

# 8A.11 Learning Opportunity



Name: \_\_\_\_\_

SAT prep: Probability

## SAT Problem

- 1) Two players in a baseball team are to be selected as a pitcher and catcher. If there are 15 players in the team, how many different outcomes are possible?

- (A) 5
- (B) 15
- (C) 30
- (D) 210
- (E) 225

- 2) **SAT Problem**

In a class of 20 boys and 15 girls, 10 boys and 8 girls speak more than one language.

If a representative for student council is to be chosen at random from the class, what is the probability that the representative will be a boy who speaks more than one language?

- (A)  $\frac{10}{18}$
- (B)  $\frac{10}{20}$
- (C)  $\frac{2}{7}$
- (D)  $\frac{8}{35}$
- (E)  $\frac{10}{30}$

- 3) **SAT Problem**

Ten members registered as a team for a math contest. If one hand shake is made between every two members, which of the following could be the total number of hand shakes in the team?

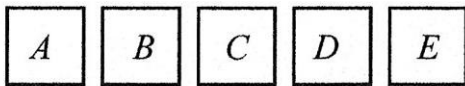
- (A) 45
- (B) 50
- (C) 75
- (D) 100
- (E) 120

**SAT Problem**

4) If each of 8 boys played a game of chess with each of 6 girls, and then each girl played a game with each of the other girls, which of the following could be the total number of games played?

- (A) 63
- (B) 65
- (C) 69
- (D) 75
- (E) 78

5) **SAT Problem**



If the five cards shown above are placed in a row so that cars  $B$  and  $C$  must be next to each other, how many different arrangements are possible?

- (A) 24
- (B) 36
- (C) 48
- (D) 72
- (E) 120

6) **SAT Problem**

$$\text{Set } A = \{0, 1, 2, 3\}$$

$$\text{Set } B = \{4, 5, 6\}$$

If  $a$  is any element from set  $A$  and  $b$  is any element from set  $B$ , how many different values are possible for  $\frac{a}{b}$ ?

- (A) 8
- (B) 9
- (C) 11
- (D) 12
- (E) 13