

Answer on Question #37767, Math, Combinatorics.

James is able to sell 15 of product A and 16 of the product B a week, Sally is able to sell 25 of product A and 10 of the product B a week, and Andrew is able to sell 18 of the product A and 13 of the product B a week.

If product A sells for \$35.75 each and product B sells for \$42.25 each, what is the difference in the amount of money earned between the most profitable and the least profitable seller?

James's profit: $35.75 \cdot 15 + 42.25 \cdot 16 = 536.25 + 676 = 1212.25\$$.

Sally's profit: $35.75 \cdot 25 + 42.25 \cdot 10 = 1316.25\$$.

Andrew's profit: $35.75 \cdot 18 + 42.25 \cdot 13 = 1192.75\$$.

Thus, the most profitable seller is Sally, and the least profitable is Andrew.

The difference between their profits is $1316.25 - 1192.75 = 123.5$.