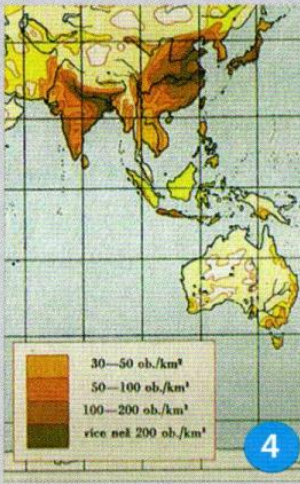
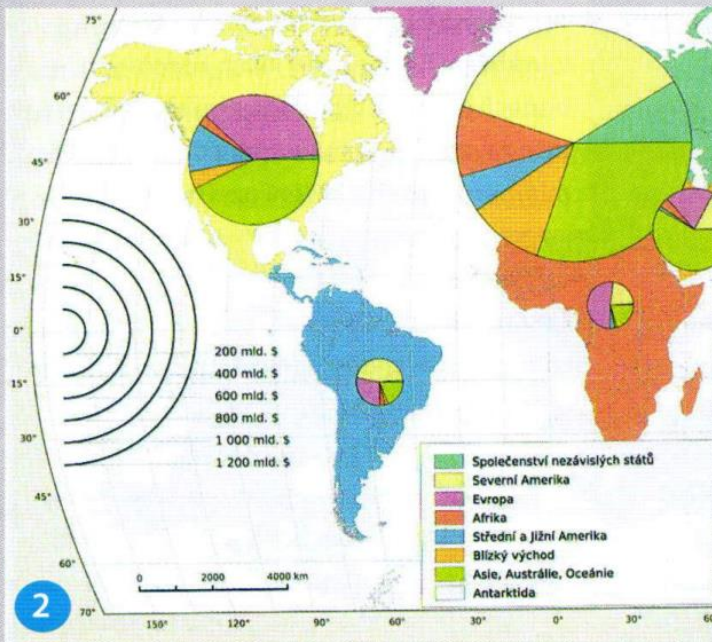
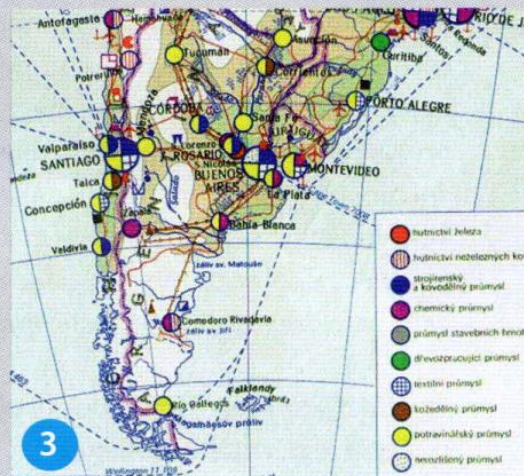
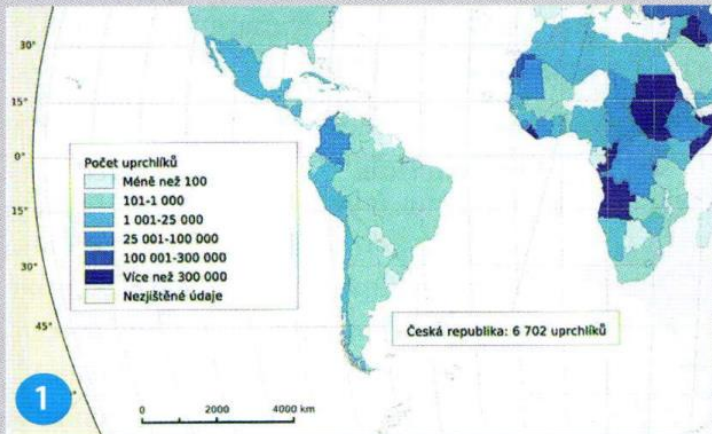


Kartografická vizualizace & chyby

Kompozice – mapa, poster

Lukáš HERMAN

Takhle ne



Obr. 1 – Příklad záměny metody pro zpracování absolutních a relativních hodnot. Data jsou typická pro zpracování metodou kartodiagramu, ale jsou chybně zpracovány „kartogramem“.

Obr. 2 – Nevhodné velikosti diagramů (špatná stupnice). Diagramy zakrývají podstatné části mapového podkladu.

Obr. 3 – Jsou-li v mapě rozdílné velikosti znaků, musí být také stupnice, která čtenáři sdělí hodnotu jevu.

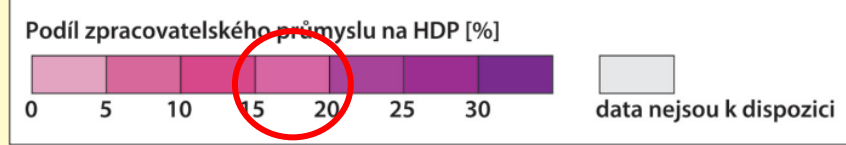
Obr. 4 – Příklad stupnice plně chybné, kromě jiného je zde překryv hranic intervalů.

Obr. 5 – Na příkladu chybí stupnice. Nestáčí napsat, že velikosti „terčů“ (správně kruhových diagramů) jsou úměrné počtu obyvatel.

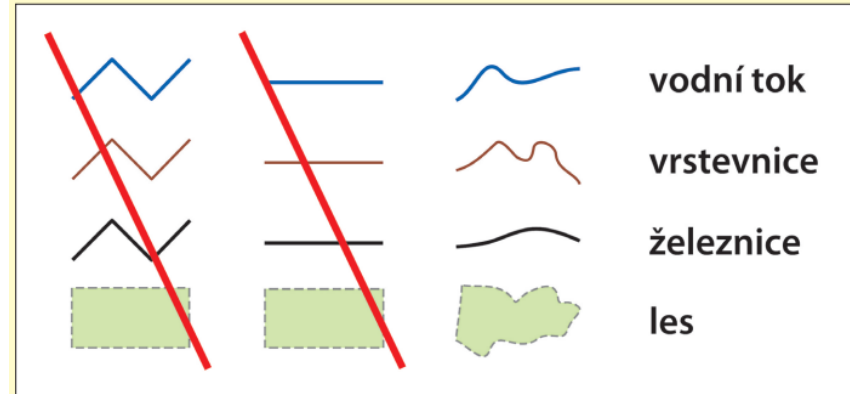
Obr. 6 – Příklad vážné chyby při tvorbě stupnice. Se změnou struktury nebyla dodržena rostoucí intenzita jevu.

