## Step-1

When the primal is expressed as above, we get the dual as follows:

Maximize *yb*, subject to $y \geq 0$, $yA \leq c$.

Note that the solution of this should be unbounded.

## Step-2

Consider the following problem:

Minimize 2*x*, subject to $x \geq 0$, $-2x \geq 1$.

This is unfeasible problem, because when $x \geq 0$, we cannot get $-2x \geq 1$.

## Step-3

In the above problem, $c = 2$, $b = 1$, $A = [-2]$.

Therefore, the dual problem is as follows:

Maximize *y*, subject to $y \geq 0$, $-2y \leq 2$.

This is undoubtedly an unbounded problem, because as we go on increasing the value of *y*, the quantity â€“2*y* remains permanently below 2.

## Step-4

Thus, a required problem is: Minimize 2*x*, subject to $x \geq 0$, $-2x \geq 1$.