



Problem of the Week

Problem B

Honesty - the Best Policy?

A reporter is doing interviews at a convention attended by 500 people.

- 40% of these people always tell the truth.
- 20 of them will always lie.
- The remaining people each sometimes tell the truth and sometimes lie.



- a) Suppose that she interviews a person at random.
- (i) As a fraction, what is the probability that the person always lies?
 - (ii) As a fraction, what is the probability that the person always tells the truth?
- b) Suppose she interviews Joe Public, a person at the convention. The last time she interviewed him, he only told her the truth, so she knows he must be a person who always tells the truth or a person who sometimes tells the truth and sometimes lies. What is the probability that Joe Public always tells the truth?