LEGENDY

- Proč je tak důležitá?
- Musí být vždy součástí mapy?



Obr. 2.: Ukázka „propadání“ barev (4. kategorie zleva má špatný odstín)

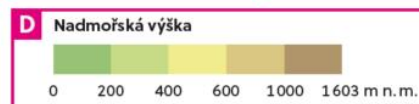
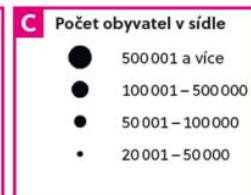
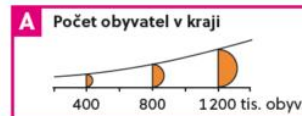
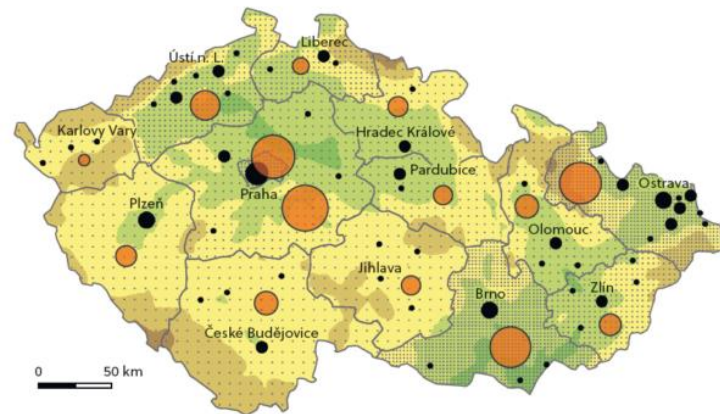


Obr. 3.: Využití defaultního nastavení legendy v programu ArcGIS bez invence autora



Obr. 4.: Nesprávná prezentace znaku v legendě (liniový znak je nahrazen polygonem).

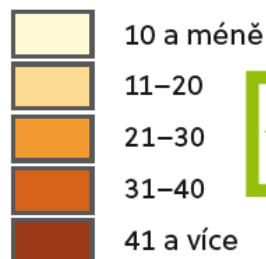
Zdroj obrázků: archiv autorů



LEGENDY

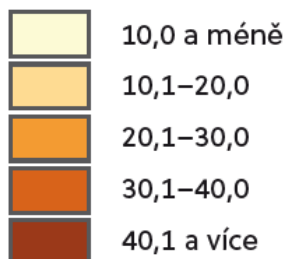
diskrétní jevy

celočíslné

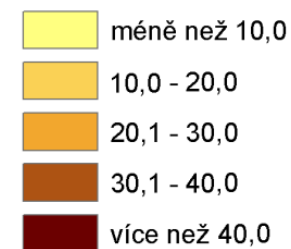
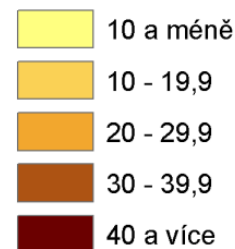


intervaly se nepřekrývají
a navazují na sebe

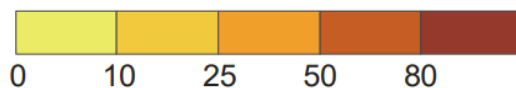
neceločíselné



intervaly se nepřekrývají a navazují na sebe
za předpokladu vyjádření jevu s přesností 0,1



Podíl orné půdy na celkové rozloze regionu [%]

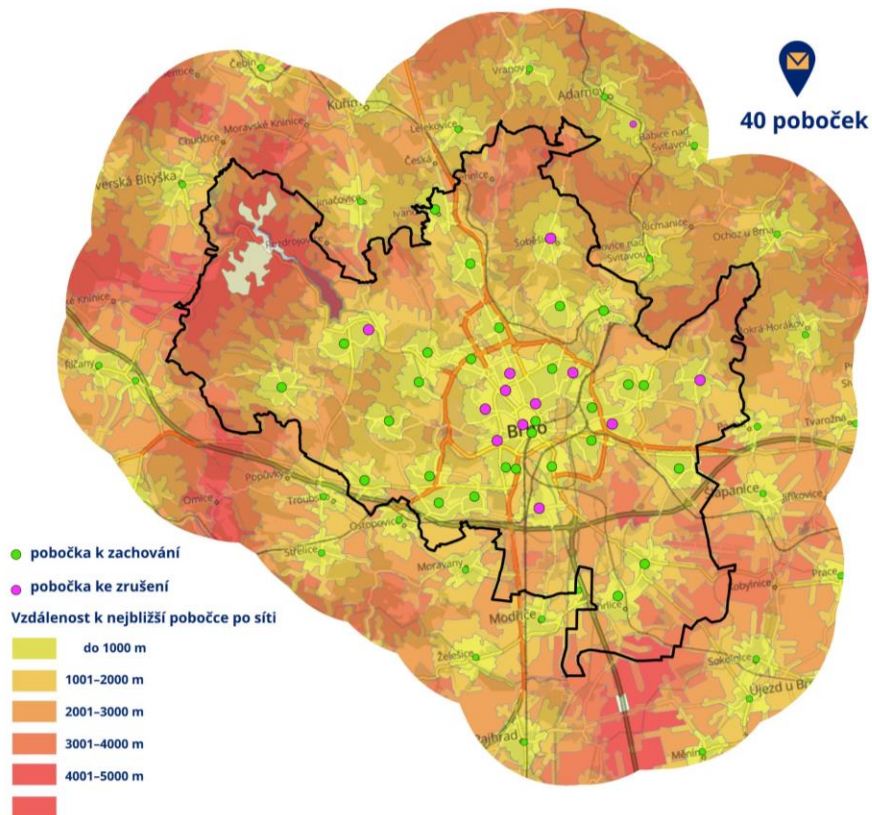


Obr. 4. Doporučená podoba legendy kartogramu pro spojité jevy.

