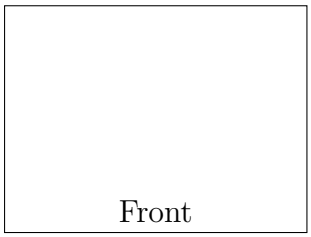
Example 1
A small rectangular enclosure containing 12 square yards is to be fenced in. The front, to be made of stone, will cost \$5 per yard of fencing, while each of the other three wooden sides will cost only \$2 per yard.

1. What will the total cost be if the length of the front (stone) side is 4 yards long? (hint: easiest to do with a labeled picture)



2. What will the total cost be if the length of the front is 3 yards long?
3. What will the total cost be if the length of the front is 2 yards long?
4. What will the total cost be if the length of the front is 5 yards long? (this will not be a whole number)
5. What is the total cost if the front is π yards long? Note: the answer should have a π in it, not a decimal approximation.
6. Cutting to the chase: if the length of the brick side is denoted by L and the cost is C what is C in terms of L ?

The calculus question, which requires algebra but cannot be solved by algebra alone, would be "What is the least amount of money that we can pay for the fencing?" or the related question "What dimensions would require the least amount of money"