1. Suppose *U* = {1, 2, ..., 9}, *A* = all multiples of 2, *B* = all multiples of 3, and *C* = {3, 4, 5, 6, 7}. Find *C* - (*B* - *A*).
2. Suppose *A*  *x**y* and *B*  *x**x*. Mark the statement TRUE or FALSE
3. *x*  *B*.
4.   *P*(*B*).
5. *x*  *A*  *B*.
6. Suppose *A*  *a**b**c* and *B*  *b**c*. Mark the statement TRUE or FALSE
7. *B*  *A*
8. *a**b*  *A*  *A*.
9. *b**c*  *P*(*A*).
10. *b**c*  *P*(*B*).
11. *c*  *P*(*B*).
12. Use a Venn diagram to prove that:
13. *A*  *B =* *A*  (*B*  *A*).
14. (*A*  *B*)  (*A*  *C*) = *A*  (*B*  *C*).
15. Show that
16. 
17. 
18. Determine whether the rule describes a function with the given domain and codomain.
19. *G*  **R**  **R** where 
20. *f*  **R**  **R** where 
21. *G*  **Q**  **Q** where *G*(*p**q*)  *q*.
22. *F*  **Z**  **Z** where 
23. Give an example of a function *f*  **Z**  **Z** that is 1-1 and not onto **Z**.
24. Suppose *f*  **R**  **Z** where *f*(*x*)  2*x*  1.
25. Is *f* 1-1? (Explain)
26. Is *f* onto **Z**? (Explain)
27. Suppose *g*  *A*  *B* and *f*  *B*  *C* where *A*  1234, *B*  *a**b**c*, *C*  2810, and *g* and *f* are defined by *g*  (1*b*)(2*a*)(3*b*)(4*a*) and *f*  (*a*8)(*b*10)(*c*2).
28. Find *f*  *g*.
29. Find *f*1.
30. Find *f*  *f*1.
31. Find a formula that generates the following sequence *a*1*a*2*a*3*…*.
32. 33333*…*.
33. 2, 0, 2, 0, 2, 0, 2,....
34. Find the sum 1  12  14  18  116  .
35. Find 