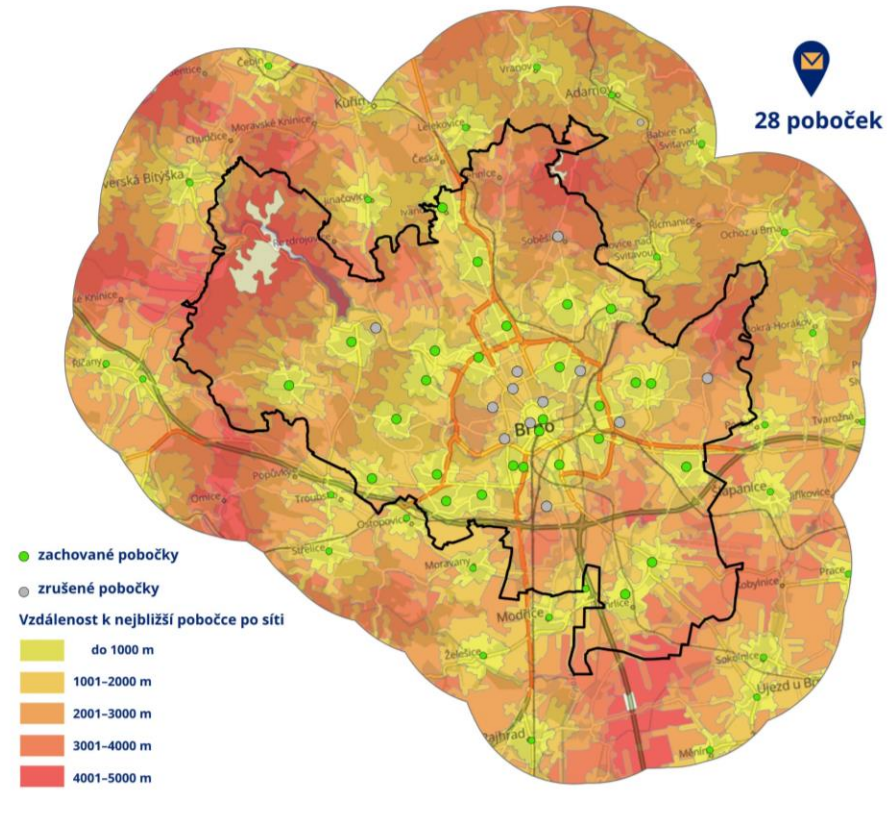


LEGENDY

DOSTUPNOST POBOČEK ČESKÉ POŠTY V BRNĚ
stav před zrušením: duben 2023



DOSTUPNOST POBOČEK ČESKÉ POŠTY V BRNĚ
stav po zrušení: červenec 2023



Data:
Aktuální počet provozovaných poboček v Brně včetně poboček "Pošta partner"
Dostupnost je počítána k nejbližší pobočce pošty, včetně poboček mimo území Brna
<https://www.ceskaposta.cz/-/ceska-posta-zrusi-300-svych-pobocek>



