The Simple AP® Human Geography Unit 1 Cheat Sheet

1.1 Maps: Types & Patterns

Reference vs. Thematic

Reference map: shows where things are (borders, roads, rivers) → navigation. Types: political, physical, road, plat (property lines).
Thematic map: shows the pattern of 1 topic (e.g., income, religion, birth rate, crops grown).

Type	Shows	Example
Choropleth	Shading	% voting
Dot density	1 dot = X	Farms
Grad. symbol	Size = amt	City pop.
Isoline	Equal-value	Elevation
Cartogram	Area ∝ data	GDP

Choropleth trap: big units look dominant → map rates (per capita), not raw totals.

Spatial Patterns on Maps

Absolute vs. relative distance: miles/km vs. time, cost, connectivity (e.g., 2 hrs by train).
Absolute vs. relative direction: N, S, E, W vs. "out West," "Down Under," "up north."
Clustered: grouped close (tech firms in Silicon Valley). **Dispersed**: spread out (Plains farmsteads).
Elevation: height above sea level.

Maps Are Selective

Every map = mapmaker's choices (what to show, colors, projection, scale) → can mislead.

⚠ A thematic map shows WHERE, not WHY. Pattern ≠ cause; you supply the process.

✓ Map stimulus: name map type → describe the pattern → explain it w/ a process.

1.1 Projections & Map Scale

Map Projections

Projection (globe → flat map): ALL distort ≥1 of **shape, area, distance, direction**.

Projection	Keeps	Distorts
Mercator	Shape, dir.	Area (poles)
Gall-Peters	Area	Shape
Azimuthal	Dir. (center)	Edges

Mercator: keeps shapes & compass direction → sea navigation. Greenland looks ≈ Africa (really ~1/14 its size); areas near poles inflated.
Equal-area (Gall-Peters, Goode): true relative size → fair for comparing country data.
Robinson: compromise; distorts all a little.
Conic: good for mid-latitudes (US maps).

Map Scale (Cartographic)

Map scale: map distance : real distance. **Fraction** (1:24,000), **written** (1 in = 1 mi), **graphic** (bar).

Large scale	Small scale
1:24,000	1:50,000,000
Small area shown	Large area shown
High detail	Low detail
City street map	World map

Graphic scale (bar) stays true if map is resized.

⚠ Large scale = ZOOMED IN (small area, big fraction). The most-flipped term in Unit 1.

✓ Pick projection by purpose: navigation → Mercator; compare sizes/data → equal-area.

1.2 Geographic Data

How Data Is Collected

Quantitative (numbers): census, surveys, satellite images, GPS → patterns, rates, change.
Qualitative (descriptions): field observation, interviews, photos → meaning, "why."

Source	Type	Best for
Census	Quant.	Pop., homes
Survey	Both	Habits
Field obs.	Qual.	Land use
Interview	Qual.	Experience
Satellite	Quant.	Land change

Geospatial Technologies

GIS (Geographic Information Systems): stores & layers spatial data → overlay maps to find relationships (flood zones + housing).
GPS: satellites find exact location (lat/long) → navigation, tracking, field mapping.
Remote sensing: data gathered from a distance (satellites, planes, drones) → deforestation, sprawl, crop health, disaster damage.
Data gaps: undercounts (homeless, rural), old data (census every 10 yrs), small samples.
Online maps: Google Earth, OpenStreetMap → anyone can make & share maps.

Don't Mix Up

⚠ GPS = finds location. GIS = analyzes layered data. Remote sensing = collects images.

✓ FRQ "limitation of the data": name who/what is missing, the scale, or the date of the data.

1.3 The Power of Geographic Data

Who Uses Geographic Data

User	Use	Data
People	Routes	GPS
Businesses	Store sites	GIS, census
Gov'ts	Districts	Census
NGOs	Aid	Satellite

Governments: US census → apportions House seats, redraws districts, allocates federal $ (schools, roads, hospitals, disaster aid).
Businesses: market data (customers, income, traffic) → site new stores, plan delivery routes.
Individuals: navigation apps, ride-share, home & school searches, delivery tracking.

Analyzing Relationships

Spatial analysis: compare data among places → reveal patterns. John Snow mapped 1854 London cholera deaths → Broad St. pump.
Map overlay: combine layers (income + grocery stores) → find food deserts & injustice.

Power & Ethics

Data = power: who maps data shapes decisions; maps can exclude (1930s **redlining** maps).
Privacy: phone tracking & data sales raise ethical concerns about who sees where you go.

⚠ Data informs decisions; it doesn't make them. Tie data → a specific decision → a scale.

✓ Strong FRQ example: census data → reapportionment → states gain/lose House seats.

