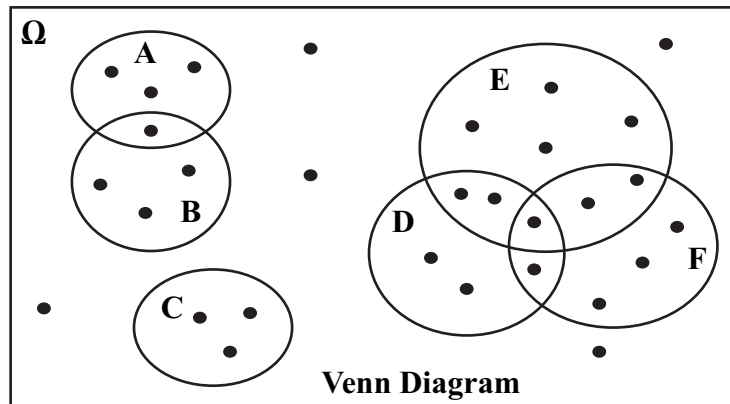


# Functions Worksheet 7 - Answers



In the Venn diagram above (Figure 1), each dot represents a possible outcome. Use the diagram to answer questions 1-5.

1. What is  $P(A \text{ or } B)$ ?

$$\frac{7}{30}.$$

2. What is  $P(A \text{ or } C)$ ?

$$\frac{7}{30}.$$

3. What is  $P(D \text{ or } F)$ ?

$$\frac{11}{30}.$$

4. What is  $P(C \text{ or } D)$ ?

$$\frac{9}{30}.$$

5. What is  $P((D \text{ and } E) \text{ or } F)$ ?

$$\frac{9}{30}.$$

The probabilities for the Venn diagram are  $P(A) = \frac{4}{30}$ ,  $P(B) = \frac{4}{30}$ ,  $P(C) = \frac{3}{30}$ ,  $P(D) = \frac{6}{30}$ ,  $P(E) = \frac{9}{30}$ , and  $P(F) =$

$\frac{7}{30}$ . Use the addition formula and additional information provided to answer questions 6-10. Verify your answers using the Venn diagram.

6.  $P(D \text{ and } E) = \frac{3}{30}$ . What is  $P(D \text{ and } E)$ ?

$$\frac{12}{30}.$$

7.  $P(C \text{ and } E) = 0$ . What is  $P(C \text{ or } E)$ ?

$$\frac{12}{30}.$$

8.  $P(E \text{ and } F) = \frac{3}{30}$ . What is  $P(E \text{ or } F)$ ?

$$\frac{13}{30}.$$

9.  $P(A \text{ or } B) = \frac{7}{30}$  and  $P((A \text{ or } B) \text{ and } C) = 0$ . What is  $P((A \text{ or } B) \text{ or } C)$ ?

$$\frac{10}{30}.$$

10.  $P(E \text{ and } F) = \frac{3}{30}$  and  $P(D \text{ and } (E \text{ and } F)) = \frac{1}{30}$ . What is  $P(D \text{ or } (E \text{ and } F))$ ?

$$\frac{8}{30}.$$