

Name: _____

Solutions

In a simplified game of craps, you make a bet of \$1 and roll two dice.

- If the sum of the numbers on the dice is 2, 3 or 12, you lose the \$1.
- If the sum of the numbers on the dice is 7, you win and get your \$1 bet back, and an additional \$1.
- In any other case, you receive your \$1 bet back.

- (1) What is the probability you lose your \$1 bet?
- (2) What is the probability you win and get the extra \$1?
- (3) What is the probability you break even and just get your bet back?

$$1) \quad \frac{4}{36} = \frac{1}{9}$$

$$2) \quad \frac{6}{36} = \frac{1}{6}$$

$$3) \quad 1 - \frac{1}{9} - \frac{1}{6} = \frac{36 - 4 - 6}{36} = \frac{26}{36} = \frac{13}{18}$$