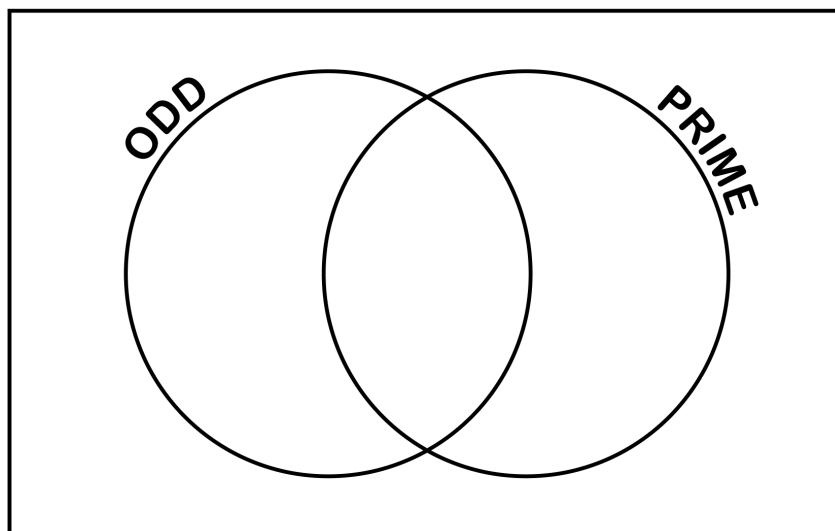
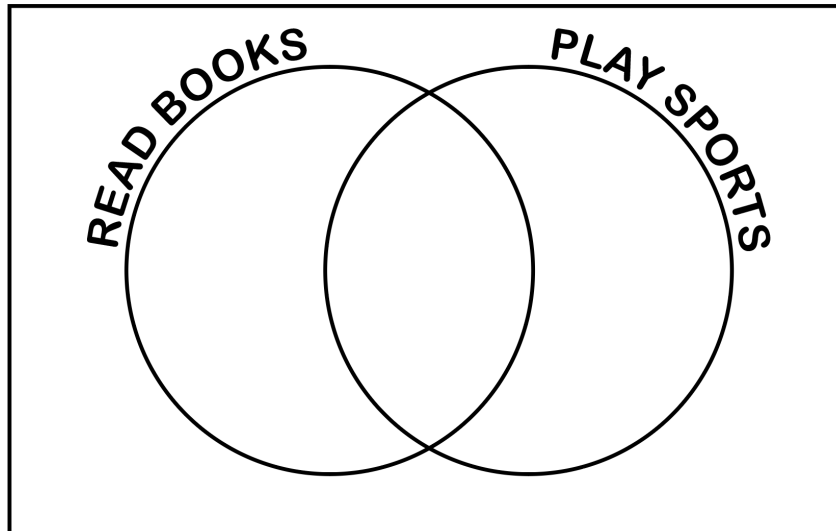


1. The following numbers are in the set $S = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\}$. Complete the following Venn diagram for the numbers in set S:



