

## NCEA Level 2 Mathematics (Statistics)

1. A newspaper reports the probability that a certain airline's flights arrive on time.
  - (a) Which of these is it:  $-6.86$ ,  $-0.686$ ,  $0.686$ , or  $6.86$ ?
  - (b) Was the probability based on equally likely outcomes, a long-run set of observed outcomes, or subjective assessment?
2. In the ANA online Health and Safety Survey of 2001, several thousand nurses reported the usual length of the shift they worked at their main job. What is the probability that one of these nurses worked a 12-hour shift?

Less than 8 hours	5.0%
8 hours	47.0%
10 hours	20.0%
12 hours	?%
More than 12 hours	22.0%

3. In a large group of high school students, the probability of having siblings is 0.95. What is the probability of being an only child?
4. In a large group of New Zealanders in 2001-2002, the probability of visiting a doctor's office in the past 12 months was 0.7. For two randomly chosen NZers in 2001-2002, what is the probability of at least one of them (i.e. either the first and not the second, or the second and not the first, or both) visiting a doctor that year?
5. A statistics teacher sets up a two-way table of counts for all 2,000 students in her history of teaching, keeping track of gender and whether or not a student received an E. The table shows that 1,200 were female, and that 500 out of all the students received an E. Overall, 300 female students received an E. Complete the table.

	E	not E	Total
Female			
Male			
Total			