Set Theory Tutorial

1. All A,B,C,D
2. a)True  
   b)True  
   c)**False**  
   d)True  
   e)True  
   f)False  
   g)True  
   h)True
3. a)True  
   b)False  
   c)True  
   d)False  
   e)True  
   f)True  
   g)True  
   h)True
4. a) {2,0,2,0…} = {0,2}  
   b) {2, 5/2, 10/3, 26/5, 50/7}  
   c) {0, 2, 12, 36, 80}  
   d) {1/2, 1/12, 1/30, 1/56, 1/90, 1/132}
5. a) {x | x ∈ Z and x = and 1}  
   b) {x = 1/n | n ∈ {1,2,3,4,5,6,7,8}} or {x | x=1/n and 1 n8}  
   c) {x ∈ Z | x = n^2 and 1 n 10}  
   d) {x ∈ Z | x = n^2 and 1 x 10}
6. a) A = {1,2,3,4}  
   |A| = 4  
   b) P(A) = 16  
   {0,{1},{2},{3},{4},{1,2},{1,3},{1,4},{2,3},{2,4},{3,4},{1,2,3},{1,3,4},{2,3,4},{1,2,3,4}}