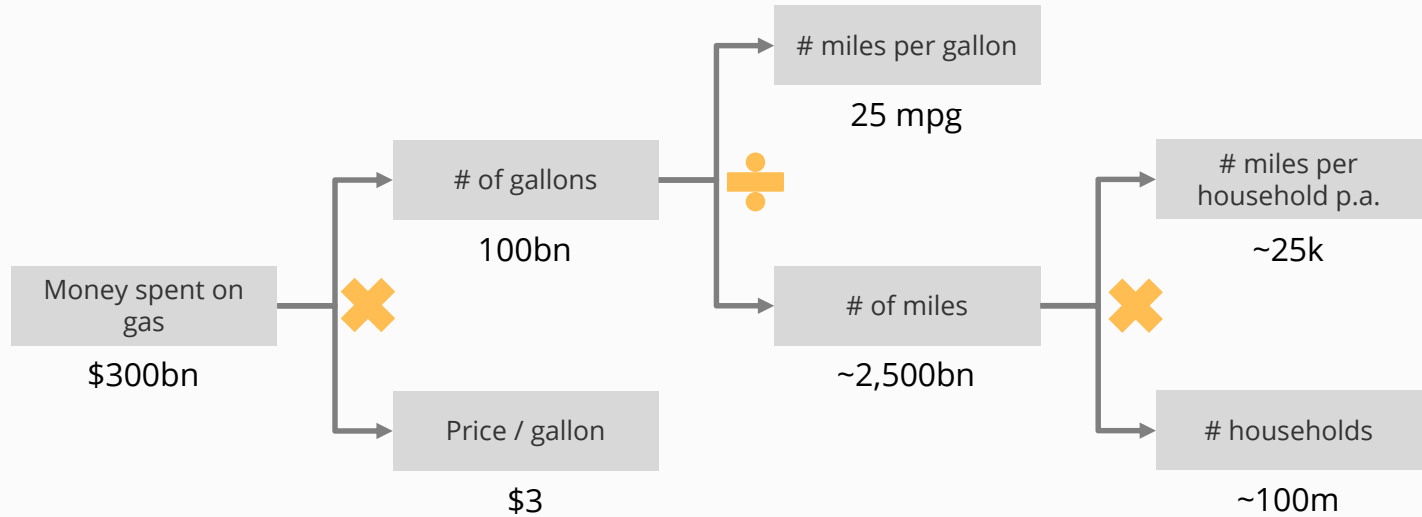


Money spent on gas every year in the US

1

A. Draw issue tree from left to right



B. Calculate numbers from right to left

Socio-economic data for selected countries

	US	UK	Australia	India
Population	~325m	~70m	~25m	~1,400m
Households	~100m	~25m	~10m	~300m
Persons / household	~3	~3	~3	~5
Median HH income	~\$45k	~\$30k	~\$45k	\$3k
Life expectancy	~80y	~80y	~80y	~70y

Key advertising metrics

	Definition	Value range
CPM	Cost per 1,000 impressions	\$5 to \$40
CPC	Cost per click	\$0.5 to \$3
CTR	Clickthrough rate	0.5% to 3%

Sources: adstage.io benchmarking reports for advertising metrics

Estimation questions cheat sheet (2/2)

Selected tech companies, 2018

	Revenue	Monthly Users
Google	Ads: \$115bn Non-ads: \$20bn	YouTube: 2bn Android: 2bn Gmail: 1.5bn Chrome: 1bn
Facebook	Ads: \$55bn	Core: 2.3bn Messenger: 1.5bn WhatsApp: 1.5bn Instagram: 1bn
Amazon	AWS: \$25bn eCommerce: \$210bn	Prime: 100m
Twitter	Ads: \$3bn	320m
Apple	Devices: \$260bn	iPhone: 250m p.a.