CS 481

Programming Assignment 1

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* 1. True
  2. False
  3. True
  4. False
  5. True
  6. True
  7. Yes, because if there was an element in A that was not in B, the union would not be the same either.
  8. No, because there could be elements in A that are not in B or C.
  9. Yes, because of part A. If A = B, then then intersection with C would also be the same.
  10. bijection, because f is invertible
  11. bijection, because f is invertible
  12. neither, because is not mapped and f(1)=f(-1)
  13. surjection, because all of is mapped
  14. surjection, because all of is mapped, but there are three roots at 0, so it is not injective.

No, because is not a one-to-one correspondence because it is not onto or one-to-one. With the domain is it an onto function, but still not one-to-one so therefore it is not invertible.

Yes, both functions are from

Yes, because

* 1. finite
  2. countably infinite,
  3. finite
  4. uncountable
  5. countably infinite,