

Q1. A coin is tossed 100 times. It comes down heads 40 times, tails 60 times. Is it biased?

Q2. 100 male rats and 100 female rats are tested on an up/down jumping stand. 40 of the males jump up, and 60 down. Only 16 female jump up, and 84 down. Is this good evidence that females jump down more than males?

Q3. In January 2007 there will be 7,000 road accidents in Cambridge. 1,643 of them will happen on Sundays. Will this be good evidence that accidents tend to happen on Sundays more than on other days?

Q4. A die is rolled 342 times. The various sides appear with the following frequencies. Is it biased?

1	2	3	4	5	6
53	48	75	49	60	57

Q5. Samples from three strains of giraffe, with 80 giraffes in each sample, were divided into four groups on the basis of ophthalmoscopic measurements of their refractive errors. The numbers in each group are shown below. Is there any evidence that the strains differ in the relative frequencies of different refractive errors (including Normal)?

	Short-sighted	Long-sighted	Astigmatic	Normal
Strain A	5	7	23	45
Strain B	13	17	30	20
Strain C	10	5	15	50