

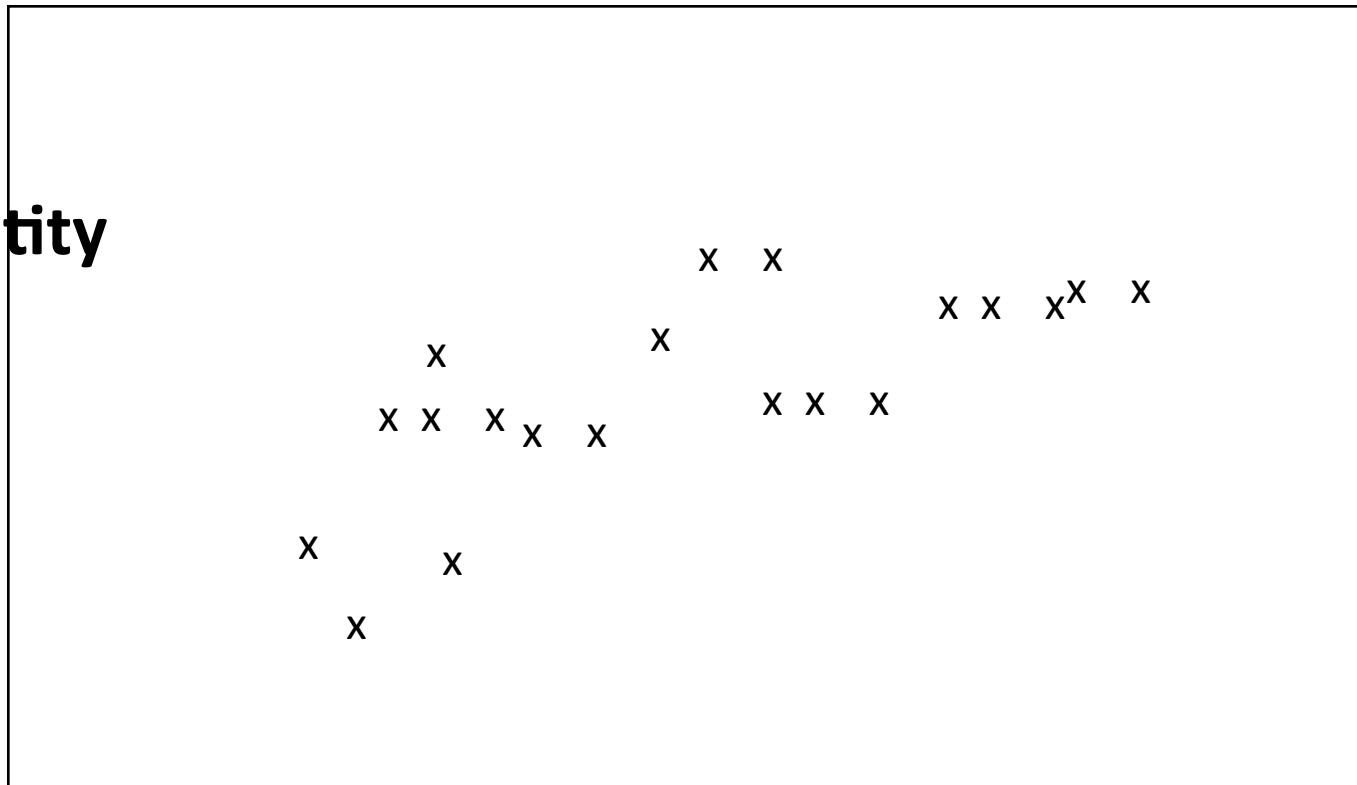
Incremental and Average Slopes

Ted Mitchell

