

**A. Losing Iron,** computing an “emerging” factor

*Constitution* settled in the water from the weight of her armaments, but the opposite occurred when she fired rounds of shot. She “lost weight.” (a) Use the information below to find out how much her hull rose in the water after each round she fired. (Not all of the information provided is relevant.) (b) How many rounds would she have to fire for her hull to rise 1 inch?

1. *Constitution* carried 130 cannon balls per gun in wartime
2. In this case, to fire a round means each cannon was fired once
3. Powder weighed about  $\frac{1}{3}$  of the ball weight, except for 24s, where the powder weight was  $\frac{1}{4}$
4. Use the number of cannon provided in the lesson
5. *Constitution*'s immersion factor is 1 inch per 10 tons

Calculations:

