

NAME: _____



FIXED vs. VARIABLE COSTS

Does the law of supply guarantee that a producer will make a profit? NO! It only shows how much a producer will produce at a given price. It does not guarantee that he will sell his entire stock at that price or that his revenue will be greater than his costs.

$$\text{PROFIT} = \text{TOTAL REVENUE} - \text{TOTAL COST}$$

Many producers lose money because the price they charge does not bring enough revenue to cover the costs of production. Their total revenue (price x # of units sold) is less than total cost.

FIXED COSTS + VARIABLE COSTS = TOTAL COST

Fixed costs are costs that are ... well, fixed; they don't change regardless of how much stuff is produced. Variable costs are costs that ... vary; they change as the level of production changes. Theater rental and insurance are fixed costs for the operator of a movie theater because he has to pay the same amount of money for these regardless of how many customers he has. Popcorn and soft drink costs are variable—the more customers he has, the more it costs.

PIZZA TIME!

Let's determine the profit of a pizza restaurant at various prices. First, determine whether each of the following items are fixed or variable costs of pizza making. Put an F in the blank of those things that represent fixed costs and a V in the blank of those things that represent variable costs.

- | | |
|-------------------|---------------------------|
| ___ accountant | ___ advertising |
| ___ cheese | ___ cooks |
| ___ delivery cars | ___ dishwashing equipment |
| ___ flour | ___ interest payments |
| ___ mushrooms | ___ ovens |
| ___ pepperoni | ___ pizza pans |
| ___ property tax | ___ sales tax |

Now let's get to the profit calculations. We'll make the following assumptions.

price of each pizza - \$8
fixed costs = \$500 per week
variable costs = \$3 per pizza

1. Calculate profit if the store makes and sells 300 pizzas. You'll want to use the formulas at the top of this page.
2. What will the profit be if the store makes 300 pizzas but, at \$8 each, can only sell 200?
3. What if the pizza company can sell all 300 pizzas at \$6? Will it make a higher profit if it charges \$6 and sells 300 or if it charges \$8 and makes (and sells) only 200 pizzas? [Is demand elastic or inelastic between \$6 and \$8?]