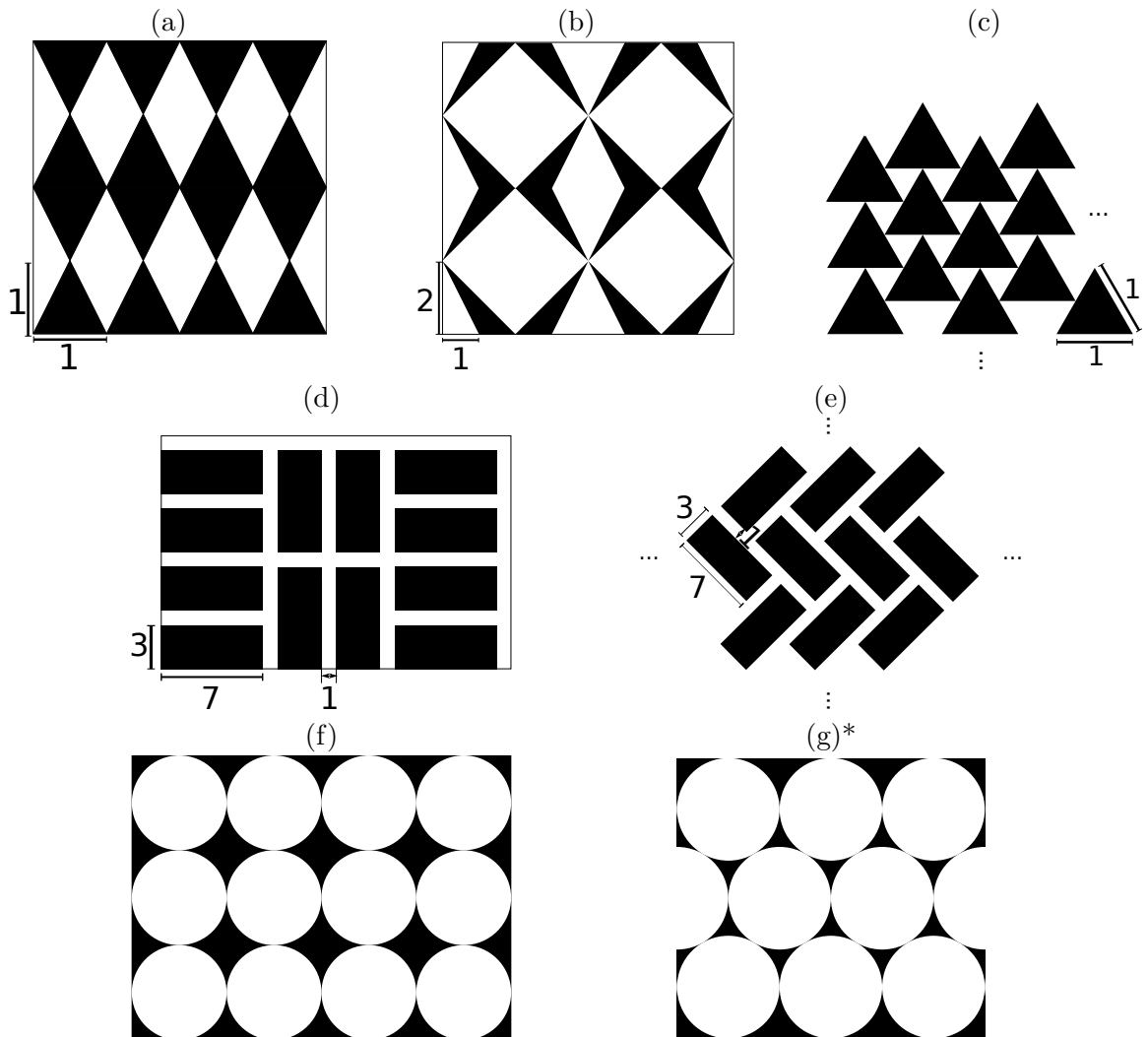# Example sheet

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1. Investigate together with your tutor whether spinning a 2 pence coin is a fair way of generating random binary outcome.

2. A small pebble is randomly dropped on the floor, which is painted in black and white according to a particular pattern. For each of the patterns below, compute the probability that the pebble lands in a black region.

3. Suppose that you would like to generate random outcome by dropping a pebble on the floor. How can you paint the floor to have

   (a) 2 possible outcomes: one with probability $\frac{1}{3}$ and one with probability $\frac{2}{3}$?

   (b) 3 equally probable outcomes?

   (c) 6 equally probable outcomes?