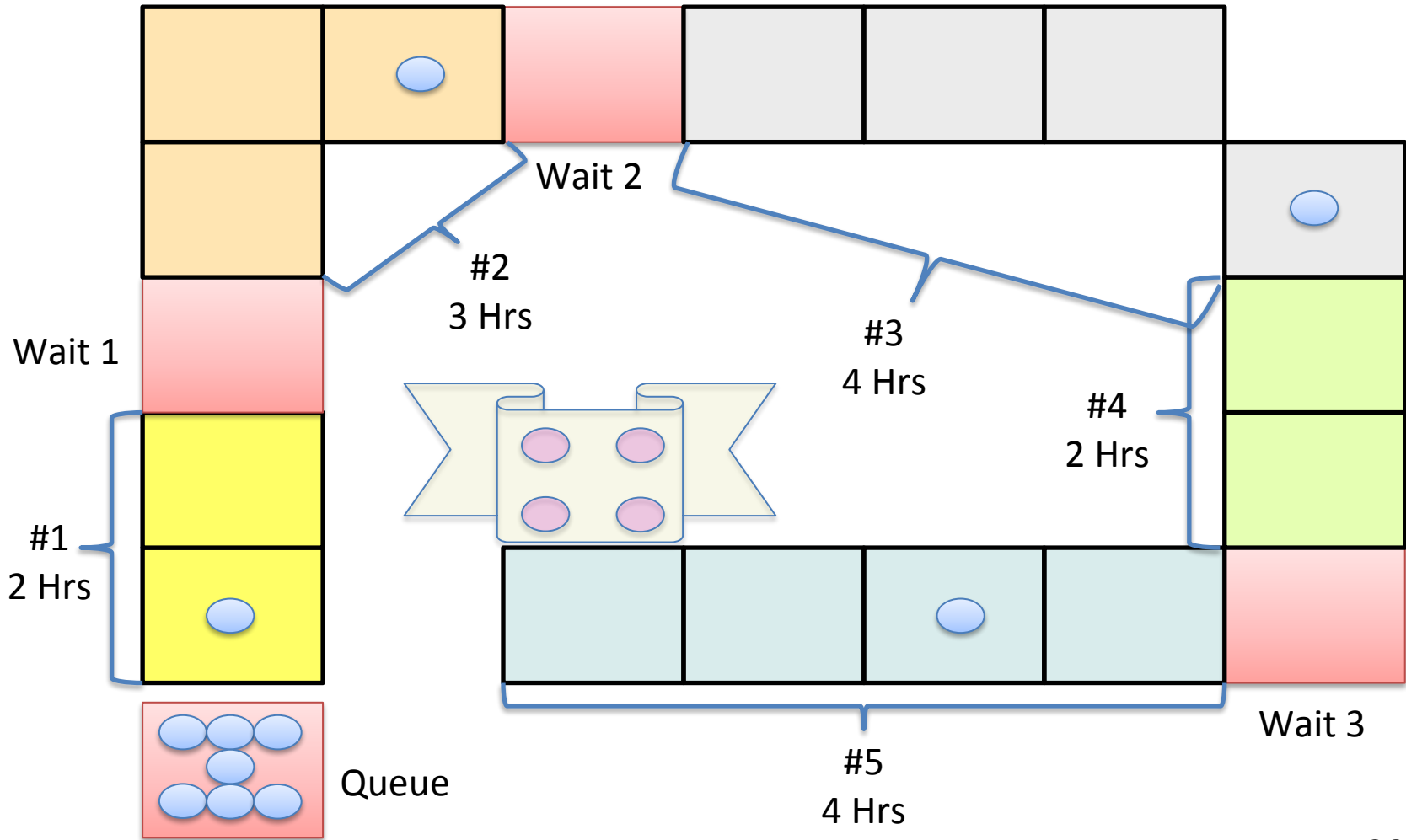




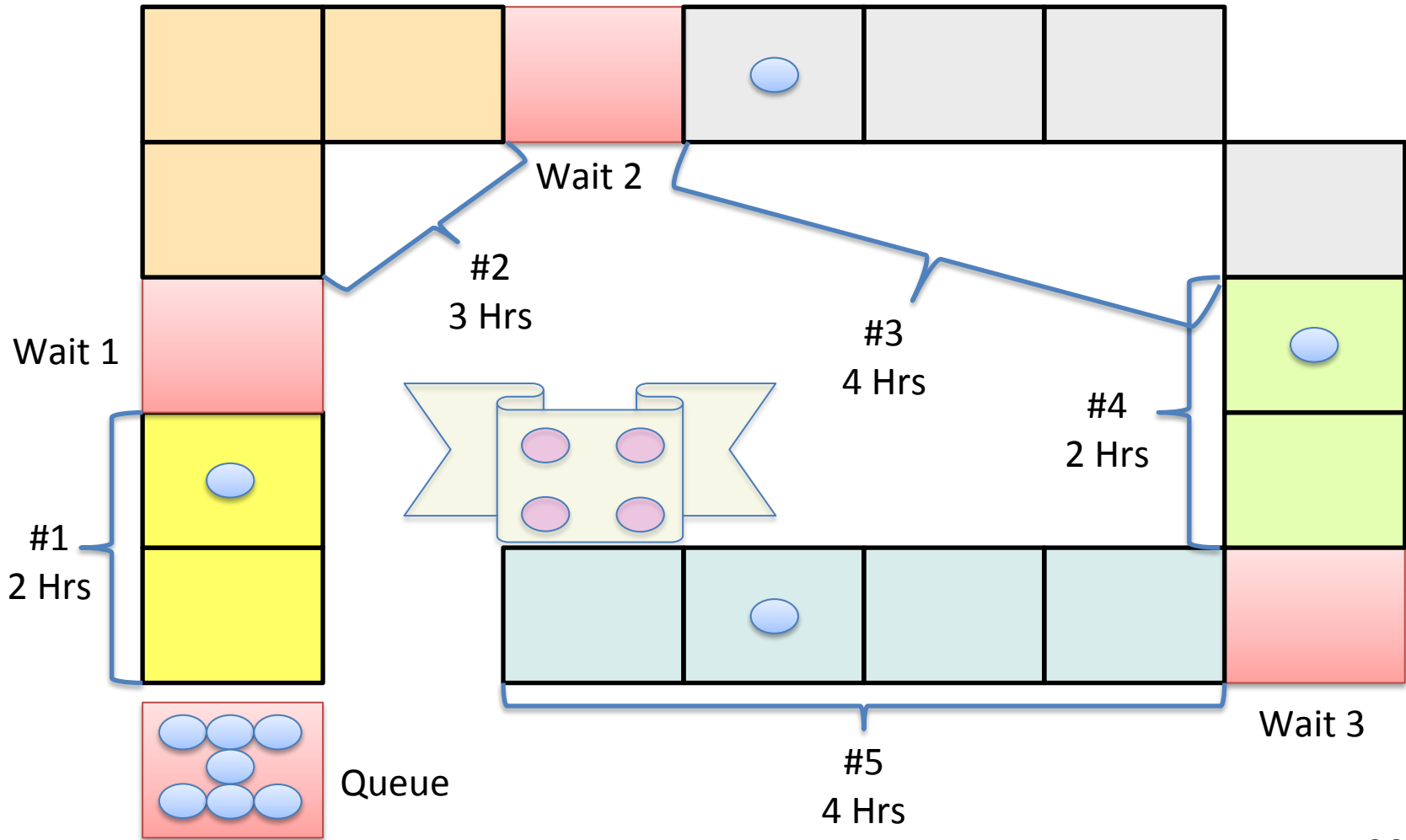
Hour 27



