1. 1. In a town, 3/5 of residents read newspapers, 1/3 attend weekend classes, 1/4 jog daily, and 2/3 are over 25. Which statement must be true?  
   (A) Some residents over 25 read newspapers.  
   (B) Everyone who jogs daily is over 25.  
   (C) Exactly 1/9 of the town both read newspapers and attend classes.  
   (D) No resident under 25 reads newspapers.
2. 2. In a college, 7/10 use the library, 2/5 play a sport, 1/2 work part-time, and 3/4 live off-campus. Which must be true?  
   (A) At least one off-campus student plays a sport.  
   (B) Every sport player uses the library.  
   (C) Exactly 1/5 both work part-time and live off-campus.  
   (D) No on-campus student uses the library.
3. 3. In a village, 4/7 have smartphones, 3/8 own motorbikes, 1/2 cultivate paddy, and 5/6 are literate. Which must be true?  
   (A) Some literate villagers have smartphones.  
   (B) All smartphone users are literate.  
   (C) Exactly 3/28 have both motorbikes and cultivate paddy.  
   (D) Some illiterate villagers own motorbikes.
4. 4. In a firm, 3/4 know Excel, 2/3 know PowerPoint, 3/5 know SQL, and 1/2 have management diplomas. Which must be true?  
   (A) Some employees know both Excel and PowerPoint.  
   (B) Every SQL user has a management diploma.  
   (C) No diploma-holder knows PowerPoint.  
   (D) Exactly 1/5 know Excel and SQL.
5. 5. In a city, 2/3 commute by bus, 3/10 cycle, 1/4 carpool, and 3/5 shop online. Which must be true?  
   (A) Some online shoppers commute by bus.  
   (B) All cyclists shop online.  
   (C) Exactly 1/6 both commute by bus and carpool.  
   (D) No bus commuter cycles.
6. 6. In a school, 5/8 study mathematics, 1/3 study biology, 3/10 study history, and 3/4 participate in clubs. Which must be true?  
   (A) Some club participants study mathematics.  
   (B) All history students study biology.  
   (C) Exactly 1/24 study both math and biology.  
   (D) No club participant studies biology.
7. 7. In a federation, 3/5 are from Region A, 2/5 from Region B; independently, 2/3 speak Language X, 1/2 speak Language Y. Which must be true?  
   (A) Some Region A members speak Language X.  
   (B) All Language Y speakers are from Region B.  
   (C) Exactly 1/6 are from Region A and speak Language Y.  
   (D) No Region B member speaks Language X.
8. 8. Among households, 3/4 have internet, 1/2 have cable TV, 2/5 have a gaming console, and 1/3 have landlines. Which must be true?  
   (A) Some internet households lack cable TV.  
   (B) All console households also have cable TV.  
   (C) Exactly 1/10 have both console and landline.  
   (D) No landline household has internet.
9. 9. In a cohort, 4/9 take Course P, 2/3 take Course Q, 1/2 take Course R, and 5/6 have internships. Which must be true?  
   (A) Some interns take Course Q.  
   (B) All Course R students take Course P.  
   (C) Exactly 2/9 take both P and Q.  
   (D) No intern takes Course P.

10. In a survey, 7/12 prefer tea, 5/12 prefer coffee, 1/3 prefer juice, and 3/4 prefer snacks; preferences can overlap. Which must be true?  
(A) Some snack-preferrers also prefer tea.  
(B) No juice-preferrer prefers tea.  
(C) Exactly 1/12 prefer both coffee and juice.  
(D) All tea-preferrers prefer snacks.