Perfect ✅ — here’s your **detailed study table** that connects every *topic*, *presentation name*, and *slide number range* across both decks (3. Quantifying Demand.pptx and 4. Profit Maximization.pptx).

This version is organized exactly like your preferred layout — easy to follow and presentation-ready for class or review.

**🧭 Elasticity, Revenue & Profit Maximization — Slide-by-Slide Study Map**

| **Step** | **Topic** | **Presentation Name** | **Slide Numbers** | **What to Focus On** |
| --- | --- | --- | --- | --- |
| 1️⃣ | **Definition & Formula** | **3. Quantifying Demand** | **Slides 6 – 9** | Understand what elasticity means, how it’s computed (E = %ΔQ / %ΔP), and why it varies even when slope is constant. |
| 2️⃣ | **Elasticity Zones & TR Curve** | **3. Quantifying Demand** | **Slides 10 – 16** | Learn to read both **Price–Quantity** and **Total Revenue–Quantity** graphs. Identify elastic, unit-elastic, and inelastic regions and how TR rises, peaks, then falls. |
| 3️⃣ | **Graphical Proof** | **3. Quantifying Demand** | **Slide 17** | Visualize the “revenue gain vs. revenue loss” rectangles. Understand why TR increases in the elastic zone and decreases in the inelastic zone. |
| 4️⃣ | **Profit Maximization Logic** | **4. Profit Maximization** | **Slides 1 – 7** | Transition from elasticity to firm decision-making: how firms use MR = MC to find profit-maximizing output and price. |
| 5️⃣ | **Worked Example (Jack’s Ice Cream)** | **4. Profit Maximization** | **Slides 8 – 12** | Apply formulas using real numbers. Compute MR = MC, find optimal Qₘ, Pₘ, and profit πₘ = pQ – (FC + MC × Q). |
| 6️⃣ | **Cost and Efficiency Concepts** | **4. Profit Maximization** | **Slides 13 – 17** | Distinguish fixed vs variable cost, marginal vs average cost. Understand the “U-shaped” AC curve and why MR = MC still holds for optimum. |
| 7️⃣ | **Market Power & Deadweight Loss** | **4. Profit Maximization** | **Slides 18 – 20** | Relate monopoly pricing to efficiency loss: price > MC → consumer surplus ↓, producer surplus ↑, deadweight loss forms. |
| 8️⃣ | **Summary & Formulas Recap** | **4. Profit Maximization** | **Slide 21 (Summary)** | Review key formulas: E = (dQ/dP)\*(P/Q), MR = P(1 + 1/E), profit max when MR = MC. |

**📚 Quick Interpretation Guide**

* **Slides 6–17** (*Quantifying Demand*) → Conceptual foundation for elasticity & total-revenue behavior.
* **Slides 1–12** (*Profit Maximization*) → Application of elasticity to pricing decisions and MR = MC logic.
* **Slides 13–21** (*Profit Maximization*) → Cost structure, efficiency, and market-power consequences.

| **Step** | **Topic** | **Presentation Name** | **Slide Numbers** | **What to Focus On** |
| --- | --- | --- | --- | --- |
| 1️⃣ | **Definition & Formula** | **3. Quantifying Demand** | **Slides 6 – 9** | Understand what elasticity means, how it’s computed (E = %ΔQ / %ΔP), and why it varies even when slope is constant. |
| 2️⃣ | **Elasticity Zones & TR Curve** | **3. Quantifying Demand** | **Slides 10 – 16** | Learn to read both **Price–Quantity** and **Total Revenue–Quantity** graphs. Identify elastic, unit-elastic, and inelastic regions and how TR rises, peaks, then falls. |
| 3️⃣ | **Graphical Proof** | **3. Quantifying Demand** | **Slide 17** | Visualize the “revenue gain vs. revenue loss” rectangles. Understand why TR increases in the elastic zone and decreases in the inelastic zone. |
| 4️⃣ | **Profit Maximization Logic** | **4. Profit Maximization** | **Slides 1 – 7** | Transition from elasticity to firm decision-making: how firms use MR = MC to find profit-maximizing output and price. |
| 5️⃣ | **Worked Example (Jack’s Ice Cream)** | **4. Profit Maximization** | **Slides 8 – 12** | Apply formulas using real numbers. Compute MR = MC, find optimal Qₘ, Pₘ, and profit πₘ = pQ – (FC + MC × Q). |
| 6️⃣ | **Cost and Efficiency Concepts** | **4. Profit Maximization** | **Slides 13 – 17** | Distinguish fixed vs variable cost, marginal vs average cost. Understand the “U-shaped” AC curve and why MR = MC still holds for optimum. |
| 7️⃣ | **Market Power & Deadweight Loss** | **4. Profit Maximization** | **Slides 18 – 20** | Relate monopoly pricing to efficiency loss: price > MC → consumer surplus ↓, producer surplus ↑, deadweight loss forms. |
| 8️⃣ | **Summary & Formulas Recap** | **4. Profit Maximization** | **Slide 21 (Summary)** | Review key formulas: E = (dQ/dP)\*(P/Q), MR = P(1 + 1/E), profit max when MR = MC. |

Perfect — let’s make this as friendly and practical as your elasticity explanation!  
Here’s a **beginner-friendly, story-style summary** of your slides from both decks 👇

**🧩 3. Quantifying Demand (Slides 6 – 17)**

**💡 What these slides mean**

These slides help you **measure (“quantify”) demand** — not just draw it.  
They show how to put numbers to demand using formulas and elasticity.

