```
> restart :
  with(simplex) :
> obj := 26·x1 + 30·x2 + 20·x3 + 8·x4;
```

$$obj := 26\,x1 + 30\,x2 + 20\,x3 + 8\,x4 \quad (1)$$

```
> Constr := {1000·x1 + 1000·x2 + 1000·x3 + x4 = 1000,
                                        4.5·x1 + 5.0·x2 + 4·x3 + x4 ≥ 4.5,
                                                    40·x1 + 10·x2
      + 6·x3 + 0· x4 ≥ 32.5, 40·x1 + 10·x2 + 6·x3 + 0· x4 ≤ 55.0};
```

$$Constr := \{1000\,x1 + 1000\,x2 + 1000\,x3 + x4 = 1000,\ 4.5 \le 4.5\,x1 + 5.0\,x2 + 4\,x3 + x4,\ 32.5 \le 40\,x1 + 10\,x2 + 6\,x3,\ 40\,x1 + 10\,x2 + 6\,x3 \le 55.0\} \quad (2)$$

```
> sol := minimize(obj, Constr, NONNEGATIVE);
```

$$sol := \{x1 = 0.7794313048,\ x2 = 0.,\ x3 = 0.2204579679,\ x4 = 0.1107272565\} \quad (3)$$

```
> assign(sol);
> x1; x2; x3; x4;
```

$$0.7794313048$$
$$0.$$
$$0.2204579679$$
$$0.1107272565 \quad (4)$$

```
> obj;
```

$$25.56019133 \quad (5)$$

```
>
>
```