

Conditions

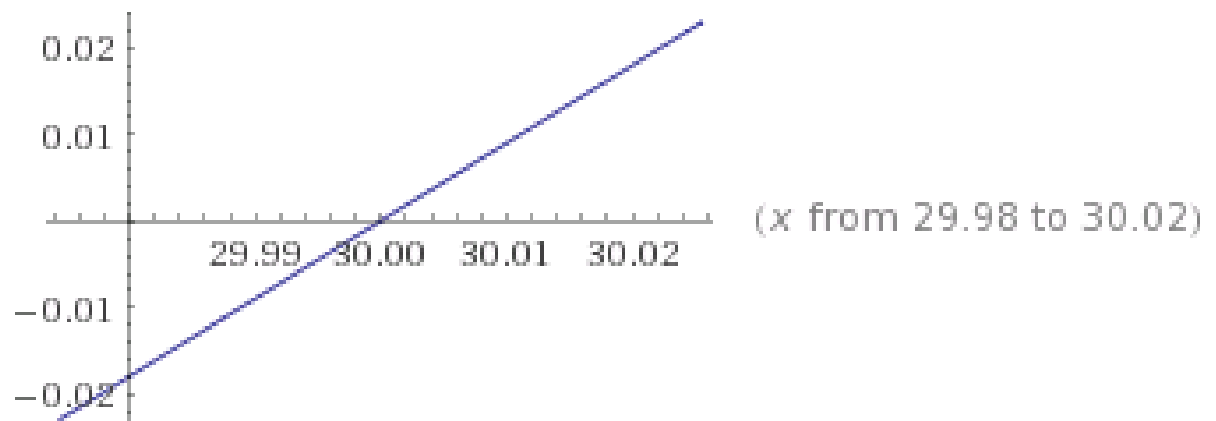
A small company duplicates DVDs. The cost of duplicating is \$27 fixed overhead plus \$0.60 per DVD duplicated. The company generates revenues of \$1.50 per DVD. Use a graph to determine the break-even point for duplicating DVDs. I need to know the ordered pair to find the break even point.

Solution

We must construct the function, which describes the company's profit. Let's the number of DVD duplicated is x . Then the function has a form:

$$p(x) = 1.5x - 27 - 0.6x = 0.9x - 27$$

Let's make a graph:



As we see on a graph, the break-even point it's a point, where $p(x)=0$. And this happens at a point with coordinates **(30,0)**.

We can make a conclusion, that the company must duplicate at least 30 DVDs to have no loss.