lecture1-example1.mod

```
int nProds = 5;

range Prods = 1..nProds;

/* Declare x1, x2, x3, x4, x5; */
dvar float+ x[Prods];

float     cost[Prods]=[550, 600, 350, 400, 200];
float grinding[Prods]=[ 12,  20,   0,  25,  15];
float drilling[Prods]=[ 10,   8,  16,   0,   0];
float  workers[Prods]=[ 20,  20,  20,  20,  20];

float grindingLimit = 288;
float drillingLimit = 192;
float  workersLimit = 384;

maximize
  sum(p in Prods) cost[p] * x[p];
  /* Alternative: 550 * x[1] + 600 * x[2] + 350 * x[3] + 400 * x[4] + 200 * x[5]; */

subject to {
  Grinding: sum(p in Prods) grinding[p] * x[p] <= grindingLimit;
            /* 12 x[1] + 20 x[2] + 25 x[4] + 15 x[5] <= 288;*/

  Drilling: sum(p in Prods) drilling[p] * x[p] <= drillingLimit;
            /* 10 x[1] +  8 x[2] + 16 x[3] <= 192; */

  Workers:  sum(p in Prods)  workers[p] * x[p] <= workersLimit;
            /* 20 x[1] + 20 x[2] + 20 x[3] + 20 x[4] + 20 x[5] <= 384; */
}
```