$$Q = ???A$$

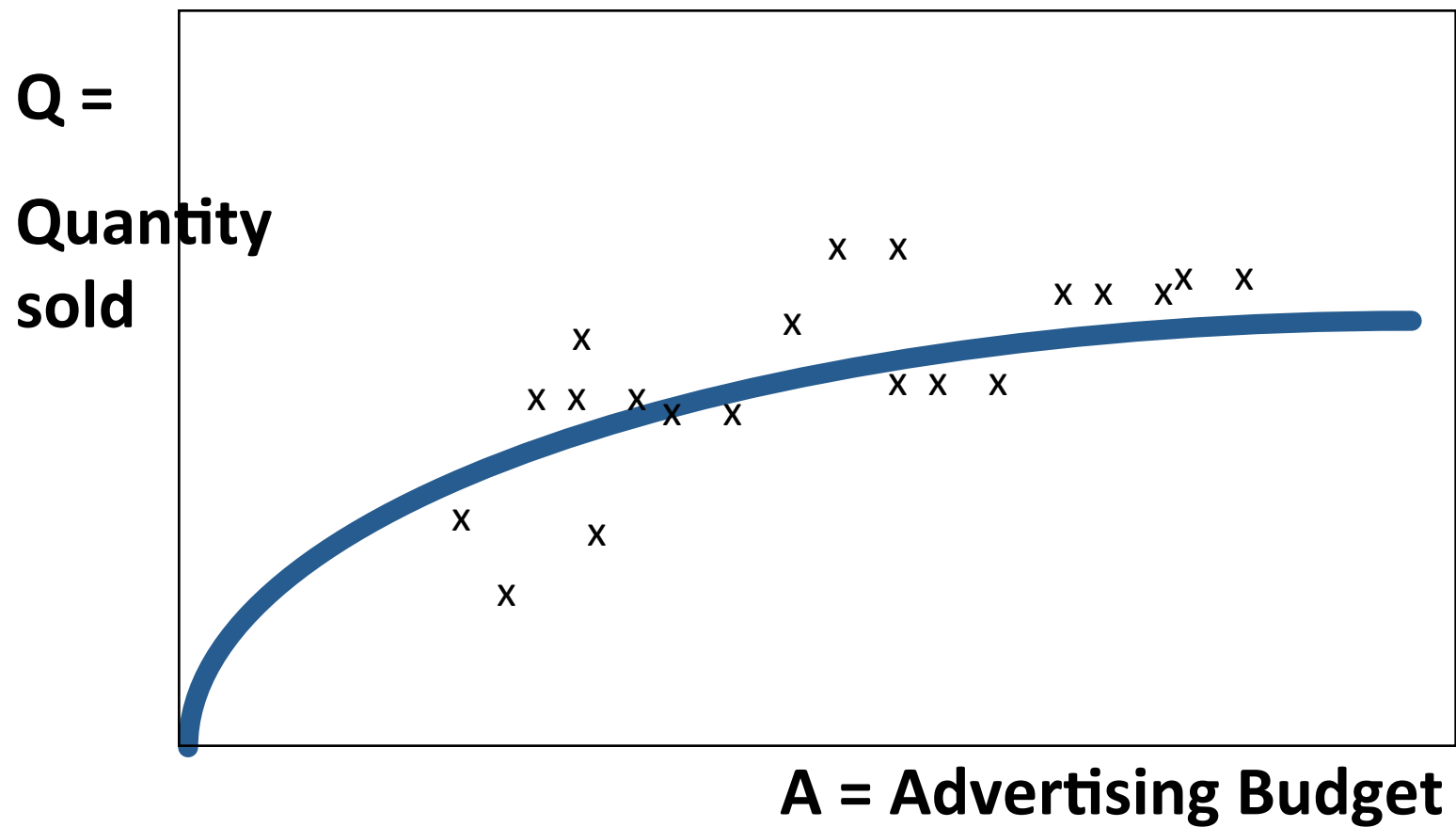
Q =

Quantity
sold