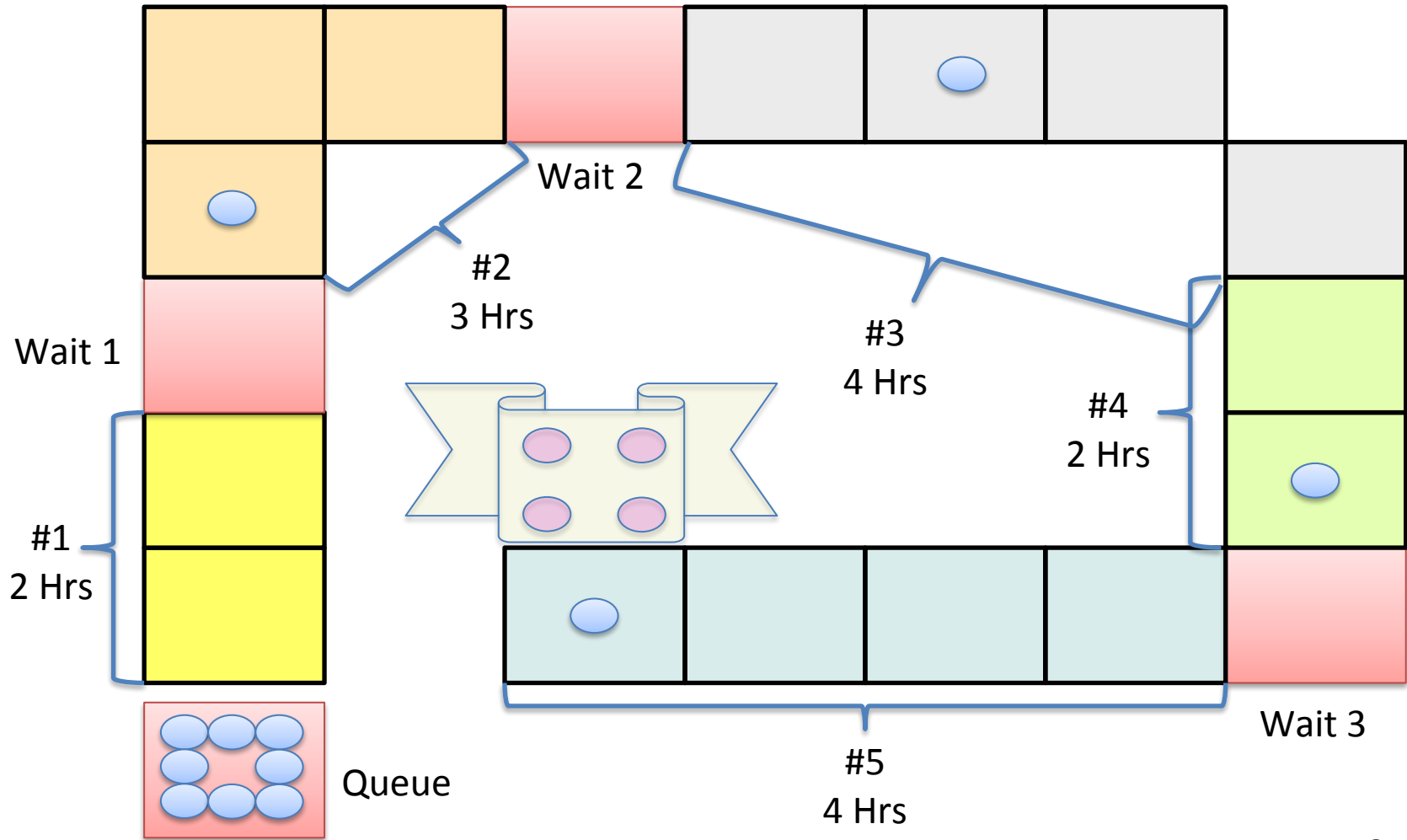
Hour 28

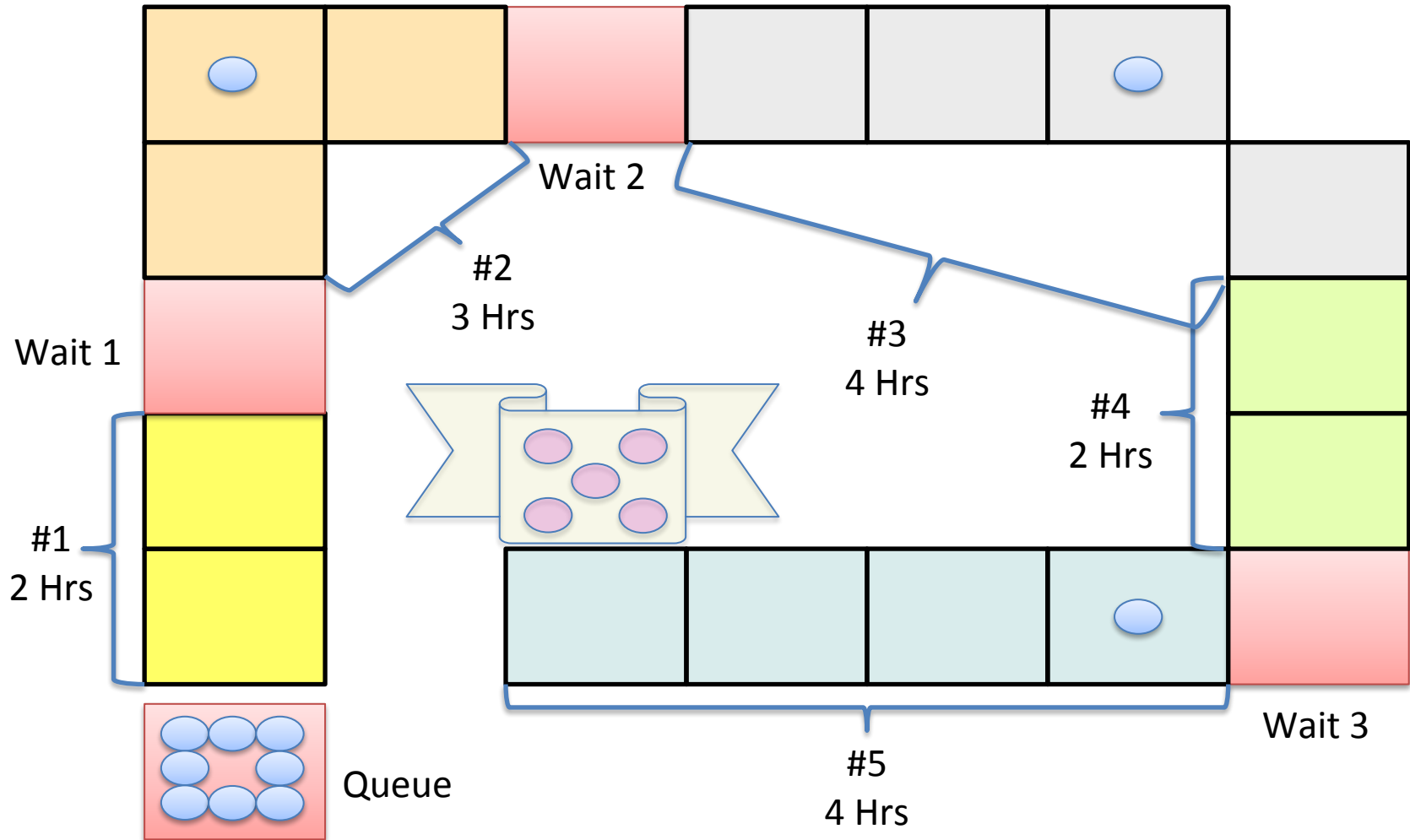


Hour 29

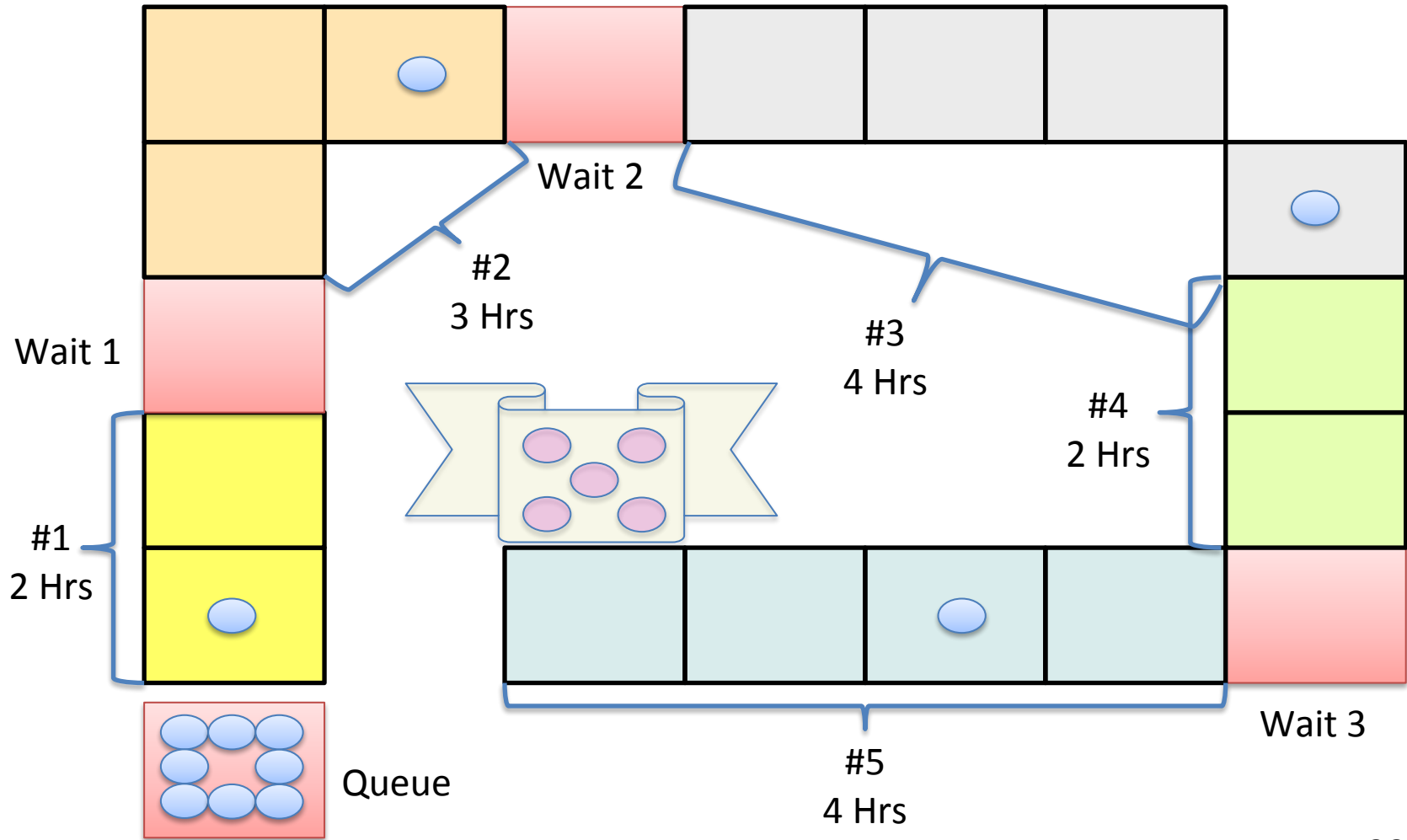


