In [7]:
```
import pulp
```

In [8]:
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prob = pulp.LpProblem("The_Buff_Boss", pulp.LpMinimize)

m1 = pulp.LpVariable('m1', lowBound=0, cat='Continuous')
m2 = pulp.LpVariable('m2', lowBound=0, cat='Continuous')
m3 = pulp.LpVariable('m3', lowBound=0, cat='Continuous')
m4 = pulp.LpVariable('m4', lowBound=0, cat='Continuous')

t1 = pulp.LpVariable('t1', lowBound=0, cat='Continuous')
t2 = pulp.LpVariable('t2', lowBound=0, cat='Continuous')
t3 = pulp.LpVariable('t3', lowBound=0, cat='Continuous')
t4 = pulp.LpVariable('t4', lowBound=0, cat='Continuous')

w1 = pulp.LpVariable('w1', lowBound=0, cat='Continuous')
w2 = pulp.LpVariable('w2', lowBound=0, cat='Continuous')
w3 = pulp.LpVariable('w3', lowBound=0, cat='Continuous')
w4 = pulp.LpVariable('w4', lowBound=0, cat='Continuous')

th1 = pulp.LpVariable('th1', lowBound=0, cat='Continuous')
th2 = pulp.LpVariable('th2', lowBound=0, cat='Continuous')
th3 = pulp.LpVariable('th3', lowBound=0, cat='Continuous')
th4 = pulp.LpVariable('th4', lowBound=0, cat='Continuous')

f1 = pulp.LpVariable('f1', lowBound=0, cat='Continuous')
f2 = pulp.LpVariable('f2', lowBound=0, cat='Continuous')
f3 = pulp.LpVariable('f3', lowBound=0, cat='Continuous')
f4 = pulp.LpVariable('f4', lowBound=0, cat='Continuous')

#obj
prob += 30*(m1+t1+w1+th1+f1)+35*(m2+t2+w2+th2+f2)+40*(m3+t3+w3+th3+f3)+20*(m4+t4

#st
prob += 24*m1+21*m2+6*m3+9*m4>=200
prob += 80*m3+50*m4>=150

prob += t1==0
prob += 24*t1+21*t2+6*t3+9*t4>=200
prob += 80*t3+50*t4>=150

prob += 24*w1+21*w2+6*w3+9*w4>=200
prob += 80*w3+50*w4>=150

prob += 24*th1+21*th2+6*th3+9*th4>=200
prob += 80*th3+50*th4>=150
prob += th1==0

prob += 24*f1+21*f2+6*f3+9*f4>=200
prob += 80*f3+50*f4>=150
prob += f1==0
prob += f4==0

prob.solve()

print(f"Optimal value of m: {m1.varValue},{m2.varValue},{m3.varValue},{m4.varVal
print(f"Optimal value of t: {t1.varValue},{t2.varValue},{t3.varValue},{t4.varVal
print(f"Optimal value of w: {w1.varValue},{w2.varValue},{w3.varValue},{w4.varVal
print(f"Optimal value of th: {th1.varValue},{th2.varValue},{th3.varValue},{th4.v
```

```
print(f"Optimal value of f: {f1.varValue},{f2.varValue},{f3.varValue},{f4.varVal

print("objective value",pulp.value(prob.objective))
```

```
Optimal value of m: 7.2083333,0.0,0.0,3.0
Optimal value of t: 0.0,8.2380952,0.0,3.0
Optimal value of w: 7.2083333,0.0,0.0,3.0
Optimal value of th: 0.0,8.2380952,0.0,3.0
Optimal value of f: 0.0,8.9880952,1.875,0.0
objective value 1638.7499939999998
```