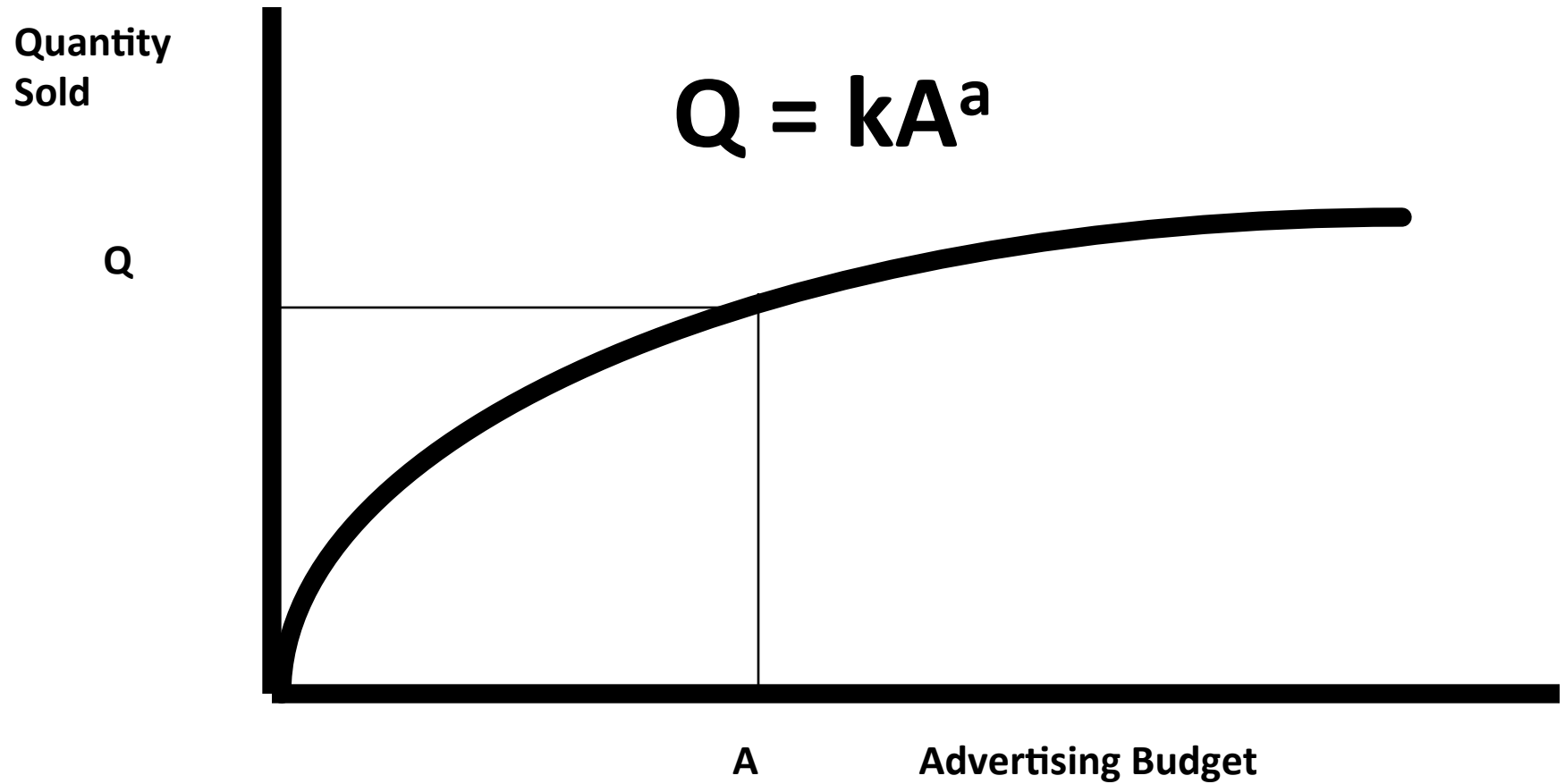


A = Advertising Budget

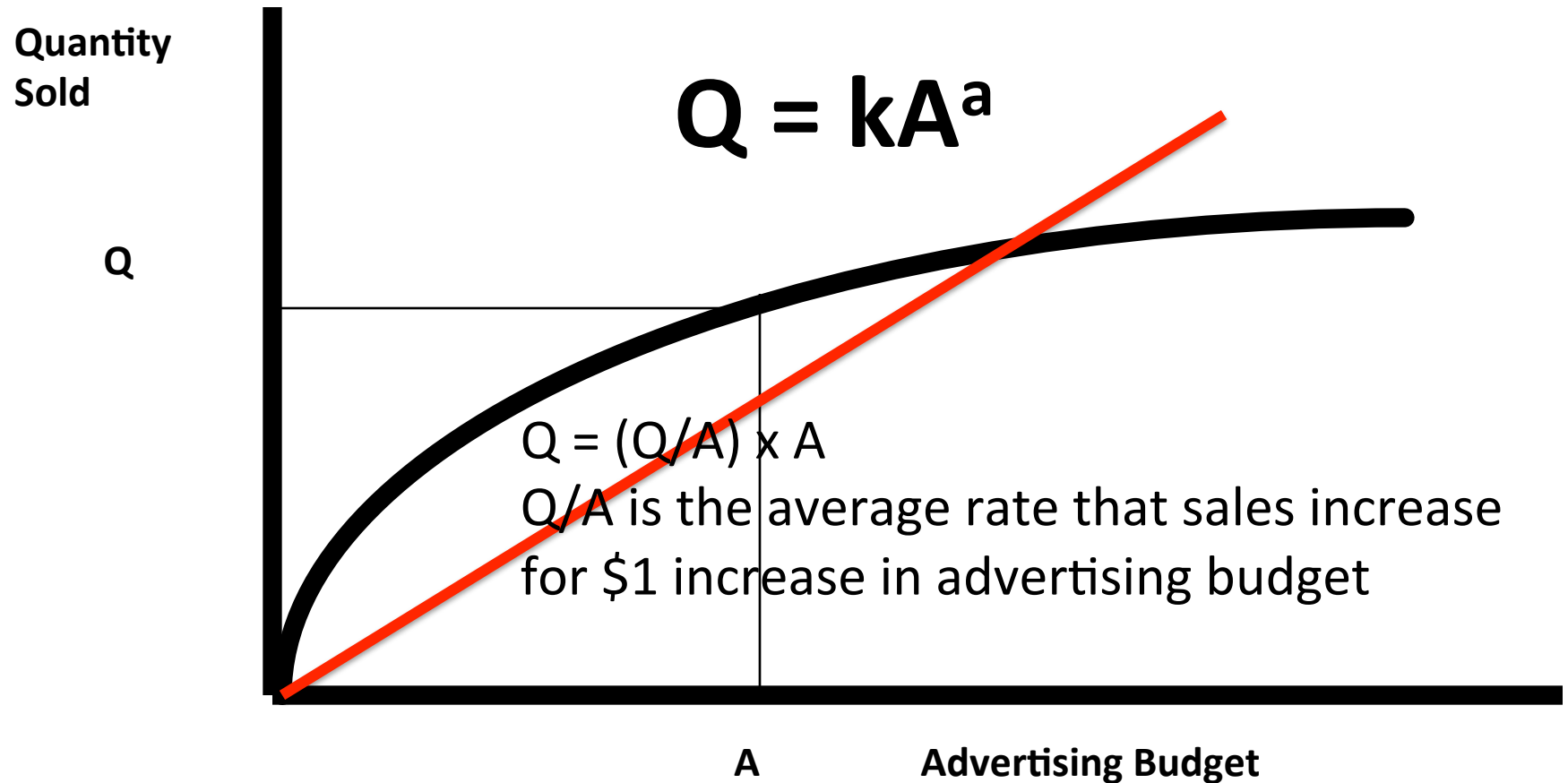