Hour 30

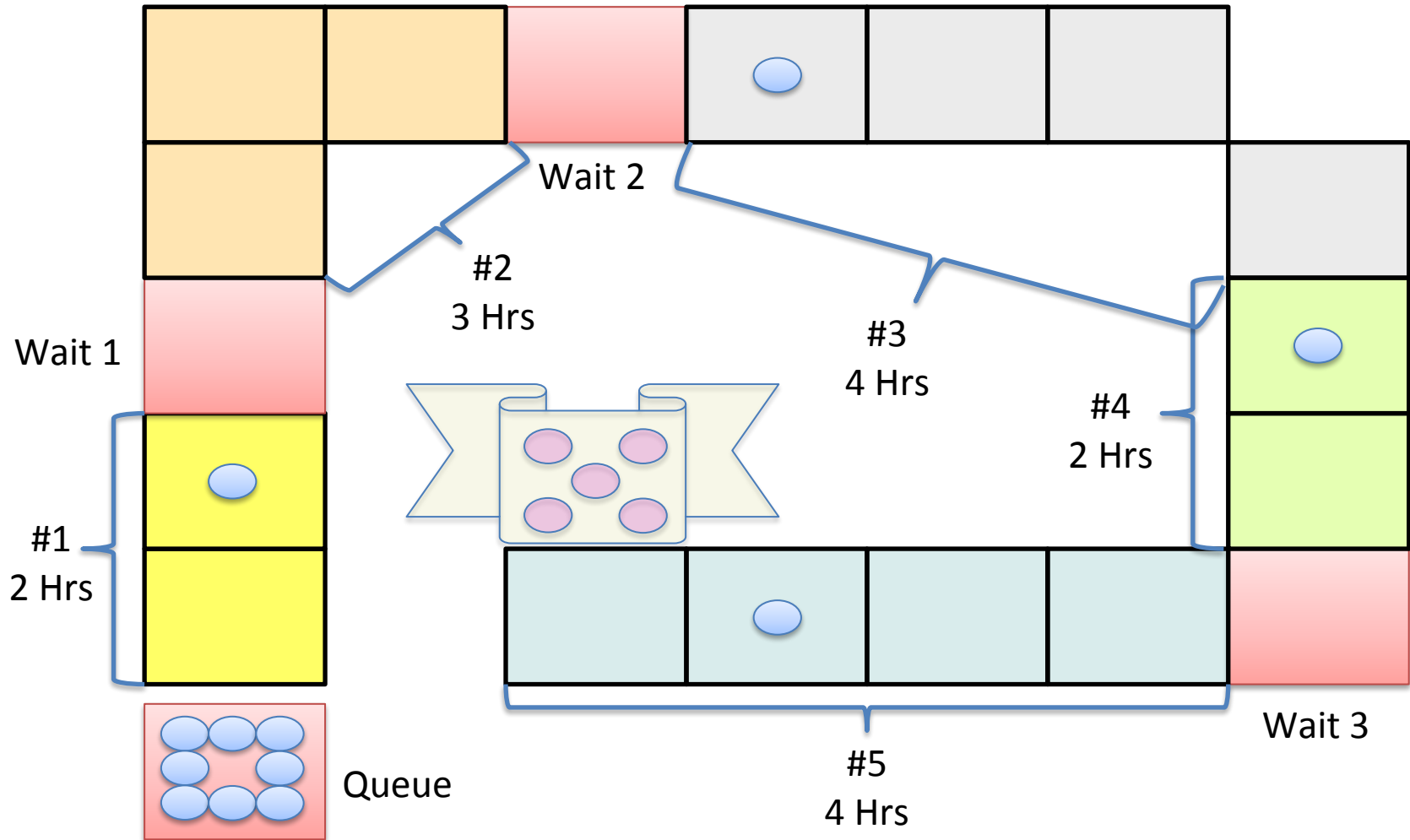




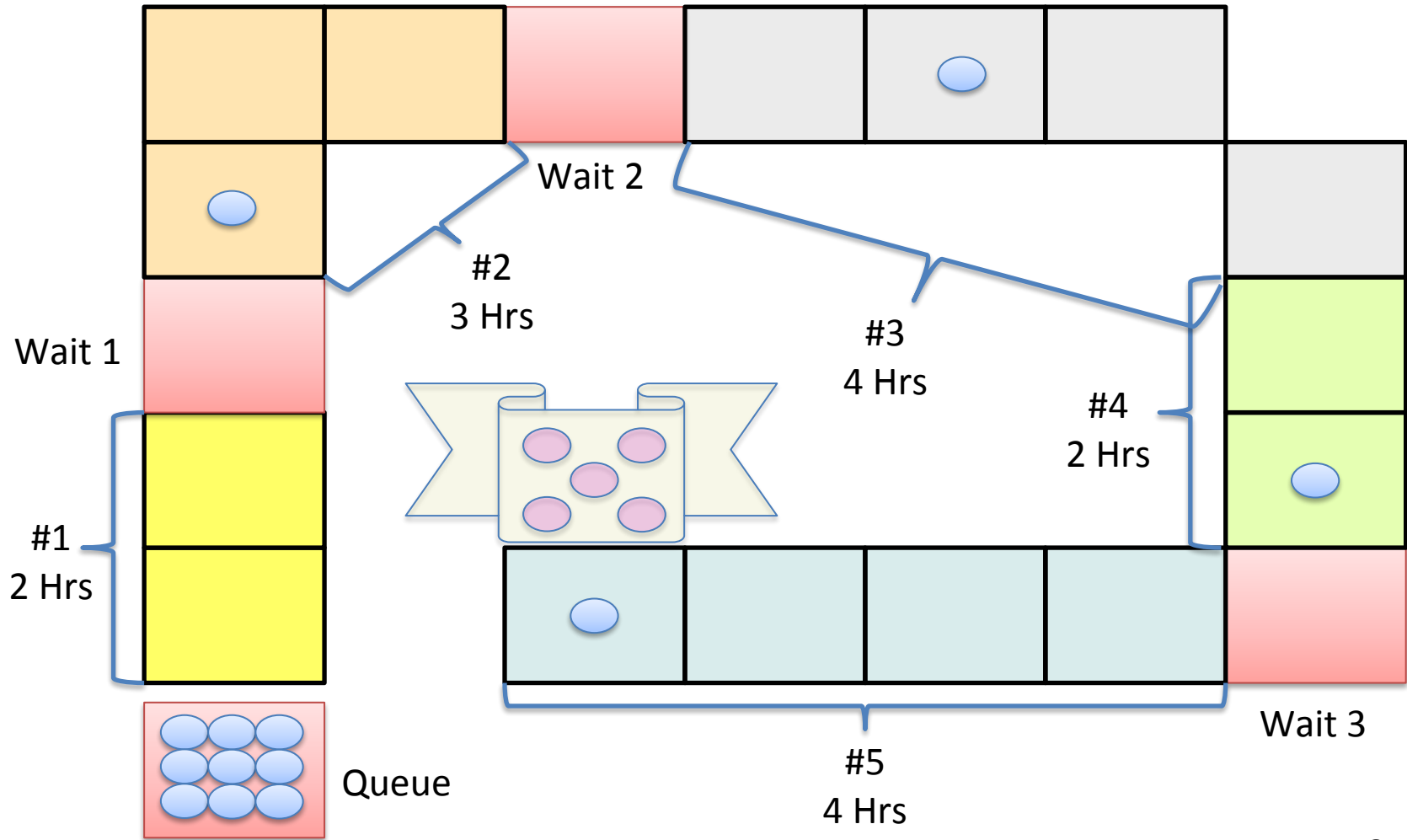