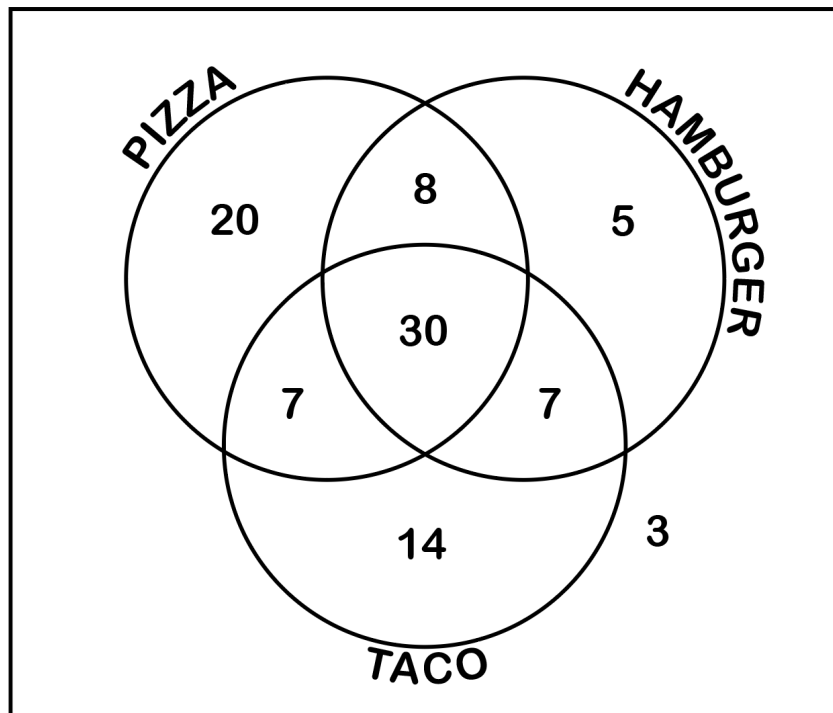
2. In a class of 30 students, 20 love to play sports, 15 love to read books, and 11 love sports and reading books.

a) Complete the Venn diagram



- b) How many students love to read books but don't love to play sports?
- c) How many students do not love to play sports?
- d) How many students do not love to play sports and do not love to read books?
- e) How many students love to play sports or love to read books?

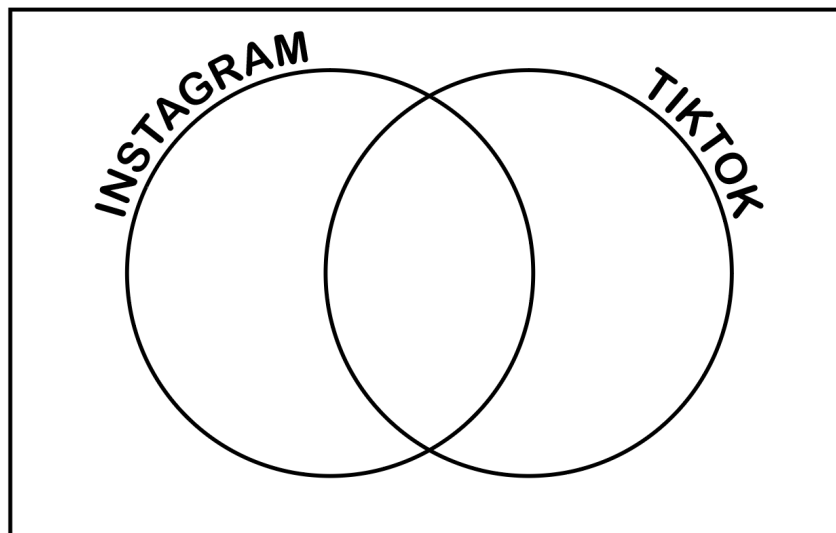
3. People were asked which of three foods they loved. Some people loved more than one type of food and some didn't like any of the three types of food. The results of the survey are show below in a Venn diagram:



- a) How many people liked tacos?
- b) How many people liked pizza and tacos?
- c) How many people liked pizza or tacos?
- d) How many people liked pizza, tacos, and hamburgers? (i.e. "the correct answer")
- e) How many people liked pizza and hamburgers, but didn't like tacos?
- f) How many people didn't like hamburgers?

4. A study in 2023 showed that 59% of U.S. teenagers use Instagram, 62% of teenagers use Tiktok, and 50% use both. Suppose we randomly select a U.S. teenager at random.

- a) Complete the Venn diagram to model this situation



- b) What percent of U.S. teenagers use instagram?
- c) What percent of U.S. teenagers use Instagram or Tiktok?
- d) What percent of U.S. teenagers use Instagram but not Tiktok?
- e) What percent of U.S. teenagers don't use Tiktok?
- f) What percent of U.S. teenagers don't use Tiktok or Twitter?