$$Q = kA^a$$



Increase in Volume

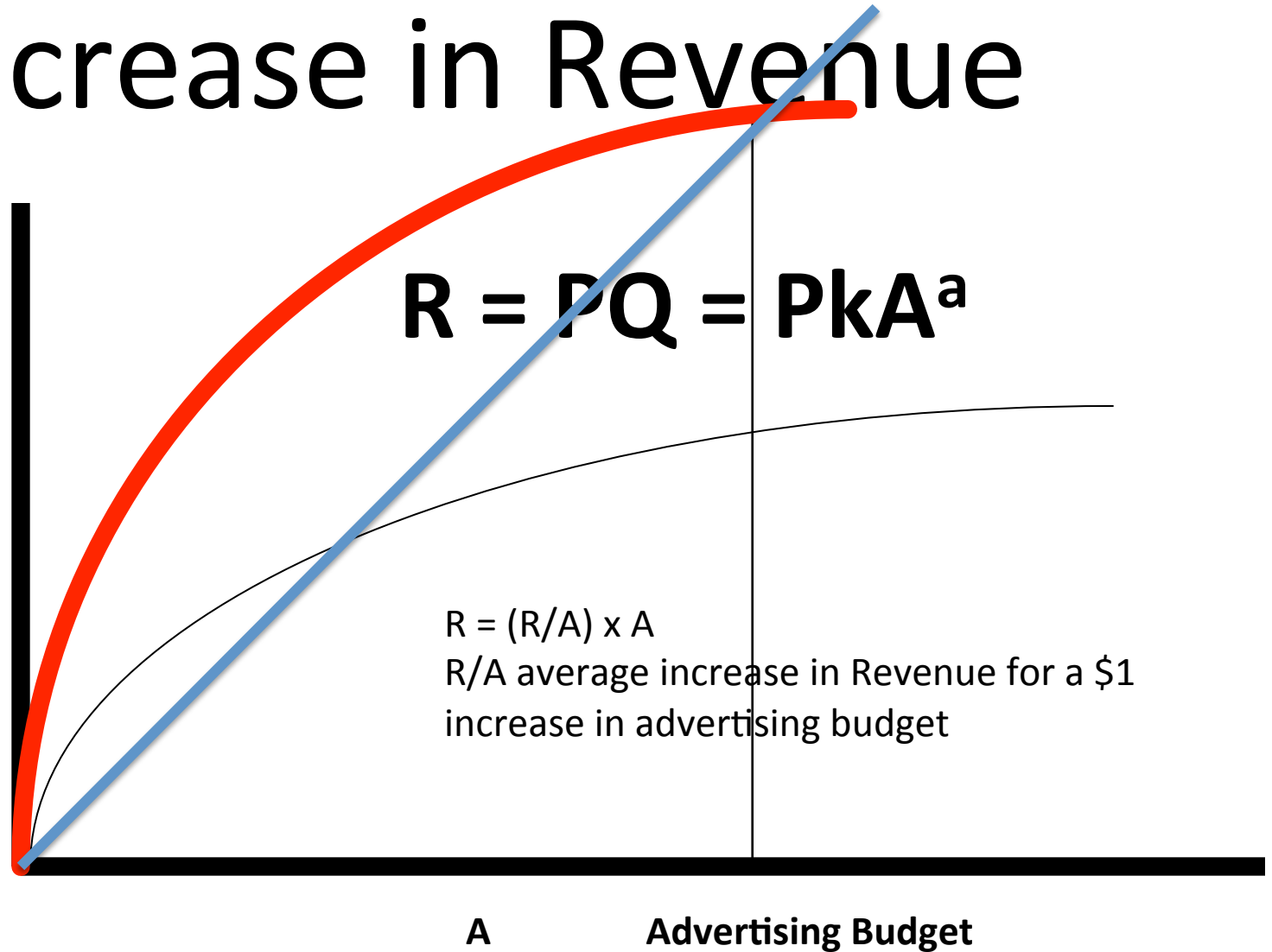