Hour 32



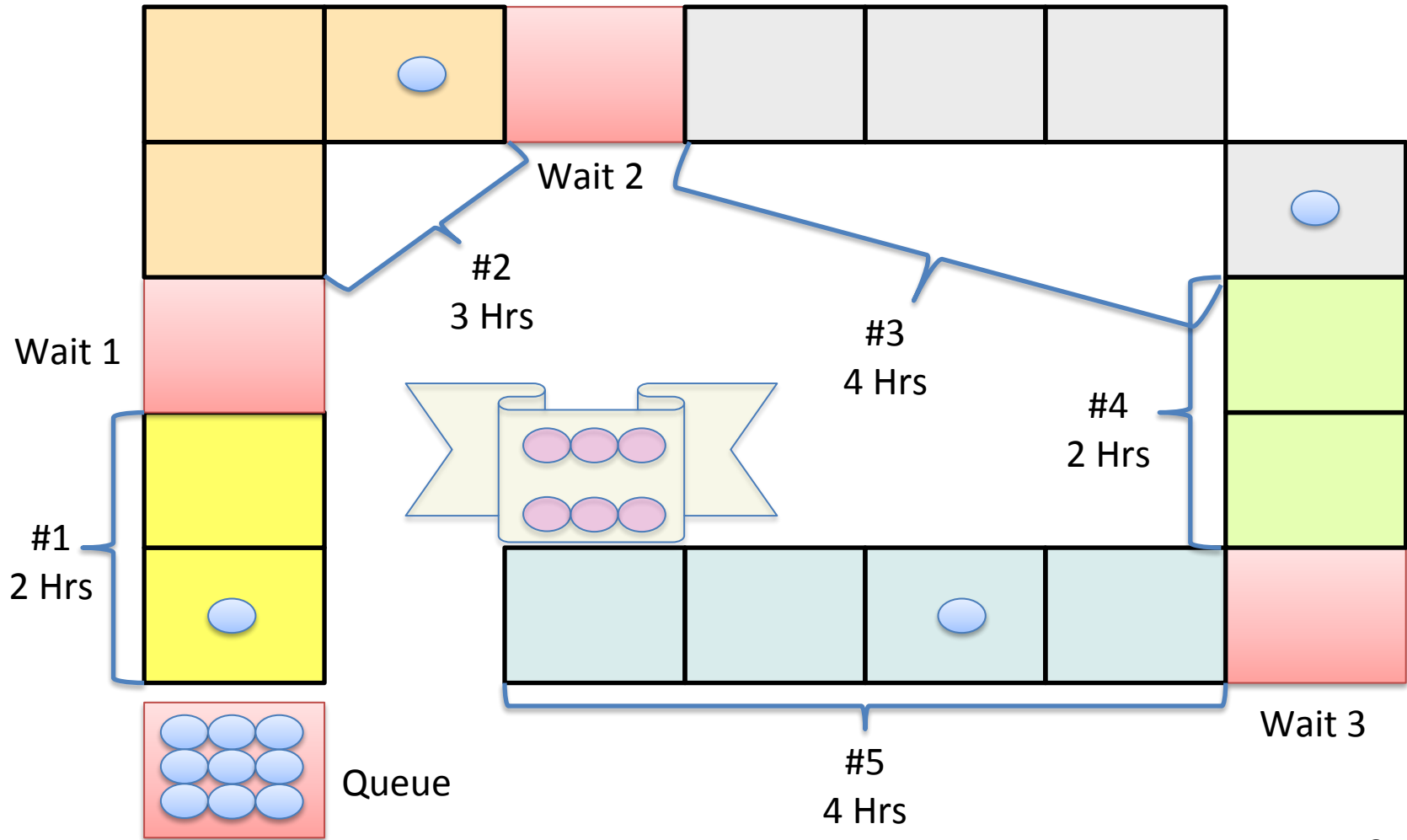
Hour 33

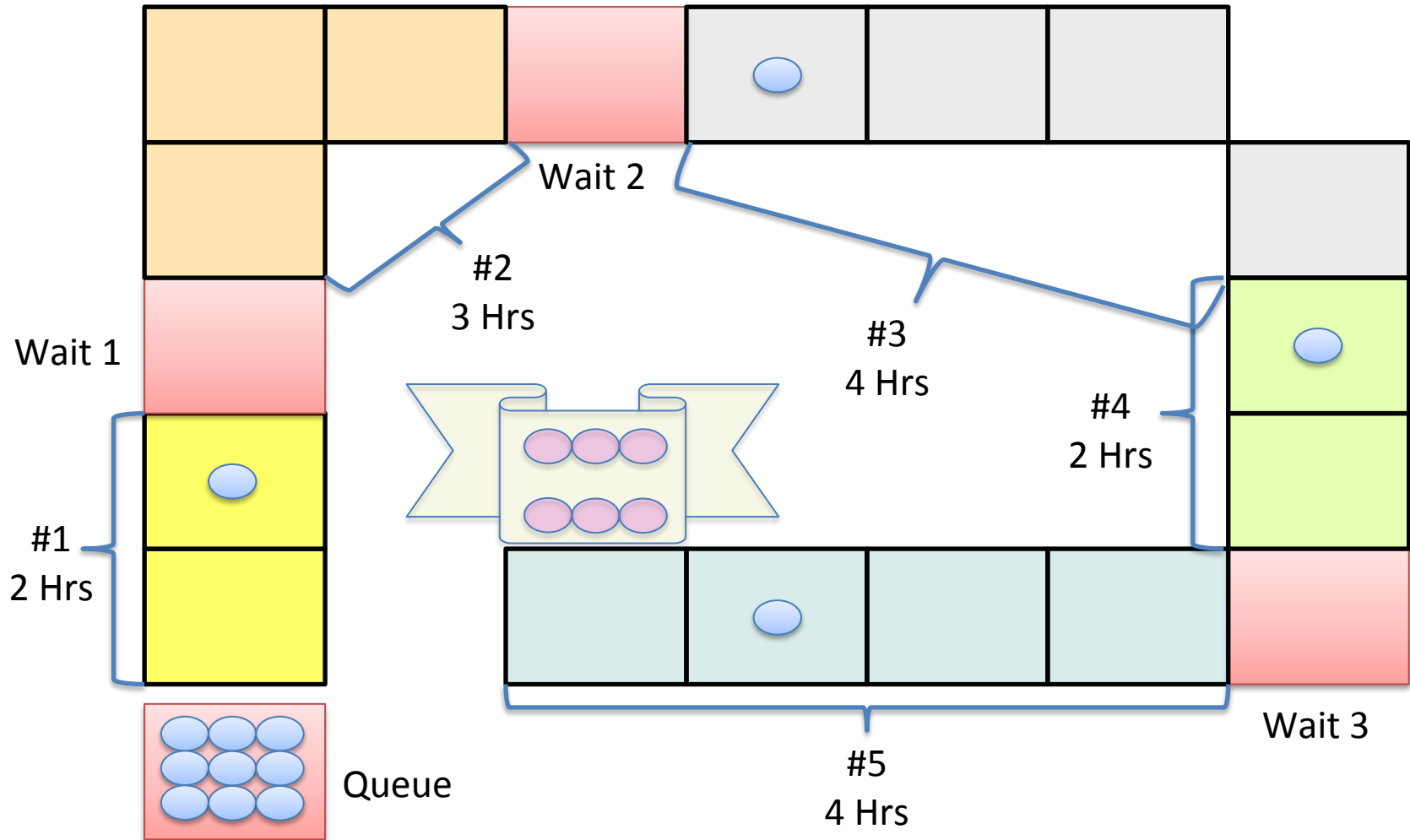


