In-Class-15

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1. A = {Z1, SL, SW, PL, PW}

   E = {Z1, Z2, Z3, Z4, SL}

   D = {Z1, Z2, Z3, Z4, SW}

   A union E = {Z1, Z2, Z3, Z4, SL, SW, PL PW}

2. D intersection E = {Z1, Z2, Z3, Z4}

3. C = {Z1, Z2, Z3, SW, PL}

   S = {Z4}

   Cmut = C union S = {Z1, Z2, Z3, Z4, SW, PL}

4. C = {Z1, Z2, Z3, SW, PL}
   S = {Z2}
   Cmut = C – S = {Z1, Z3, SW, PL}

5. C = {Z1, Z2, Z3, SW, PL}
   Cmut = {C – {Z2}} union {Z4} = {Z1, Z4, Z3, SW, PL}

6. Actual number of sets = 5
   Union = 5 c 2 = 5! / (2! * 3!) = 10
   Intersections = 10

   Number of cross overs = union + Intersections + Actual = 25
   Number of mutations = 25

   Total = Crossovers + Mutations = 25 + 25 = 50
   Time = 50 * 0.1 = 5 seconds

7. Actual number of sets = 6
   Unions = 6 c 2 = 6! / (2! * 4!) = 15
   Intersections = 15

Number of cross overs = unions + Intersections + Actual = 36
Number of mutations = 36

Total = Crossovers + Mutations = 72
Time = 72 * 0.1 = 7.2 seconds