


The background features a stylized circus scene. At the top, three red and white striped tents with red flags are set against a blue sky with radiating red and blue stripes. Below the tents is a green scalloped valance with white stars. A large red curtain with white stars is pulled back to reveal a blue banner with the text. The entire scene is framed by a gold border with a dotted pattern.

4.5 Linear Programming

-
- ▶ Skill 3
 - ▶ Now Nick, Pavel, and Henrick can raise some additional money to invest, so they want to **maximize** profit. They sell the bobble heads for \$15 each and the pucks for \$10 each.
 - ▶ We want to find the sales quantities that will give the maximum profit within the given constraints.
-
- 

▶ First we write an objective function for revenue.

▶ $r = 15x + 10y$ where r = the total revenue

15 = selling price of bobble heads

x = the # of the bobble heads sold

10 = selling price of the pucks

y = the # of pucks sold




Now we want to substitute out intersection points in to the revenue function

Where is the maximum revenue at?

Where is the maximum profit at?

$r - c$



-
- ▶ We can also find the maximum profit by writing an objective function for profit.
 - ▶ $p = r - c$
-
- 

Homework

- ▶ Page 174-177
- ▶ 8-17. 23-31