Hour 34

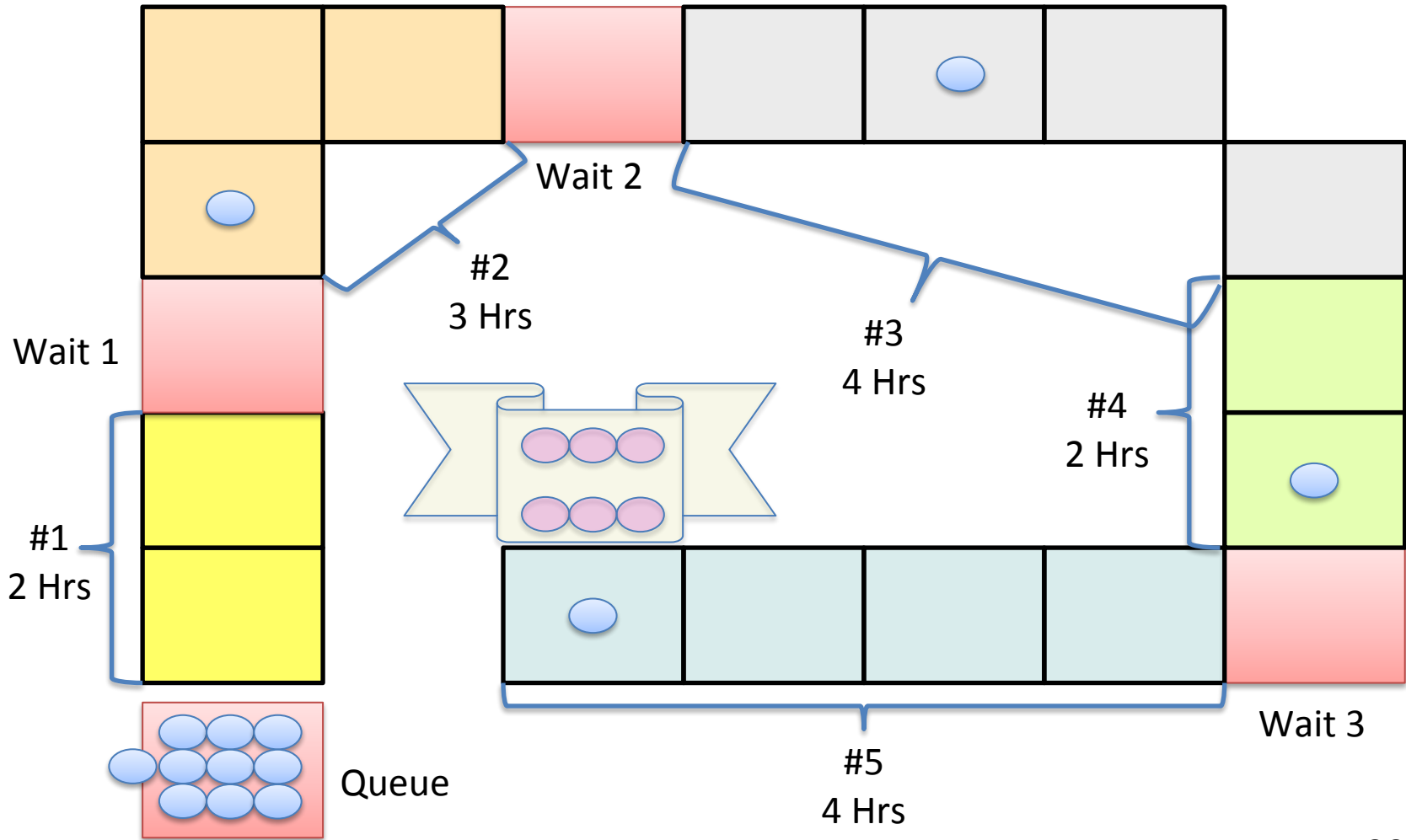


Hour 35

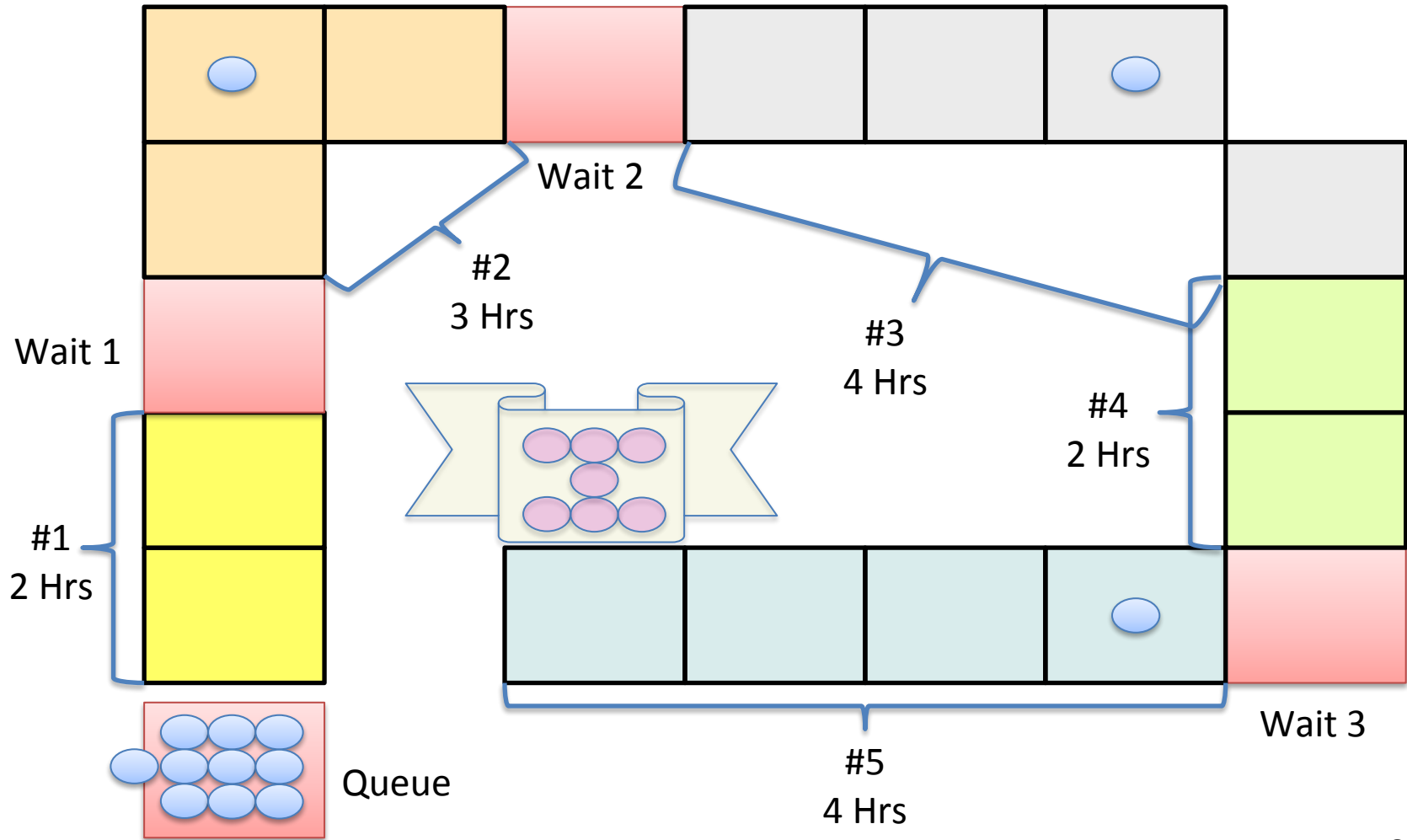


