Business College is planning an online MBA tech program, start up cost for equipment, facilities, course development, staff recruitment and development is $350,000. College plans to charge tuition of $18,000 per student per year. The university administration will charge the college $12,000 per student for the first 100 students enrolled each year for administrative costs and its share of the tuition payments.

How many students does the college need to enroll in the first year to break even?

If the college can enroll 75 students the first year, how much profit will it make?

The college believes it can increase tuition to $24,000, but doing so would reduce enrollment to 35. Should the college consider doing this?

Manufacturer discovered 20% of all transmissions installed in particular style truck one year are defective. He contacted the owners of the vehicles and asked that they return the trucks to the dealer to check the transmission. The Auto Mart sold seven of these trucks and has two of the new transmissions in stock. What is the probability that the auto dealer will need to order more new transmissions?