

Card Game

Mrs Jakeman is teaching her class about probability. She has ten cards, numbered 1 to 10, which she mixes up and stands on a shelf turned so that the numbers do not show.



Mrs Jakeman turns the cards round on at a time. The class has to guess whether the next card will have a higher number than the last one turned or a lower number.

The first card turned is the 3.



1. Would you expect the next number to be higher than 3 or lower?

Explain why you made this decision.

The next card is number 10.



2. What is the probability that the next card will be a higher number?

Explain how you know.

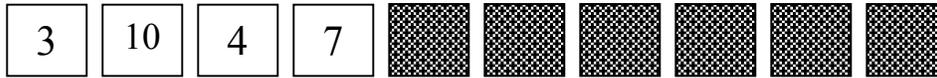
The next card is number 4.



3. What is the probability that the next number is higher?

Show your work.

The next card is number 7.



4. What is the probability that the next number is lower?

Show your work.

The fifth card is the 1.



When the sixth card is turned the probability that the following one is higher is the same as the probability that it is lower.

5. What must the sixth card be?

Explain how you worked it out.