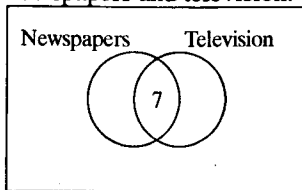
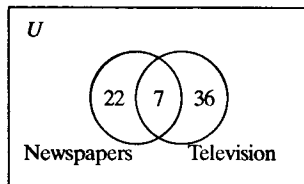


Math 106, Section 2.5 #43-48 Answer key

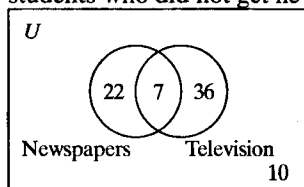
43. Begin by placing 7 in the region that represents both newspapers and television.



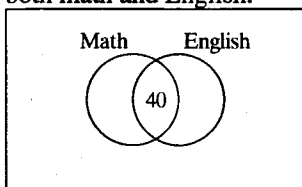
- a. Since 29 students got news from newspapers, $29 - 7 = 22$ got news from only newspapers.
 b. Since 43 students got news from television, $43 - 7 = 36$ got news from only television.



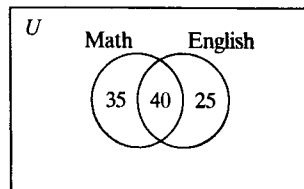
- c. $22 + 7 + 36 = 65$ students who got news from newspapers or television.
 d. Since 75 students were surveyed, $75 - 65 = 10$ students who did not get news from either.



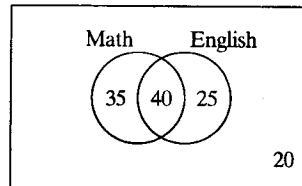
44. Begin by placing 40 in the region that represents both math and English.



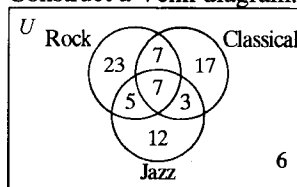
- a. Since 75 students registered for math, $75 - 40 = 35$ registered for only math.
 b. Since 65 students registered for English, $65 - 40 = 25$ registered for only English.



- c. $35 + 40 + 25 = 100$ students who registered for math or English.
 d. Since 120 students were surveyed, $120 - 100 = 20$ students who did not register for either.

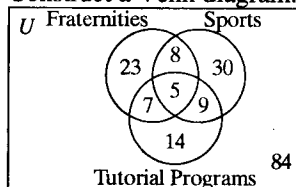


45. Construct a Venn diagram.



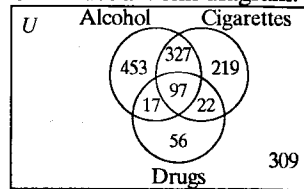
- a. 23
 b. 3
 c. $17 + 3 + 12 = 32$
 d. $23 + 17 + 12 = 52$
 e. $7 + 3 + 5 + 7 = 22$
 f. 6

46. Construct a Venn diagram.



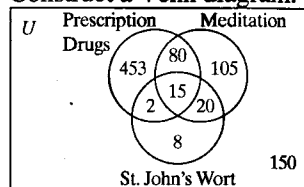
- a. 30
 b. 8
 c. $23 + 8 + 30 = 61$
 d. $23 + 30 + 14 = 67$
 e. $8 + 7 + 9 + 5 = 29$
 f. 84

47. Construct a Venn diagram.



- a. 1500 (all eight regions)
- b. 1135 (the six regions of sets A and C)
- c. 56 (region VII)
- d. 327 (region II)
- e. 526 (regions I, IV, and VII)
- f. 366 (regions II, IV, and VI)
- g. 1191 (regions I through VII)

48. Construct a Venn diagram.



- a. 833 (all eight regions)
- b. 675 (the six regions of sets A and C)
- c. 8 (region VII)
- d. 80 (region II)
- e. 463 (regions I, IV, and VII)
- f. 102 (regions II, IV, and VI)
- g. 683 (regions I through VII)