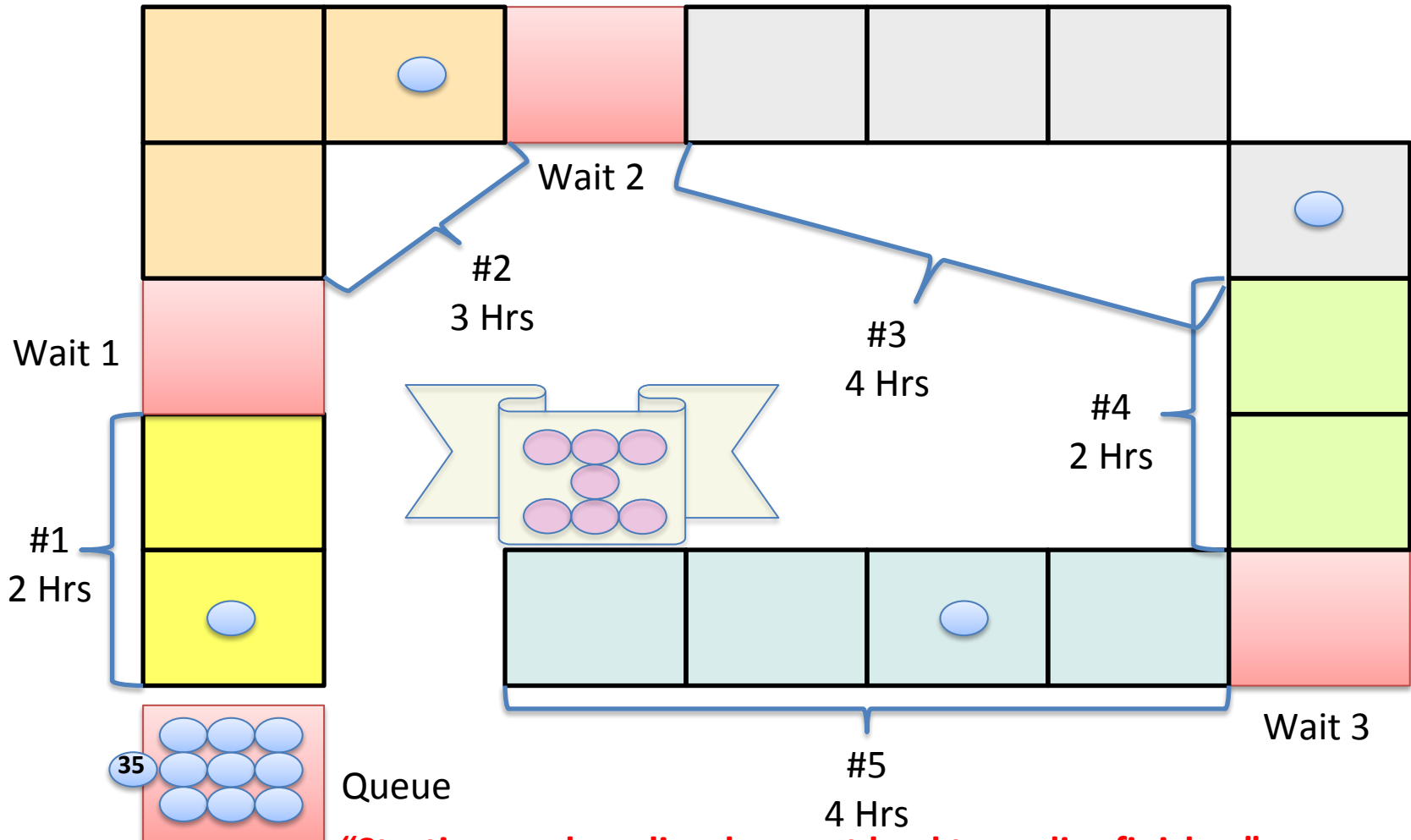


Hour 38



Hour 39





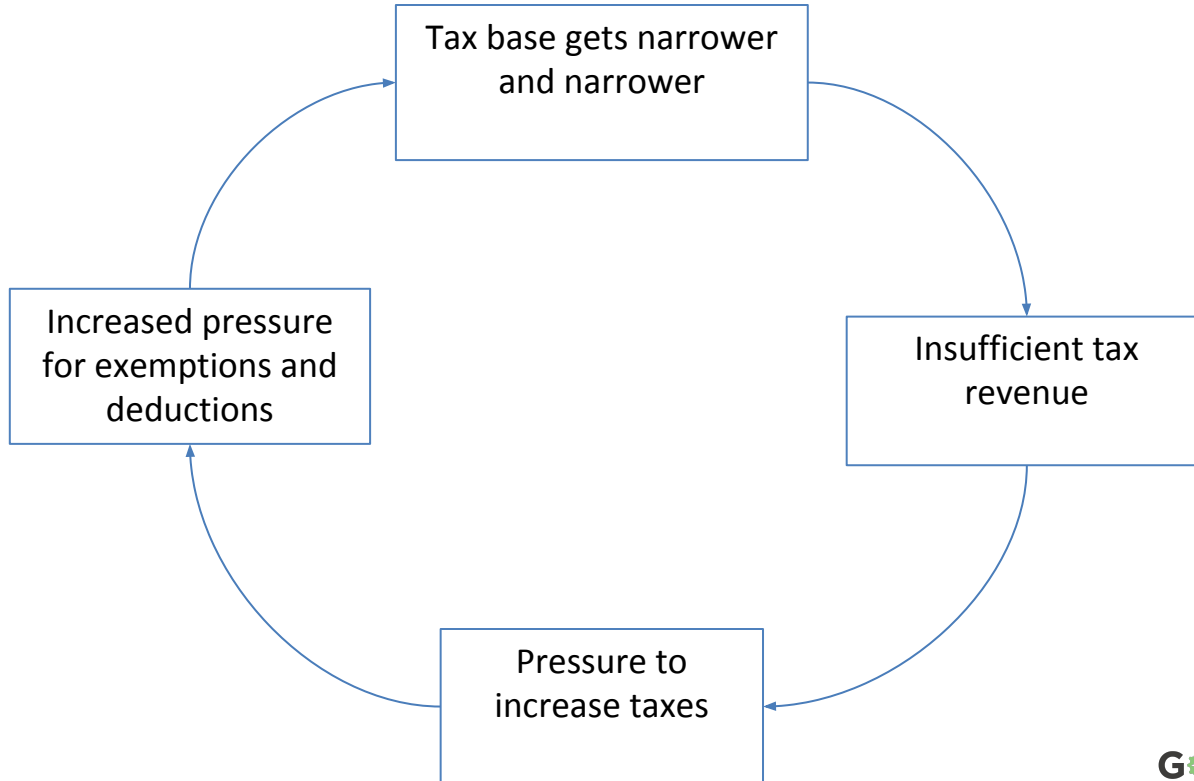