1.4 Spatial Concepts

Location & Place

Absolute location: exact spot on Earth's grid (lat/long), e.g., 40.7°N, 74.0°W = NYC.
Relative location: position vs. other places ("NE of Philadelphia"). Shifts w/ new connections.
Site: physical traits of a place (landforms, water, climate). **Situation**: location vs. other places.
Place: point w/ unique human & physical traits → **sense of place** (meaning people attach). **Space**: area between places; how things are arranged.
Toponym: place name; shows history & power (Leningrad → St. Petersburg, 1991).

Distance & Interaction

Distance decay: interaction ↓ as distance ↑ (fewer visits, calls, trade w/ far places).
Time-space compression: jets & internet shrink relative distance → weakens distance decay.
Flows: movement of people, goods, money, info between places (migration, trade, data).

Distribution

Pattern	Arrangement	Example
Clustered	Close	Shops at exit
Dispersed	Spread out	Farmsteads
Linear	On a line	Rail towns

⚠ Time-space compression does NOT shrink absolute distance — only relative (time/cost).

✓ Explaining a flow: name the link (tech, trade route) → say how it alters distance decay.

1.5 Human–Environment Interaction

Nature & Society

Human–environment interaction: people use, adapt to & change the env.; env. limits people.
Natural resources: renewable (solar, wind, timber) vs. nonrenewable (oil, coal, minerals). **Land use**: how land is used (farm, urban, industry).
Sustainability: meet present needs w/o harming future generations' ability to meet theirs.

Two Theories

Env. determinism	Possibilism
Env. dictates culture	Env. limits options
Humans passive	Humans adapt (tech)
Rejected (racist)	Accepted today

Environmental determinism: physical env. (esp. climate) causes cultural & economic traits. Used to justify colonialism → rejected today.
Possibilism: env. sets limits & options; culture & tech decide the outcome (Dutch polders, Andean terraces, desert irrigation in Israel).

Human Impacts

Modifications: dams, terraces, irrigation, deforestation, urban heat islands. Harm: Aral Sea shrank from cotton irrigation. Help: reforestation.
Cultural ecology: how a culture & its local env. shape each other over time (e.g., farming).

⚠ Never argue env. determinism as correct on an FRQ — use possibilism + human choice/tech.

✓ Show both directions: env. limits humans AND humans change the env. around them.

1.6 Scales of Analysis

Scale of Analysis

Scale of analysis: level data is grouped at: **global, regional, national, local** (state, city).
Key idea: patterns & processes look diff. at diff. scales → changing scale reveals or hides variation.

Scale	Unit	Shows
Global	Countries	Core/periph.
Regional	Regions	Bloc trends
National	States	Inner gaps
Local	Cities	Fine detail

Example: national avg. income looks high, but county data shows poor rural pockets.
Scale & policy: zoning (local) vs. laws (national) vs. treaties (global) → diff. solutions.
Example: world pop. growth is slowing (global) but still fast in Niger (national scale).

Map Scale ≠ Scale of Analysis

Map scale: ratio map : Earth. **Scale of analysis**: level of data grouping. Different!
Tip: large map scale usually ↔ local analysis.

Linking Scales

Multi-scale thinking: local event ← global process (Ohio factory closes ← global outsourcing).
Aggregation trap: averages over big units hide inequality; smaller units show more detail.

⚠ "Scale" on an FRQ usually = scale of ANALYSIS, not map scale. Read the prompt.

✓ "How does scale affect interpretation": contrast data at 2 scales + explain why.

1.7 Regional Analysis

Types of Regions

Type	Defined by	Example
Formal	Shared trait	Corn Belt
Functional	Node+flows	Metro area
Perceptual	Beliefs	"The South"

Formal (uniform): ≥1 trait shared throughout (language, climate, crop), e.g., Quebec.
Functional (nodal): centered on a node, tied by flows (commuting, TV market, delivery area, airline hub). Pull ↓ w/ distance (distance decay).
Perceptual (vernacular): mental image; borders vary by person (Midwest, Dixie, "Middle East").

Boundaries & Debates

Boundaries: transitional (fade), contested or overlapping; a place sits in many regions at once.
Contested regions: is Mexico in North or Latin America? Depends on the criteria.
Regionalization: geographers group places by chosen criteria; regions are tools, not facts.
Same place, 3 regions: Chicago = Corn Belt (formal), metro (functional), Midwest (perceptual).

Unit 1 on the Exam

FRQ verbs: identify, describe, explain, compare. 3 FRQs, 7 pts each; Q2 & Q3 use stimuli.

⚠ Functional region = defined by connections/flows, NOT a shared trait.

✓ Unit 1 terms (scale, region, distance decay) appear in EVERY unit's FRQs. Use them by name.