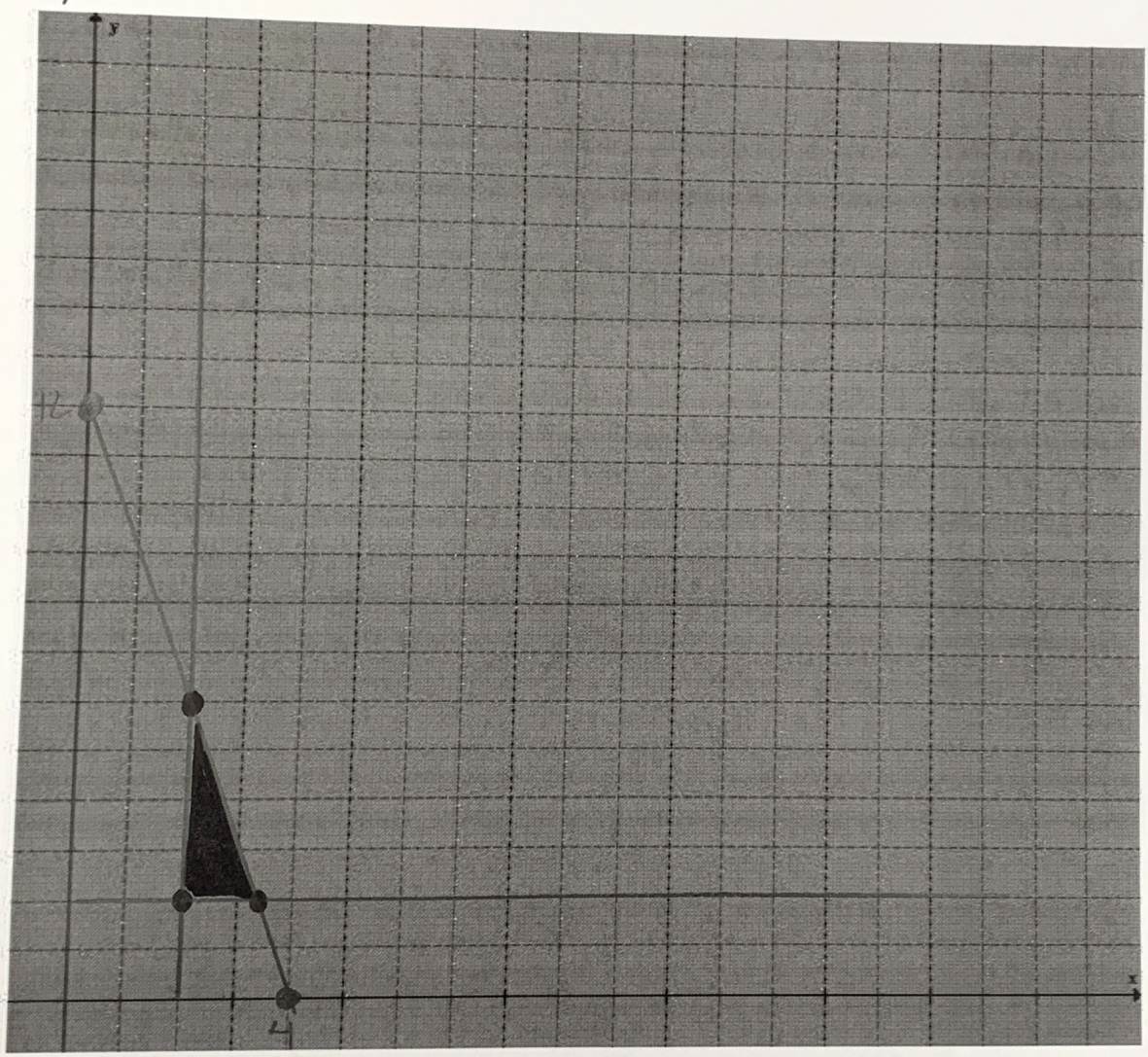
1. A carpenter makes bookcases in two sizes, large and small. It takes 6 hours to make a large bookcase and 2 hours to make a small one. The profit on a large bookcase is $50, and the profit on a small bookcase is $20. The carpenter can spend only 24 hours per week making bookcases and must make at least 2 of each size per week.

m



ℓ

Constraints

$6\ell + 2m \leq 24$

$\ell \geq 2$

$m \geq 2$

ℓ	m
0	12
4	0

V of FR

(2, 2) = 140

(3.5, 2) = 215

(2, 6) = 220

Opt Eq

$P = 50\ell + 20m$

2 large and 6 small maximizes profit @ $220