Starting work earlier does not lead to earlier finishes

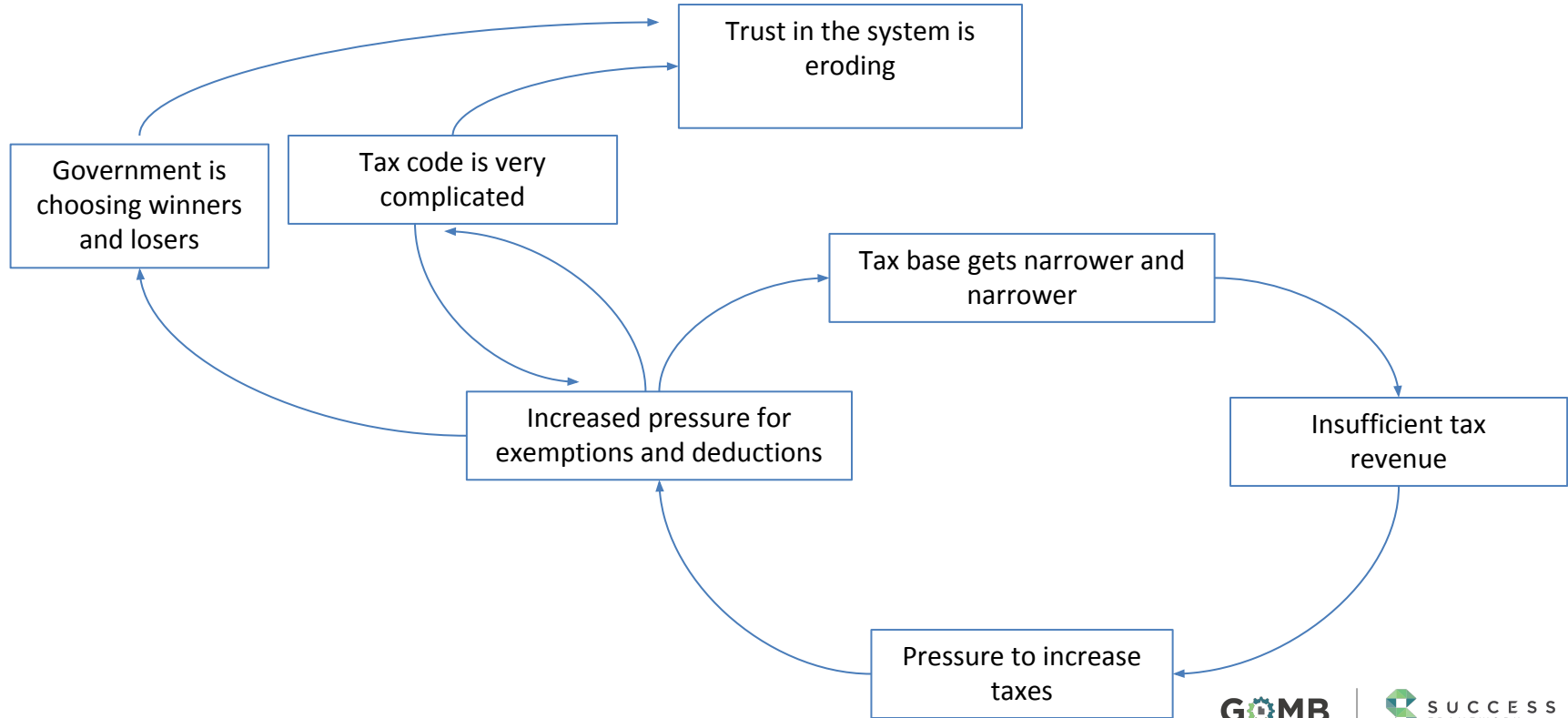
In the second example:

