

Homework #1: Place answers on this sheet

1. What is the pour rate in vertical feet per hour and what is the minimum time spacing of the concrete trucks needed to maintain your production rate given the following parameters:
  - Wall is 660'-0" (perimeter of foundation), 14' high, and 10" thick.
  - You are using a concrete pump that has a maximum output of 1,440 yds<sup>3</sup> / per 8 hours
  - Concrete trucks have a 10 yard capacity, and a cycle time of 40 minutes
  - Your placement crew can place concrete at a rate of 850 yds<sup>3</sup> / per 10 hours
  
2. What is the total time to complete the pour given the following parameters:
  - Wall is 4' tall (top of wall 6" above grade, but accessible to Georgia buggies) and 10" thick, and surrounds a foundation that is 75'-0" long by 65'-0" wide.
  - Georgia buggy capacity is 21 ft<sup>3</sup>
  - The cycle time for a Georgia buggy is an average of 2 minutes
  
3. What is the lateral pressure on a 13' tall wall, placed at 2' per hour, a concrete weight per cubic foot of 158 lbs and a chemical coefficient of 1.4 and a temperature of 67 degrees?
  
  
  
  
  
  
  
  
  
  
4. What is the lateral pressure on a 20' tall wall, placed at 8' per hour, a concrete weight per cubic foot of 133 lbs and a chemical coefficient of 1.0 and a temperature of 84 degrees?
  
  
  
  
  
  
  
  
  
  
5. What is the lateral pressure on a 12' tall wall, placed at 12' per hour, a concrete weight per cubic foot of 150 lbs and a chemical coefficient of 1.2 and a temperature of 70 degrees?