Increase in Volume

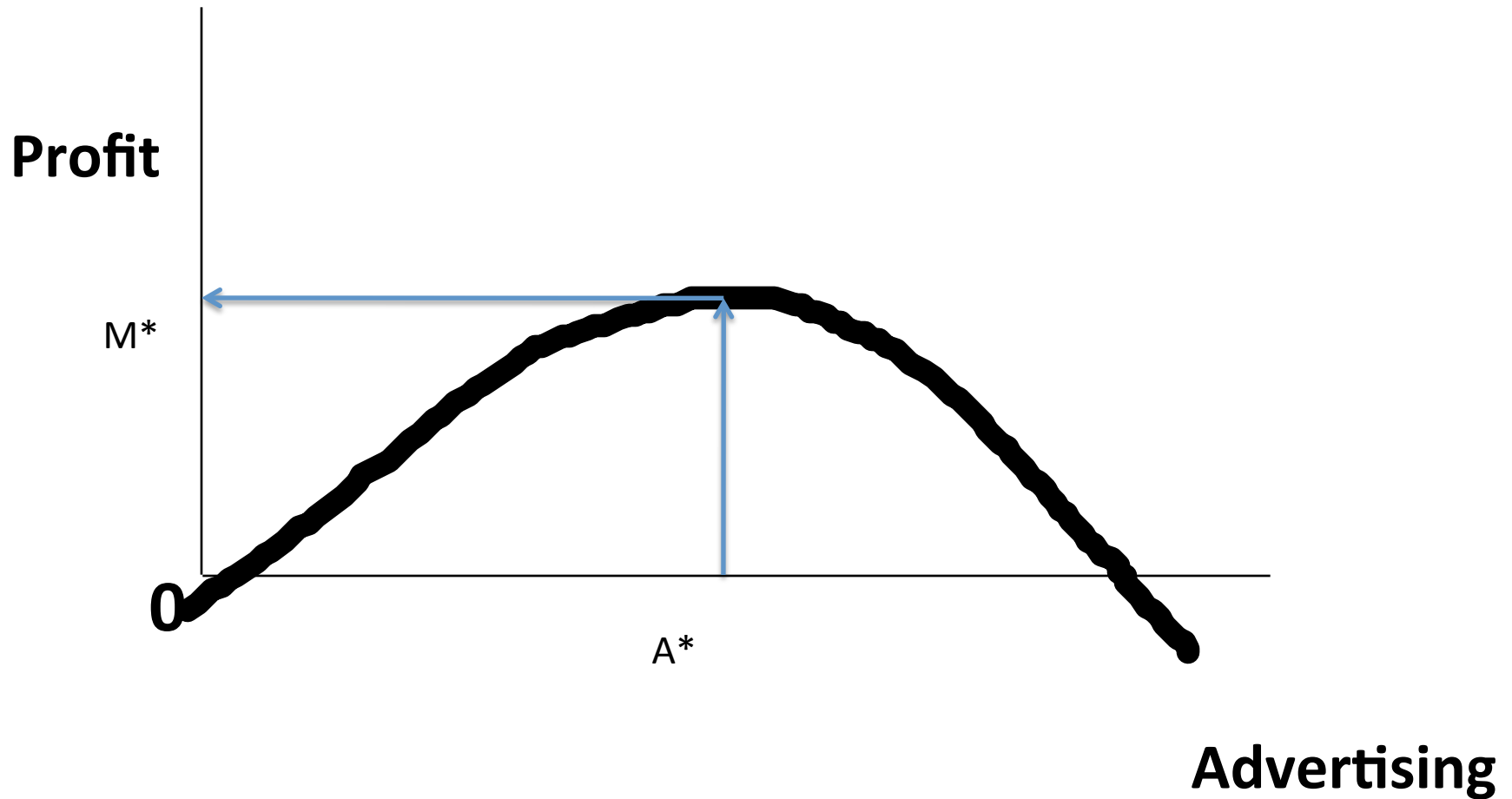


Increase in Revenue

