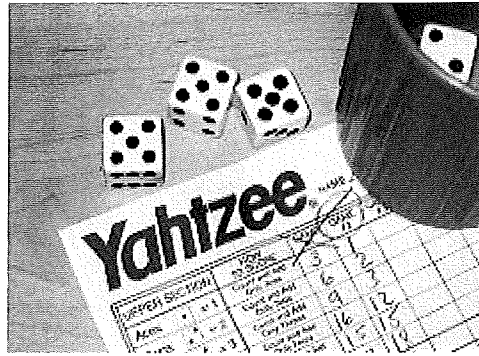# Yahtzee!

The game of Yahtzee is played with 5 dice. A Yahtzee is when all five dice are rolled and show the same number in a single roll.

What is the probability of rolling a Yahtzee in a single roll?
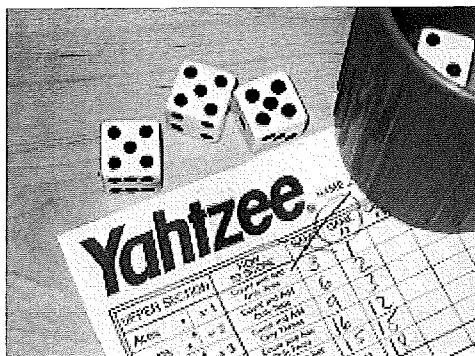
Yahtzee!

The game of Yahtzee is played with 5 dice. A Yahtzee is when all five dice are rolled and show the same number in a single roll.

What is the probability of rolling a Yahtzee in a single roll?

SOLUTION

Probability of rolling five "sixes" in one roll

$$\frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{1}{7776}$$

Since there are 6 possibilities for rolling a yahtzee (1,2,3,4,5 or 6), multiply the probability by 6.

$$6 \times \frac{1}{7776} = \frac{1}{1296} = 0.00077$$
$$\approx 0.08\%$$