1. 1. edge(u,x) ^ edge(x,y) ^ edge(y,v) -> Path3(u,v)
   2. edge(v,x) ^ edge(x,y) ^ edge(y,z) ^ edge(z,v) -> Cycle4(v)
2. 1. d(w,w) d ∉ R  
      m(a) ground atom  
      b(x,z,x) b ∉ R  
      o(x,z) atom
   2. d(w,w) d ∉ R  
      u(a,x) params != 3  
      u(x,x,x) ground atom  
      t(a) atom
3. 1. 2,7
   2. 1,7,9
4. 1. 1. supervises(x,y) -> supervisedBy(y,x)
      2. supervisedBy(x,y) ^ student(x) -> faculty(y)
      3. supervisedBy(x,y) ^ faculty(y) -> student(x)
      4. student(David)
      5. supervisedBy(David,Pascal)
   2. 1. writesFor(x,y) ^ newspaper(y) -> journalist(x)
      2. journalist(x) ^ wonAward(x,Pulitxer) -> qualityJouranilist(x)
      3. reads(x,y) ^ authorOf(z,y) ^ qualityJournalist(z) -> qualityReader(x)
      4. qualityReader(Joe)
      5. writesFor(Peter, theEconomist)