

### In-class exercise 14

Consider the data  $(1,0.5)$ ,  $(2,2.5)$ ,  $(3,2)$ ,  $(4,4)$ ,  $(5,3.5)$ ,  $(6,6)$ ,  $(7,5.5)$ . Consider a model of the form:

$$y = a_1 + a_2x + a_3 \cos(\pi x)$$

Find the coefficients  $a_1, a_2, a_3$  that would give the best fit to the data.