

## Optimum Bait

*My brother Matt owns Optimum Bait Company. Optimum Bait Company manufactures fishing lures. The monthly cost to run the factory is \$4200 and the cost of producing each lure is an additional \$0.25 per lure.*

If he produces 1000 lures in one month, what is the average production cost per lure?

Create a function,  $C(x)$ , that models the average production cost per lure.

Calculate the average production cost per lure if he produces 4000 lures in one month? 8000 lures? 12000 lures? 420000 lures?

As he produces more lures what price does the average cost of production approach? Why?

If he wants the average cost of production to be \$1, how many lures would he have to produce in one month?

If he wants to make a profit of at least \$4000 per month, what is the minimum number of lures he would have to produce if he sells every lure he produces for \$4?