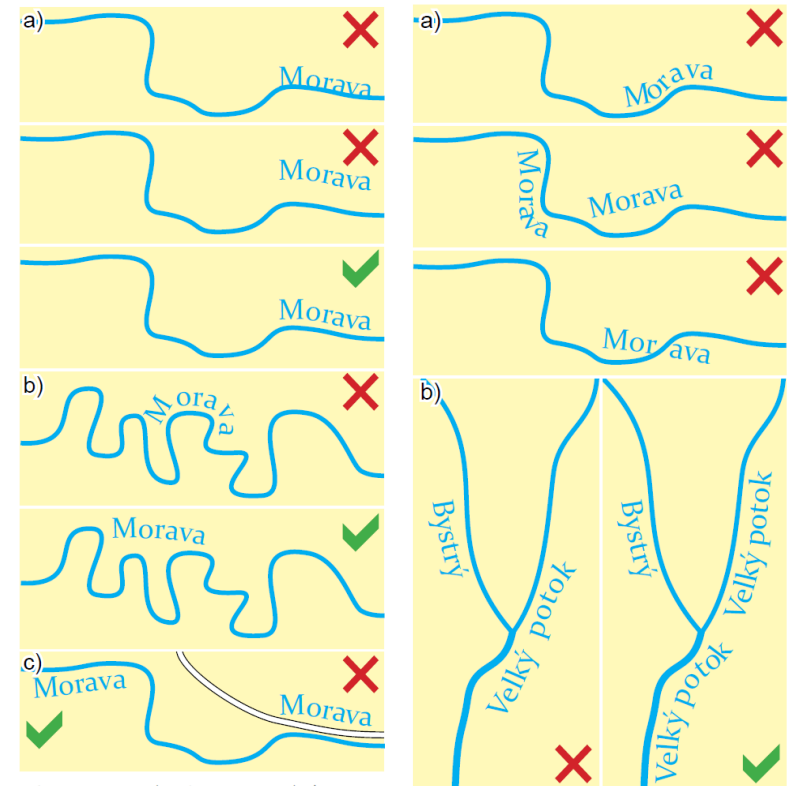
POPIS

- K čemu popis v mapě složí?
- Písma a fonty

Břeclavských běhů
Břeclavských běhů
Břeclavských běhů



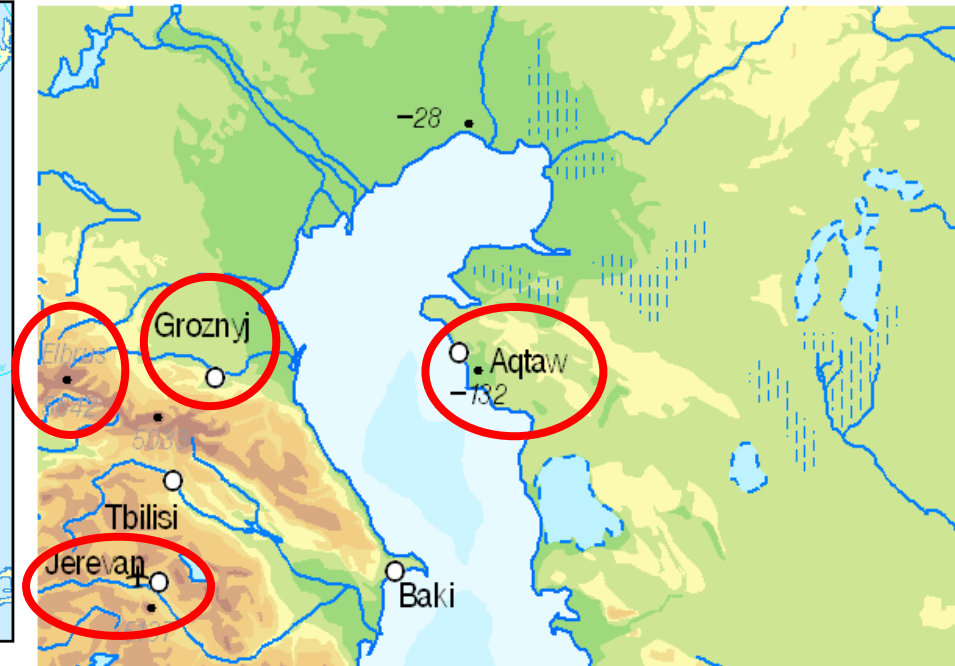
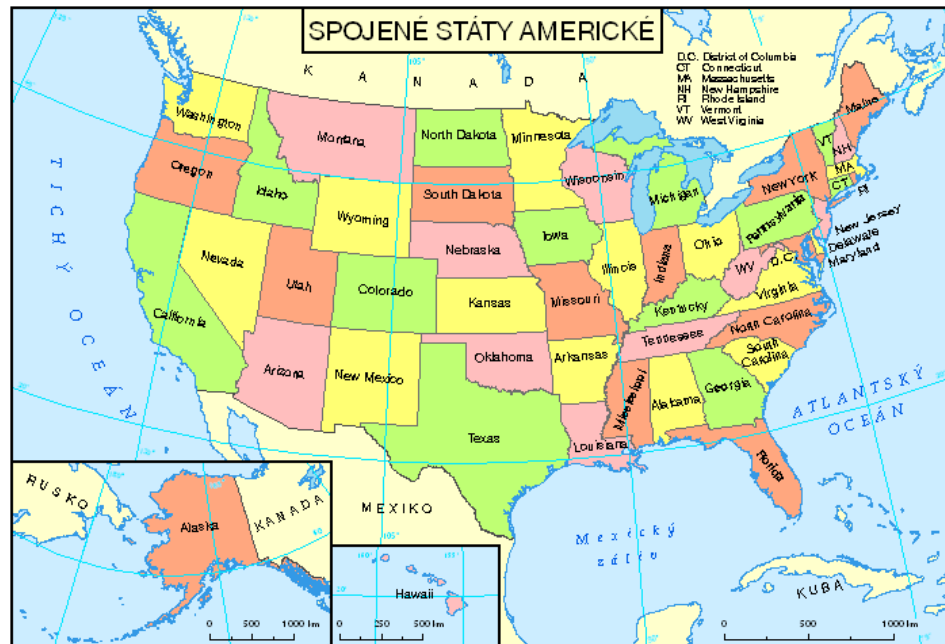
Obr. 9.36 – (Ne)vhodné zarovnání víceřádkového popisu figurálních prvků.



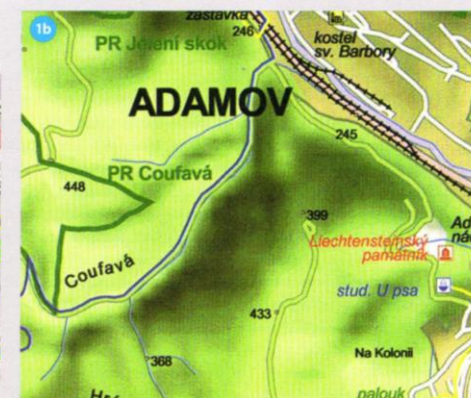
Obr. 9.38 – Zásady umístování popisu liniových prvků.

SC I

POPIS

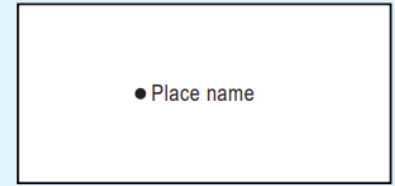
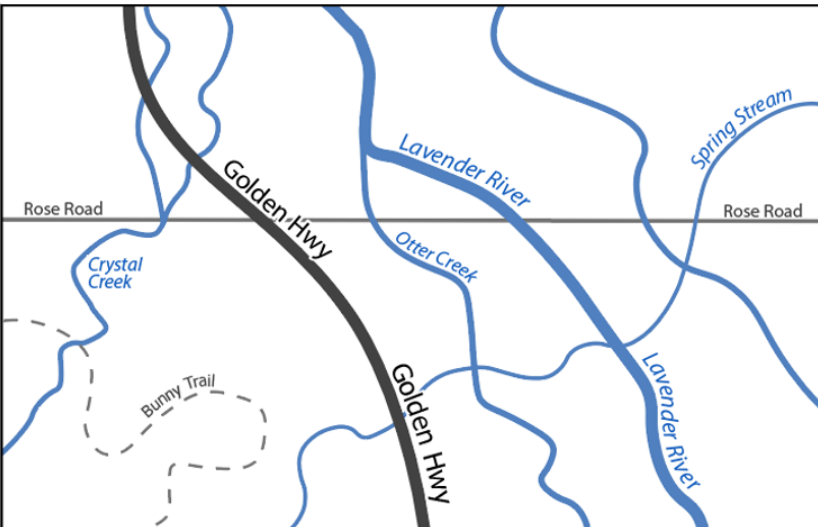
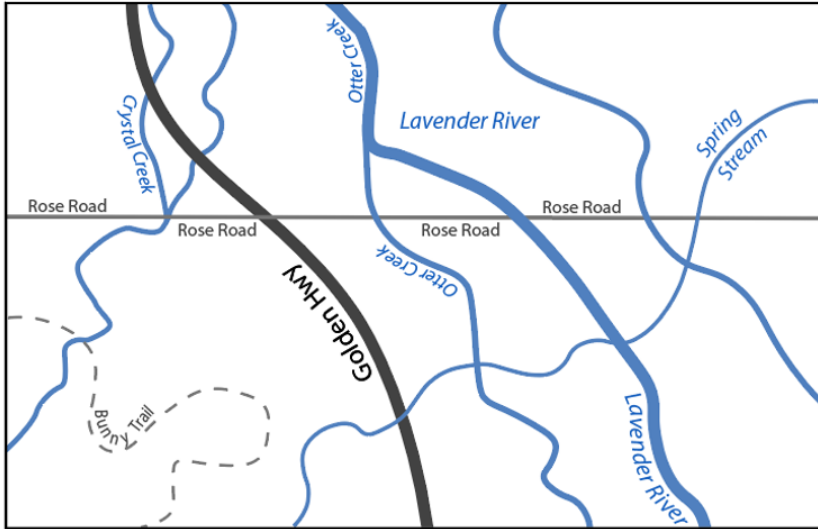


orzita

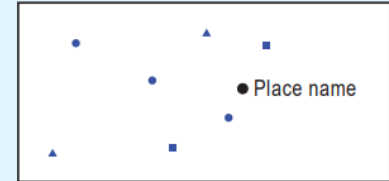


Obr. 1a, b – Nevhodně zvolená barva písma ve vztahu k podkladu. 1a – Bílé písmo na oranžovém a zeleném podkladu společně s přesahem písma v popisu ulic způsobuje špatnou čitelnost celé mapy. 1b – Přestože jsou barvy písma zvoleny asociativně podle druhu objektů, je místy popis nečitelný kvůli barvě podkladu (zelená na zeleně).