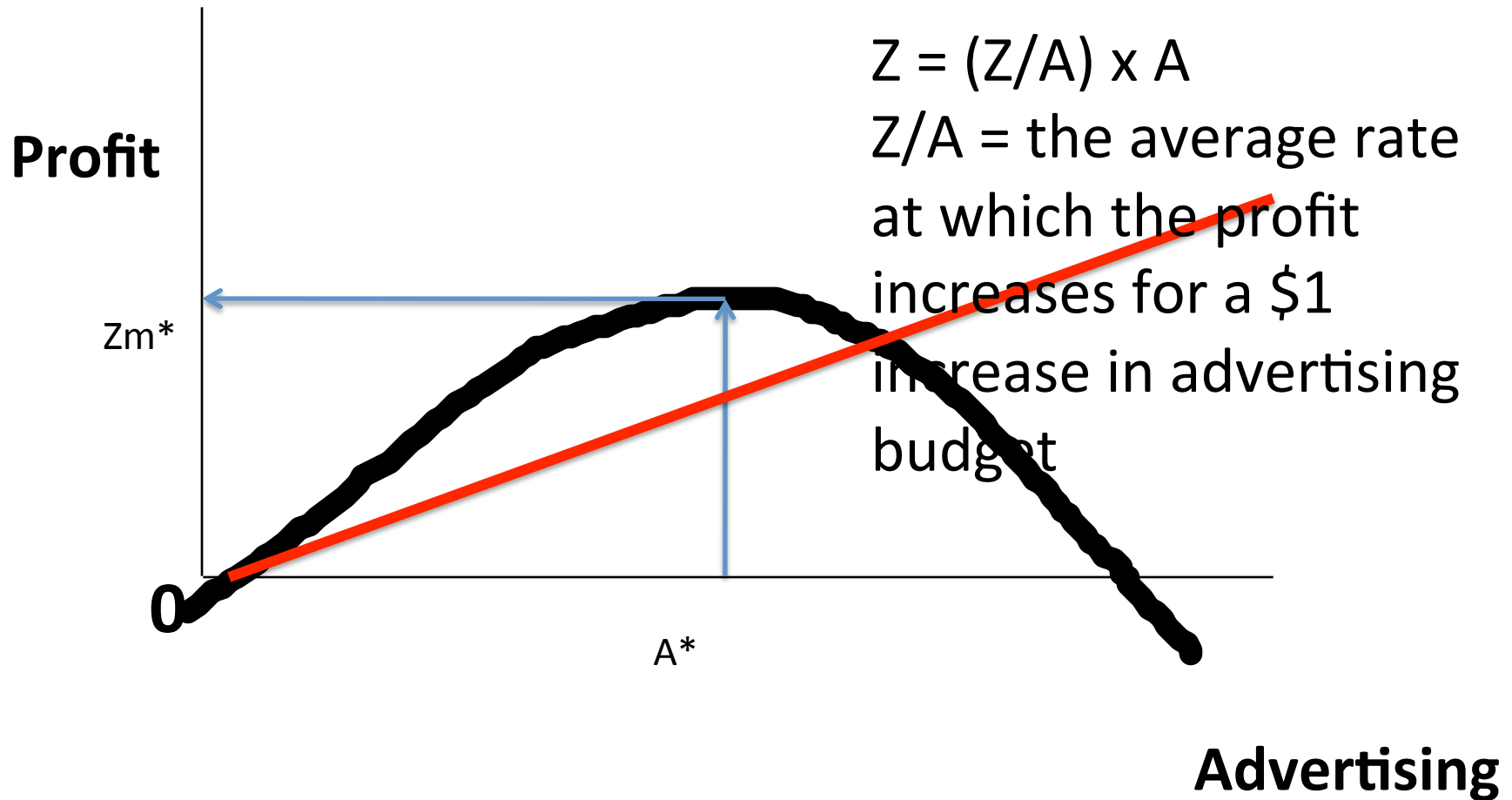
Revenue



What Does The Profit Curve Look Like?

