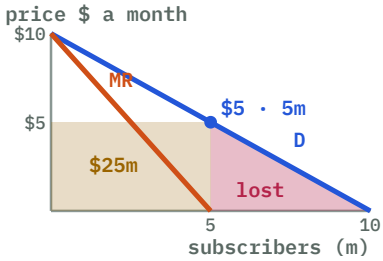
Are Amazon and Google monopolies?

A seller with no rival picks fewer customers and a higher price. With a big fixed cost, one firm can be cheaper than two, so digital markets lean toward one. Being big is not the same as abusing it. The numbers, the two tests, the court cases. Question 6 of the ten to ask about any app.

1 One seller

MR = MC

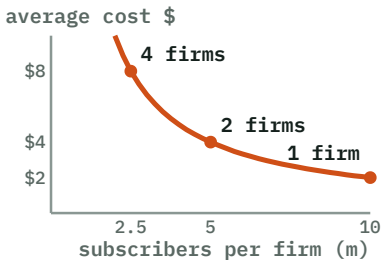
- **Monopoly** = one seller, no close rival · **Tide** = only streaming service on **Coralia** (toy island) · **Noa** uses the apps · **Kai** runs a bakery
- Demand `P = 10 − Q` (Q millions, P $ a month) · **MC** (cost of 1 more subscriber) `$0` · fixed `$20m` a month
- **MR** (marginal revenue = what 1 more adds) `= 10 − 2Q` · falls 2× as fast as P · `MR = MC = 0` → **Q = 5m, P = $5** · revenue `$25m` → keeps `$5m`
- **Market power** = price above MC without losing all customers ($5 vs $0)
- **Deadweight loss** = value lost, 5m left out · `½ × 5 × $5 = $12.5m`
- Practice: music plan `P = 12 − Q`, fixed $24m → **6m at $6**, revenue $36m, keeps $12m, lost `½ × 6 × $6 = $18m`



2 One firm cheaper than two

natural monopoly

- 3 forces → one winner: **falling average cost** (Lesson 3) · **network effects** (Lesson 2) · **data** (Lesson 4)
- **Average cost** = total cost ÷ users · `$20m ÷ 10m = $2` · 2 services, 5m each → `$4` · 4 services → `$8`
- Price war (each undercuts the other) → price ≈ $0 (MC = 0) → neither pays $20m
- **Natural monopoly** = 1 firm serves all at a lower average cost than 2+ could
- Practice: map app **Compass**, $30m, 15m users → 1 app `$2` · 3 apps `$6` each · at $3: `15 × 3 = $45m` ✓ · `5 × 3 = $15m` each ×



3 Size or abuse?

when the price is $0

- Free app → no high price to see → 2 tests: **big?** (cheapest, best) · **abuse?** = using the position to shut rivals out (court decides) · US law → how power was got or kept, not size alone · EU → extra rules for **gatekeepers** (biggest platforms)
- `SIZE` 9 in 10 searches · lowest average cost · 8 in 10 map searches `ABUSE?` paid to be the only engine installed · buying the rising rival · paying to block rival apps · ranking own games first `NEITHER` liked free product · $5 ad-free tier · best-rated photo app · $2 storage plan
- Market power at **$0** → more ads · more data taken · quality not improved · rivals bought or copied · practice: 10 → 15 ads/hour, 30 s, 2 h a day → `5 × 0.5 × 2 = 5` min/day more
- **A share of what?** Amazon ≈ 38% of US online sales (eMarketer, research firm, 2019) vs ≈ 4% of all US retail (Amazon) · practice: 80% of search ads × ¼ of all ad $ = `20%`

4 Real world

dated facts

- **Google** ≈ 90 of 100 searches worldwide (StatCounter, April 2026)
- **European Commission** (EU competition authority), June **2017**: `€2.42 bn` fine, favoring its own shopping service · upheld by the EU's top court, Sept **2024**
- **US**, Aug **2024**: Judge Amit Mehta → illegal monopoly in general search, partly by paying to be the **default** (the engine used unless you change it) · Sept **2025**: no Chrome sale · deals to be the only default banned · some data shared · appeals to a higher court undecided (Oct 2026)
- **Amazon**: FTC (US competition agency) + states sued, Sept **2023**, blocking rivals → open, trial set for 2027
- **Standard Oil** (oil refiner) broken up, **1911** · **Microsoft**: ruling **2000**, breakup dropped, settlement (agreement) **2001** · **Digital Markets Act** (EU): Nov 2022 → 6 gatekeepers Sept 2023 (Alphabet, Amazon, Apple, ByteDance = TikTok, Meta = Facebook, Microsoft) → rules since March 2024
- Debate, no verdict: `ACT` tipping + lock-in (all move to one app, and stay) keep rivals out → law must keep the door open · `WAIT` free, good services; a rival is one download away

5 So what?

question 6 of 10

- **Ten questions to ask about any app** · 1 · Who pays, if not you? · 2 · How many others are on it? · 3 · What does one more copy cost? · 4 · What does it know about you, and what is that worth? · 5 · Why did the price just move? · **6 · Could a rival take its place?** → costs, network effects, data keep rivals out? what does the firm do with its position?
- Noa → free search that works well · Kai → buys ads; if one firm sells nearly all, little choice on price → Lesson 7 (copyright: a monopoly granted by law)

Watch out: big ≠ abuse · a share depends on the market counted · the monopoly price is read on the **demand** line at the Q where MR = MC, not on the MR line