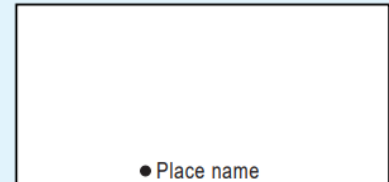
POPIS



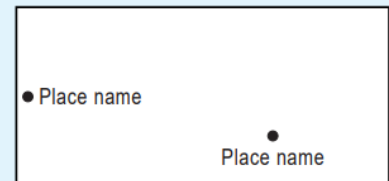
Ensure that text isn't too small - generally a minimum of 7pt should be used.



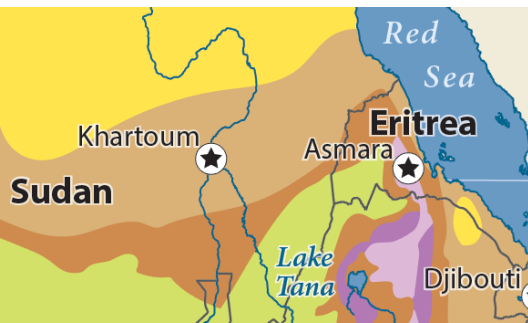
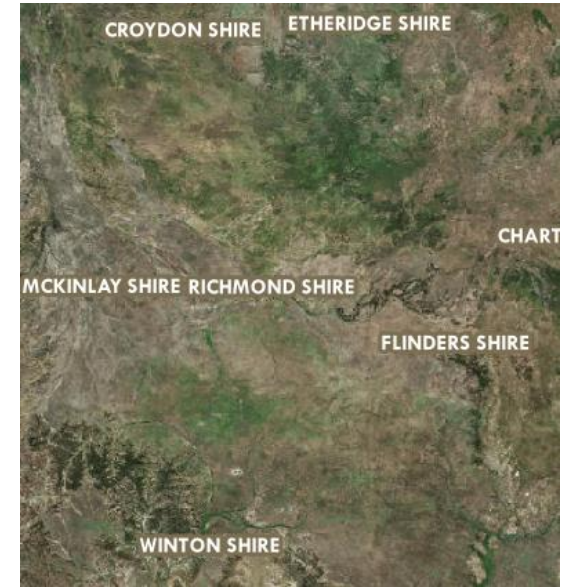
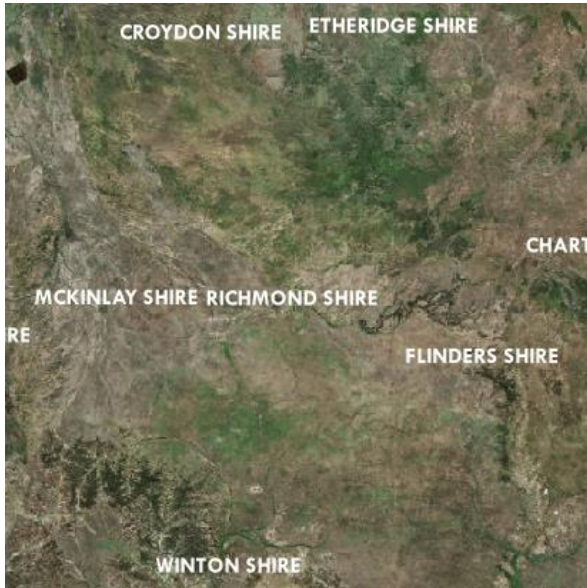
Ensure that symbols are large enough to be seen clearly.



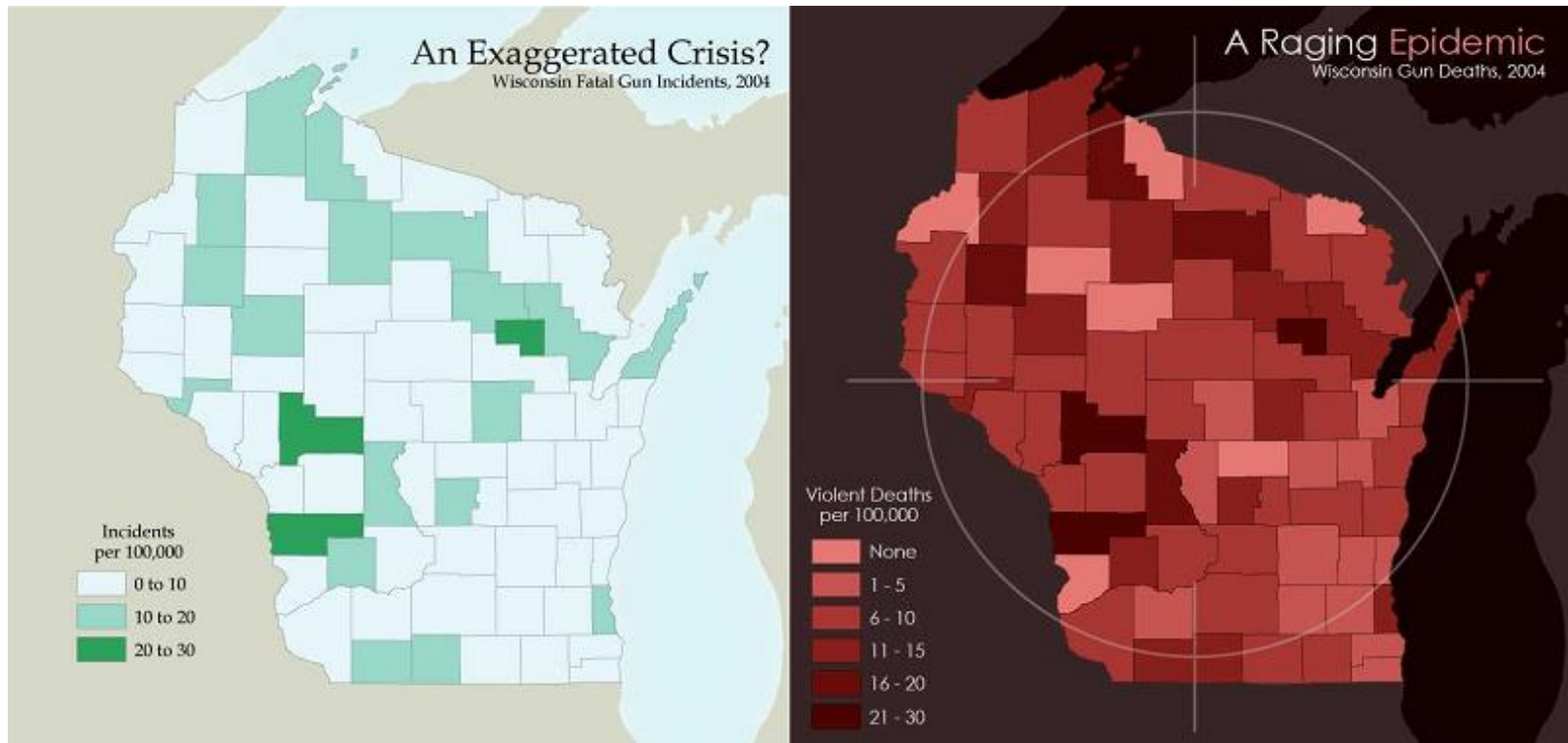
Ensure that text isn't cropped by the frame.