Think of it like turning your “intuition” about buyers into actual math that predicts *how much people will buy* at each price.

**🧃 Example 1: Measuring Price Sensitivity**

When you raise your product price, how much does quantity sold drop?  
That’s **price elasticity**.

Formula in the slide basically says:  
[  
\text{Elasticity} = \frac{%\text{ change in quantity}}{%\text{ change in price}}  
]

💬 Example:  
If price ↑ by 1%, and quantity ↓ by 2%, elasticity = –2.  
→ Very price-sensitive (“elastic”).

If price ↑ by 1% but quantity ↓ only 0.3%, elasticity = –0.3.  
→ Not very sensitive (“inelastic”).

**🎯 Why elasticity isn’t constant**

Even if your demand curve is a straight line, **elasticity changes** along it.  
At high prices (top-left of the graph):

* Each price change is *small*,
* Each quantity change is *big*,  
  → Elastic (big reaction).

At low prices (bottom-right):

* Price change is *big*,
* Quantity barely moves,  
  → Inelastic (small reaction).

So, **same slope ≠ same elasticity**.

**💰 Price, Elasticity, and Revenue**

These slides show a cool trick:

* If demand is **elastic**, cutting price **increases revenue**.
* If demand is **inelastic**, cutting price **reduces revenue**.

It’s like a sweet spot — when demand is **unit elastic (≈ –1)**, total revenue peaks.  
That’s the point companies love to find.

**🧮 Practice formula (example from slide 9)**

When slope = constant, elasticity = changes along the curve because the base values (P and Q) keep changing.  
The math example shows how that works, but conceptually:

Elasticity = “% change in Q” ÷ “% change in P” — it depends on where you start.

**🧠 Big takeaway for Quantifying Demand**

“Elasticity tells us *how much demand reacts*. Once you know that, you can predict what will happen to sales and revenue if prices, income, or competitors’ prices change.”

**💼 4. Profit Maximization (Slides 1 – 21)**

**💡 What these slides mean**

Now that you know how customers react (elasticity),  
this section shows how a **business decides the best price** to **maximize profit** — not just revenue.

**🧃 Step 1: The Core Idea**

When you sell **one more unit**, ask two questions:

1. How much more **revenue** do I earn? (That’s *Marginal Revenue* = MR)
2. How much more **cost** do I pay? (That’s *Marginal Cost* = MC)

👉 If **MR > MC**, sell more.  
👉 If **MR < MC**, you’re selling too much.  
👉 The sweet spot is when **MR = MC** — that’s *profit maximization*.

**🍦 Example: The Ice-Cream Truck**

Jack rents a truck for $15 (fixed cost) and pays $3 per cone (marginal cost).  
Demand: p = 10 – 0.5 Q

Steps:

1. Find MR = 10 – Q
2. Set MR = MC → 10 – Q = 3 → Q = 7
3. Find price → p = 10 – 0.5×7 = 6.5
4. Profit = (6.5×7) – (3×7 + 15) = $9.5

So, best price = $6.50, quantity = 7, profit = $9.50.  
That’s the “happy point” where he makes the most.

**🧱 Step 2: Market Power**

When a firm has control over price (like a monopoly or strong brand):

* It charges **above MC**,
* Produces **less quantity**,  
  → Customers pay more, and total welfare (consumer + producer surplus) falls — called **deadweight loss**.

So, market power means higher profits but less efficiency.

**💰 Step 3: Costs – Fixed vs Variable**

* **Fixed costs:** same no matter how much you sell (e.g., truck rental).
* **Variable or marginal costs:** rise with each extra unit (e.g., cones, labor).  
  Real businesses often have **U-shaped average costs** — they drop first (efficiency), then rise again (overtime, limits).

**📈 Step 4: The Graph Summary (Slide 21)**

* **Demand curve (D)** slopes downward.
* **Marginal Revenue (MR)** lies below D.
* **Marginal Cost (MC)** rises upward.
* **MR = MC** → profit-max quantity Qₘ.
* The price on D at Qₘ is Pₘ.
* The shaded gap between revenue and cost = profit.
* Area beyond Qₘ = deadweight loss (lost welfare).

**🎯 In short**

| **Concept** | **Meaning** | **Real-World Analogy** |
| --- | --- | --- |
| MR = MC | Best balance between gain & cost | Sweet spot on your treadmill — fastest pace without burning out |
| Market Power | Ability to charge above cost | Apple pricing iPhones |
| Deadweight Loss | Lost benefit to society | People who wanted to buy but price was too high |

**🚀 Big takeaway for Profit Maximization**

“Firms make the most profit where the extra dollar earned from selling one more unit equals the extra dollar spent to make it. Beyond that, you’re working harder for less reward.”

Would you like me to turn this into a **one-page colorful “cheat sheet” PDF** combining both topics (Quantifying Demand + Profit Maximization) for your quick EMBA revision?