

**Problem 1**

1. studies(ivar, informatics). - legg merke til små bokstaver på konstanter
2. population(Norway 4,5).
3. rich\_country(norway).
4. prime(2). - Prolog vil ikke dermed teste om 2 faktisk er et primtall; vi gir bare 2 egenskapen prime
5. author(hamlet, someone).
6. mortal(X):- humans(X). - en regel som sier 'alle ...' representeres i Prolog ved en regel med en variabel som representerer en av disse 'alle'.
7. pays taxes(X):- person(X), rich(X). - 'alle ...' blir her til en regel om en representant X for alle
8. takes(ivar, umbrella):- raining.
9. employes(firebrigade,X):- man(X), heoght(X,Y),more\_than(Y,6).

**Problem 2**

biography(X,Y,2003)

**Problem 3**

```
likes(ola,Food) :-
    indian(Food),
    mild(Food).
likes(ola,Food) :-
    italian(Food).
```

```
indian(curry).
indian(tandoori).
indian(tikkaMasala).
```

```
mild(tandoori).
hot(curry).
hot(tikkaMasala).
```

```
italian(pizza).
italian(spaghetti).
```

**Problem 4**

```
likes(Person,Food) :-
    indian(Food),
    mild(Food),
    norwegianPerson(Person).
```

```
likes(Person,Food) :-
    italian(Food),
    norwegianPerson(Person).
```

```
likes(Person,Food) :-
```

```
indian(Food),
(hot(Food); mild(Food)),
indianPerson(Person).
```

```
norwegianPerson(ola).
norwegianPerson(kari).
indianPerson(indy).
```

```
indian(curry).
indian(tandoori).
indian(tikkaMasala).
```

```
hot(tikkaMasala).
mild(tandoori).
hot(curry).
italian(pizza).
italian(spaghetti).
```

### Problem 5

```
star(sun).
star(sirius).
star(vega).
```

```
orbits(mercury, sun).
orbits(venus, sun)
orbits(earth, sun).
orbits(mars, sun).
orbits(moon, earth).
orbits(deimos, mars).
```

```
planet(B):- orbits(B, sun).
```

```
satellite(B):- orbits(B,P), planet(P).
```

```
solar(sun).
solar(B):- planet(B); satellite(B).
```

### Problem 6

1. tel(hundre\_meter\_skogen, ole\_brumm, N).
2. tel(C,P,123).
3. local(N1,N2):- tel(C,P1,N1),tel(C,P2,N2).
4. notOK:- tel(C1,P1,N),tel(C2,P2,T), C1\==C2.  
notOK:- tel(C1,P1,N),tel(C2,P2,T), P1\==P2.

### Problem 7

a)

```
connection(X,Y):- reindeerLine(X,Y).
connection(X,Y):- reindeerLine(X,Z),connection(Z,Y).
```

b)

```
f.eks.:
Question: connection(northpole,X), connection(X,moscow).
Ansvr: X = stockholm
```