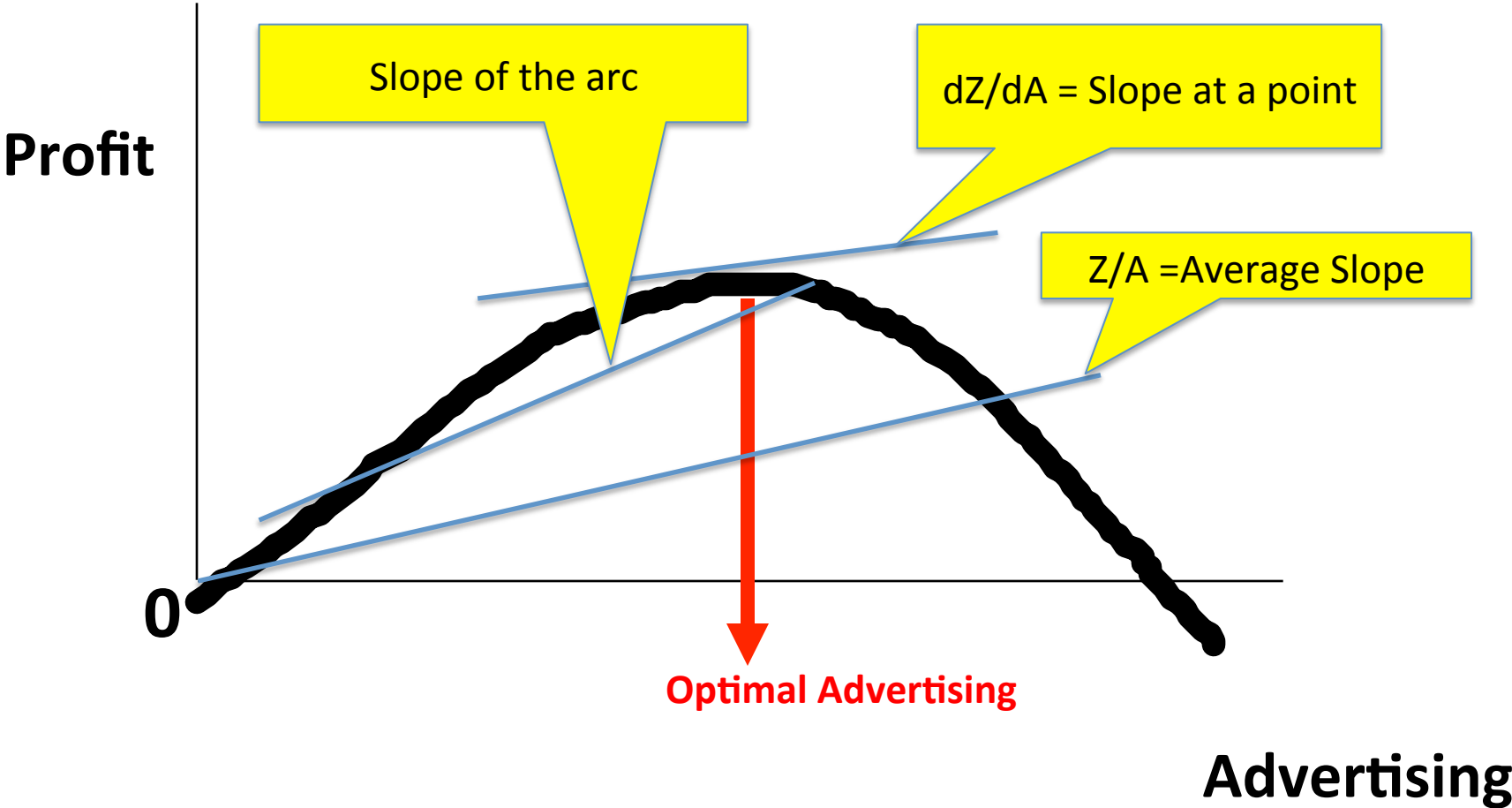


What Does The Profit Curve Look Like?

