

Stat 539 Spring 2006
Homework 5 due March 2

1. Thrombocytopaenia is a condition of abnormally low platelets that often occurs during necrotizing enterocolitis (NEC) - a serious illness in infants that can cause tissue damage to the intestines. Ragazzi et al. investigated differences in the \log_{10} of platelet counts in 178 infants with NEC. Patients were grouped into four categories of NEC status. Group 0 referred to infants with no gangrene, group 1 referred to subjects in whom gangrene was limited to a single intestinal segment, group 2 referred to patients with two or more intestinal segments of gangrene, and group 3 referred to patients with the majority of small and large bowel involved. The \log_{10} platelet counts for these subjects are in [this Excel spreadsheet](#).

Determine with appropriate statistical methods what group differences appear to be present.

2. The nursing supervisor in a local health department wished to study the influence of time of day on length of home visits by the nursing staff. It was thought that individual differences among nurses might be large, so the nurse was used as a blocking factor. The nursing supervisor collected the following data:

Nurse	Length of Home Visit by Time of Day			
	Early Morning	Late Morning	Early Afternoon	Late Afternoon
A	27	28	30	23
B	31	30	27	20
C	35	38	34	30
D	20	18	20	14

Do these data provide sufficient evidence to indicate a difference in length of home visit among the different times of day? Do nurses appear to differ?