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# This is written by Zhiyang Ong, for Homework #4 of  
# Discrete Optimization at National Taiwan University, Fall 2013.
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# Question 2)
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```
/* Decision variables */
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```
var x1 >= 0;  
var x2 >= 0;  
var x3 >= 0;  
var x4 >= 0;  
var x5 >= 0;  
var x6 >= 0;  
var x7 >= 0;  
var x8 >= 0;
```

```
/* Objective function */
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```
minimize z: 2*x1 + x2 + 3*x3 + 3*x4 + x5 + 2*x6 + 2*x7 + 5*x8;
```

```
/* Constraints */
```

```
s.t. c1 : x1 + x2 = 1;  
s.t. c2 : -x1 + x3 + x4 = 0;  
s.t. c3 : -x2 - x3 + x5 = 0;  
s.t. c4 : -x4 - x6 + x7 = 0;  
s.t. c5 : -x5 + x6 + x8 = 0;
```

```
solve;
```

```
display z, x1, x2, x3, x4, x5, x6, x7, x8;  
end;
```