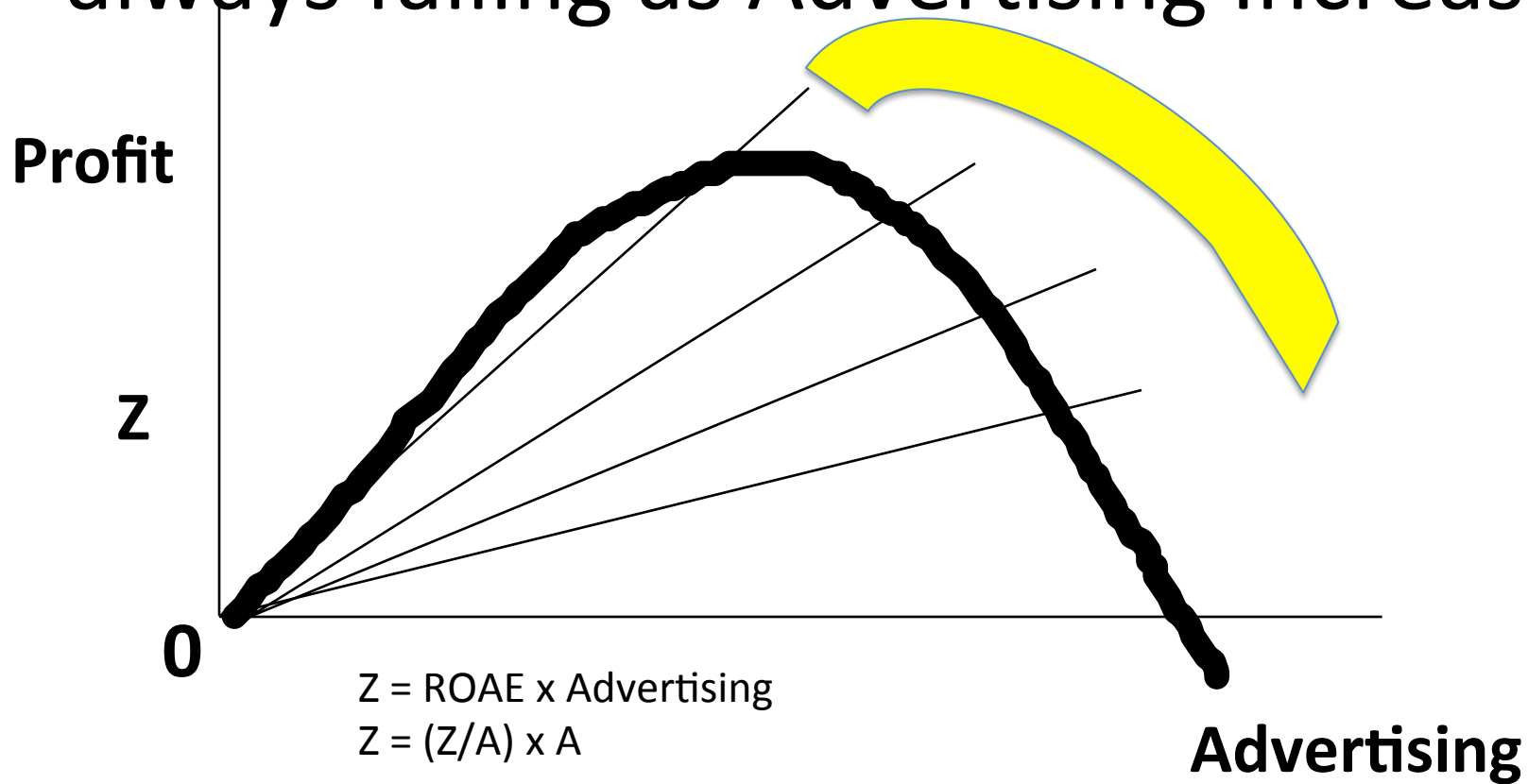


- What is the difference between average response and the marginal or incremental response?

Three Slopes



Return on Advertising Expense is always falling as Advertising Increases



- It is better to use the incremental change rather than the average rate
- But changes in averages are harder

- You walked from home to school at an average pace of 10 miles per hour
- You walked from school to home at an average pace of 5 miles per hour
- What was your average pace for the round trip?

- You walked from home to school at an average pace of 10 miles per hour
- You walked from school to home at an average pace of 5 miles per hour
- What was your average pace for the round trip?
- **Not $(10 + 5)/2 = 7.5$ miles per hour!!!**
- **Assume the distance was 100 miles**
- **At 10 mph it took $100/10 = 10$ hours**
- **At 5 mph it took $100/5 = 20$ hours**
- **You walked 200 miles in 30 hours and your average speed was $200/30 = 6.666$ mph**