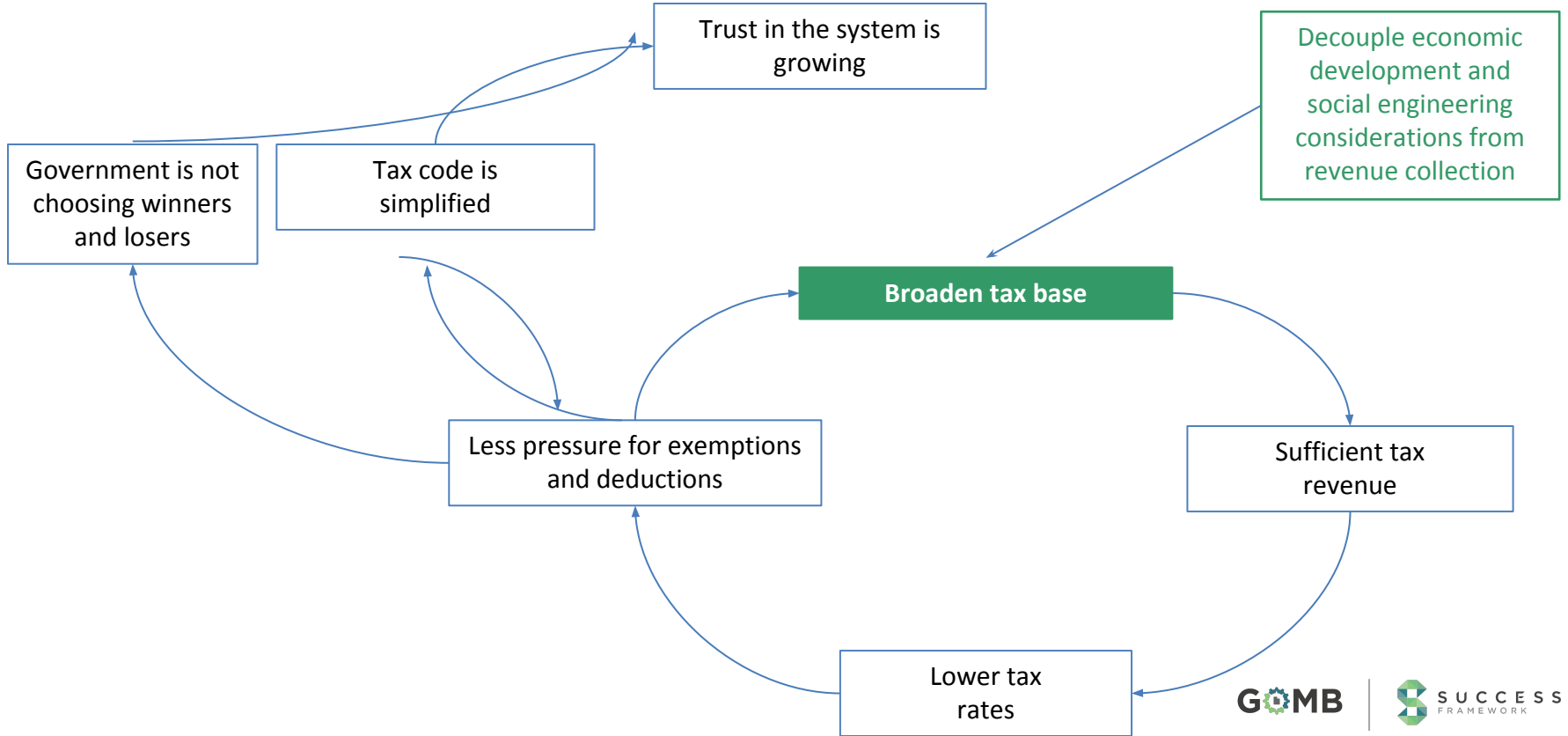
- Total fixed costs are unchanged at \$12,000 per week
- The throughput rate is one unit every four hours or 10 units per week (40 / 4)
- The cost per unit is \$1,200 ($\$12,000 / 10$) - \$600 less per unit

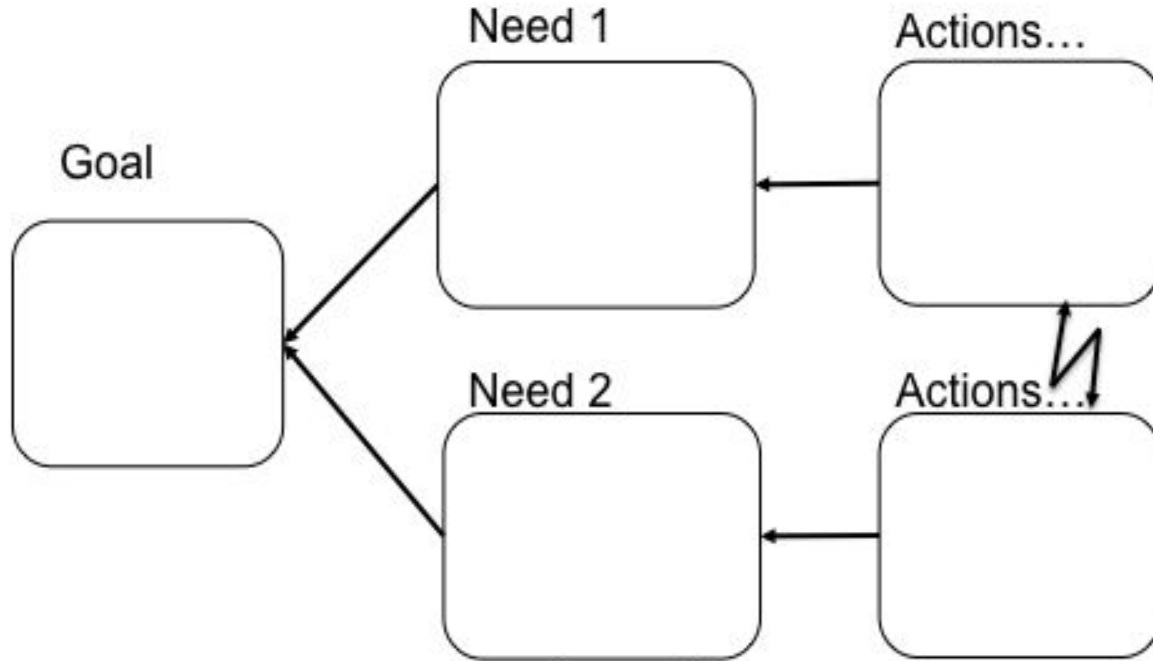
If the backlog in the queue is seasonal (temporary) then it will be absorbed in time. If it's a new trend, additional resources may be necessary; however, only add staff if throughput increases.

- Pressure to increase taxes
- Tax base is getting narrower and narrower
- Insufficient tax revenue
- High administrative cost for government, businesses, and individuals
- Tax code is very complicated
- Government is choosing winners and losers
- Trust in the system is eroding
- Some perceive an unfair playing field











Be sure to attend the
Breakthrough Results for Government and Business Conference

September 7 - 8, 2017

Grand America Hotel
Salt Lake City, Utah

Register at: utahexcellence.com