HALO

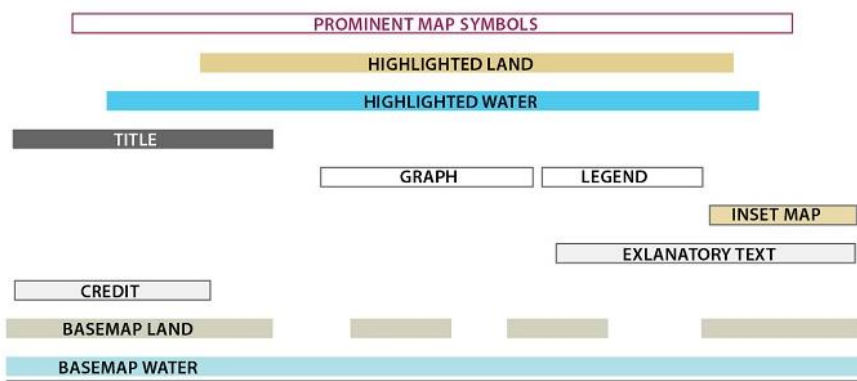


STYL & DESIGN

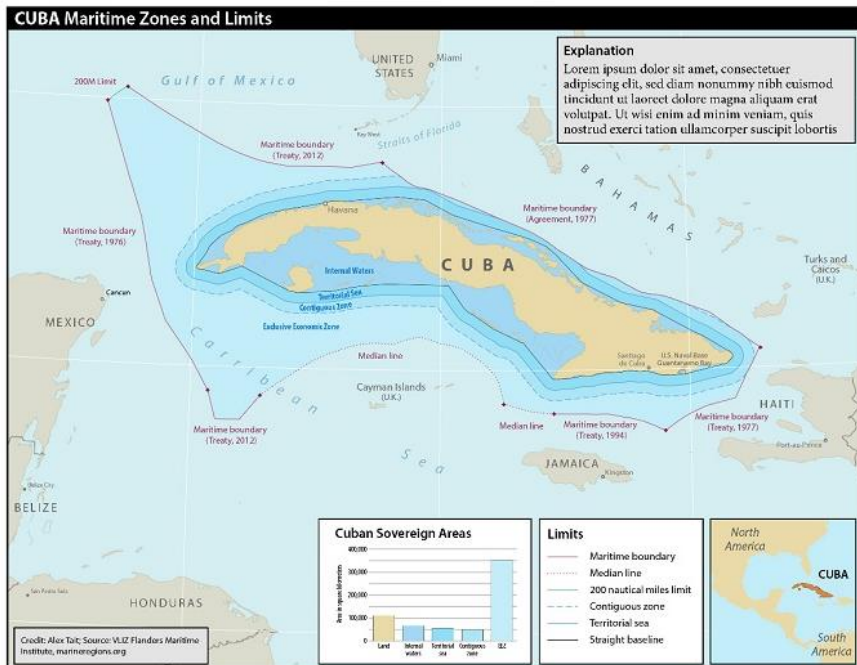


DESIGN

Visual Hierarchy



Map Layout

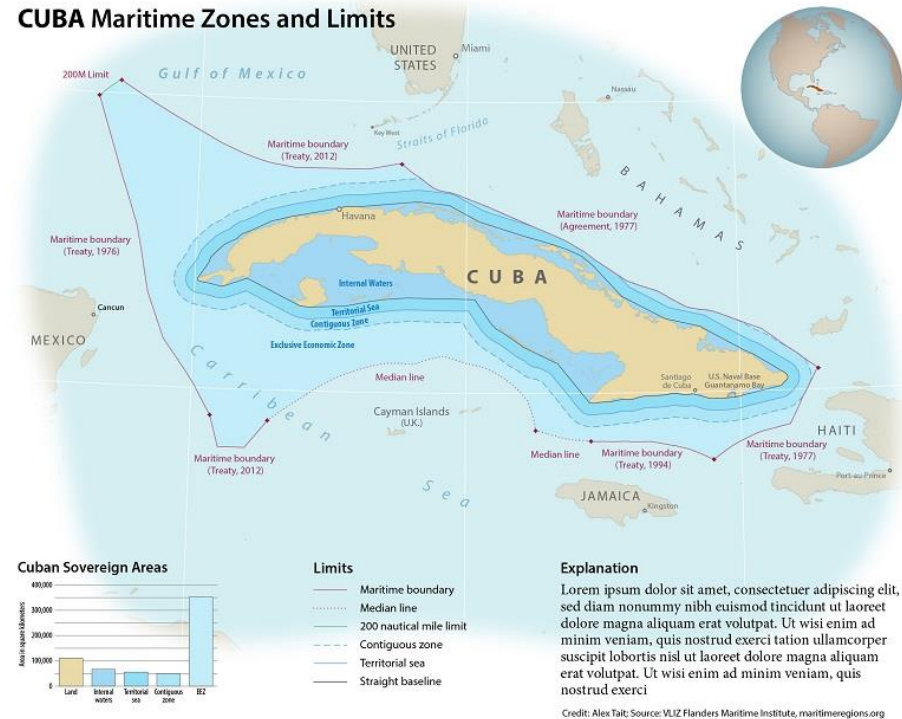
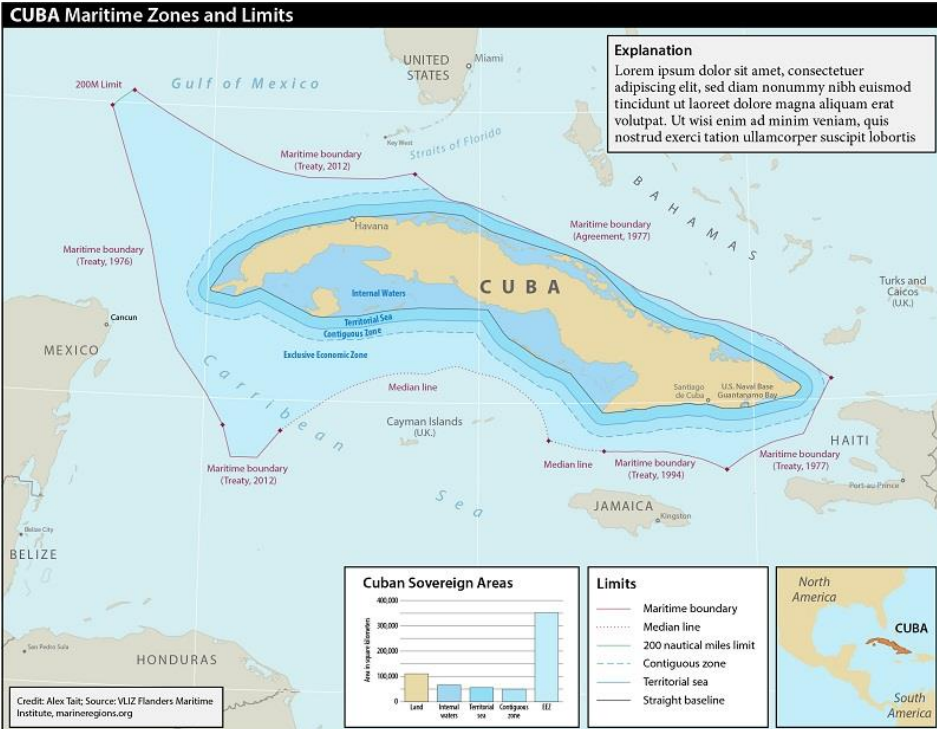


Type	Stronger		vs		Weaker
Size*	Large		vs		Small
Color: Hue	Warm		vs		Cool
Color: Saturation	Intense		vs		Pale
Color: Value‡	Dark/Light		vs		Light/Dark
Focus	Sharp		vs		Blurry
Position	Center		vs		Periphery
Continuity	Edged		vs		Continuous
