Problem of the Week

Problem E

Dot Remover

Manfred has six cards. One card has 2 dots on it, one card has 3 dots on it, one card has 4 dots on it, one card has 5 dots on it, one card has 6 dots on it, and one card has 7 dots on it.

Manfred removes one of the dots at random, with each of the 27 dots equally likely to be removed. Esther then randomly chooses one of the cards, with each card equally likely to be chosen.

What is the probability that the card chosen by Esther has an odd number of dots on it?