

Example 11. There are 100 5th graders in Hope Middle School. 58 like English, 38 like Math, and 52 like Spanish. 6 students like Math and English only (not Spanish), 4 students like Math and Spanish only (not English), and 12 students like all three subjects. Each student likes at least one subject. How many students only like English?

- (A) 18 (B) 19 (C) 24 (D) 25 (E) 26

☆ **Example 12.** (AMC 10) How many numbers between 1 and 2005 are integer multiples of 3 or 4 but not 12?

- (A) 501 (B) 668 (C) 835 (D) 1002 (E) 1169

Example 14. 8th grade classes are surveyed. 78% of the students like swimming, 80% like computer games, 84% like playing chess and 88% like reading books. At least how many percent of students like all four activities?

- (A) 30 (B) 66 (C) 83 (D) 12 (E) 22

☆ **Problem 12.** How many numbers between 1 and 2015 are integer multiples of 3 or 5 but not 15?

- (A) 403 (B) 671 (C) 835 (D) 268 (E) 806

Problem 17. Every camper at camp EKO is required to take exactly two of the three crafts classes offered. One summer, 47 campers took basket weaving, 59 took cabinet making, and 34 took pottery. How many campers attended camp EKO that summer?

- A) 70 (B) 48 (C) 60 (D) 30 (E) 16

Problem 19. There are 52 students in a class. 30 of them can swim. 35 can ride bicycle. 42 can play table tennis. At least how many students can do all three sports?

- A) 7 (B) 8 (C) 6 (D) 3 (E) 30