Grouping*	Isolated		vs		Grouped
Arrangement	Ordered		vs		Random
Distribution	Dense		vs		Sparse
Cropping	Entire		vs		Cropped
Detail*	Intricate		vs		Generalized

*Cartography texts disagree on which is stronger and which weaker.

‡Value's strength depends on the background, dark is stronger on a light background and light on dark one.

DESIGN



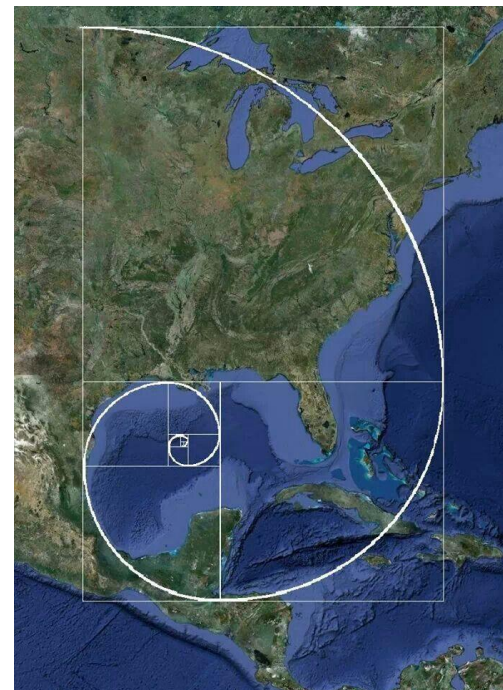
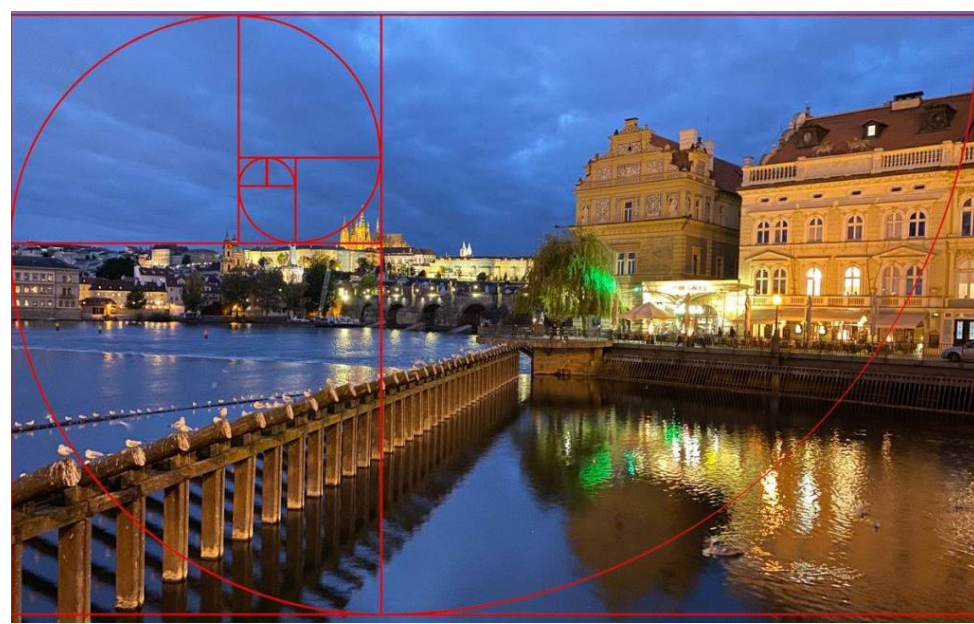
ROZVEŽENÍ MAPOVÉHO LISTU

