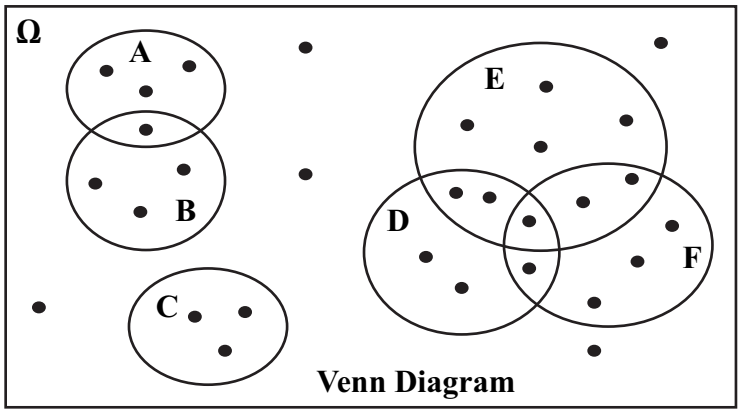
Functions Worksheet 7



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

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

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

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

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

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

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 $P(D \text{ and } E)$?

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

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

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

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