	1:1 			
	7:8 			
	1:2 		16:9 	
	9:8 		10:7 	

ZLATÝ ŘEZ

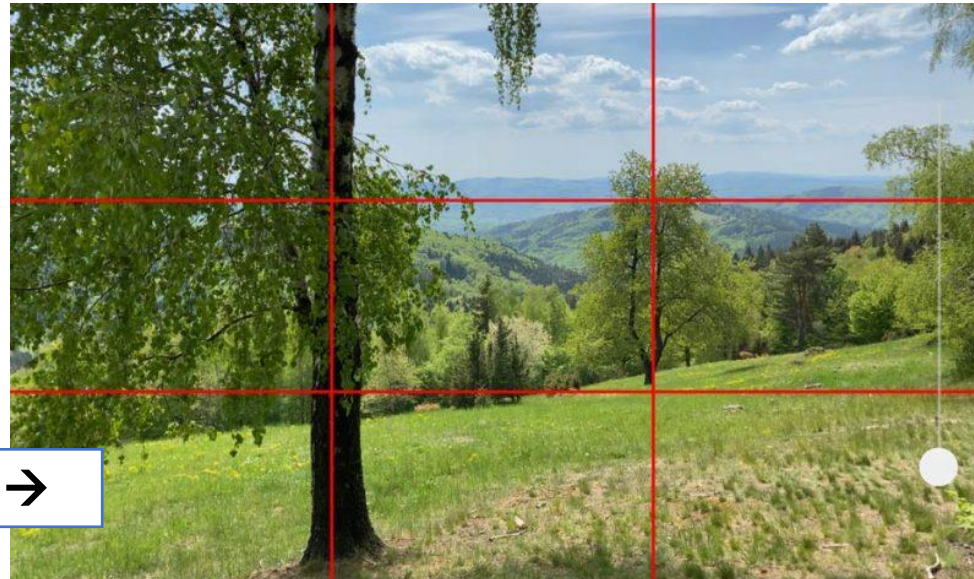
$$\frac{a + b}{a} = \frac{a}{b}$$

1,61



akulta,

Pravidlo třetin →



KVÍZ ...

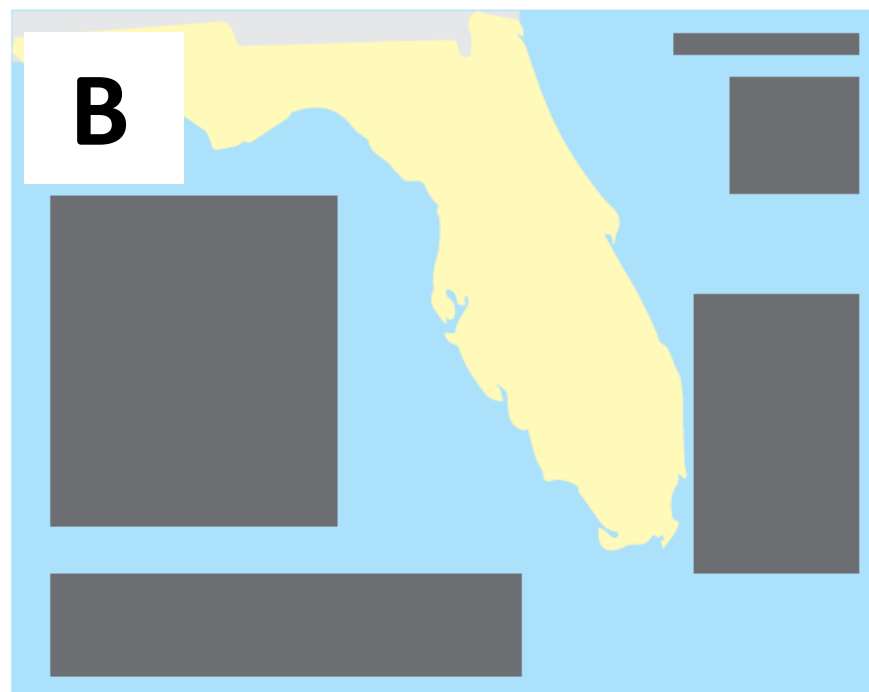
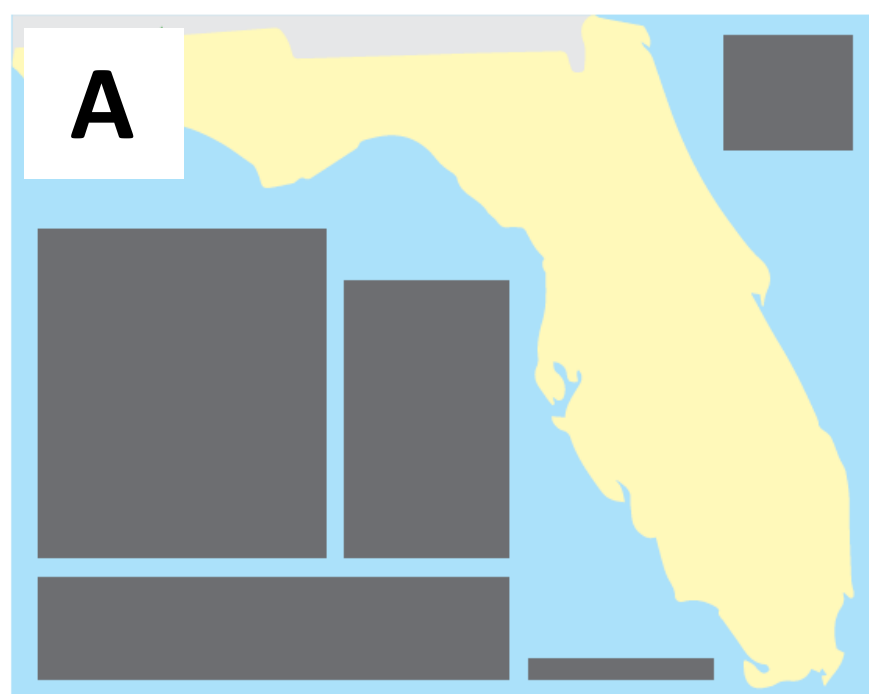
Urči, která varianta mapového layoutu je **správná / lepší**

V potaz berte uvedenou **charakteristiku**

Pokud není uvedeno jinak, vybírá se jedna možnost ze dvou.

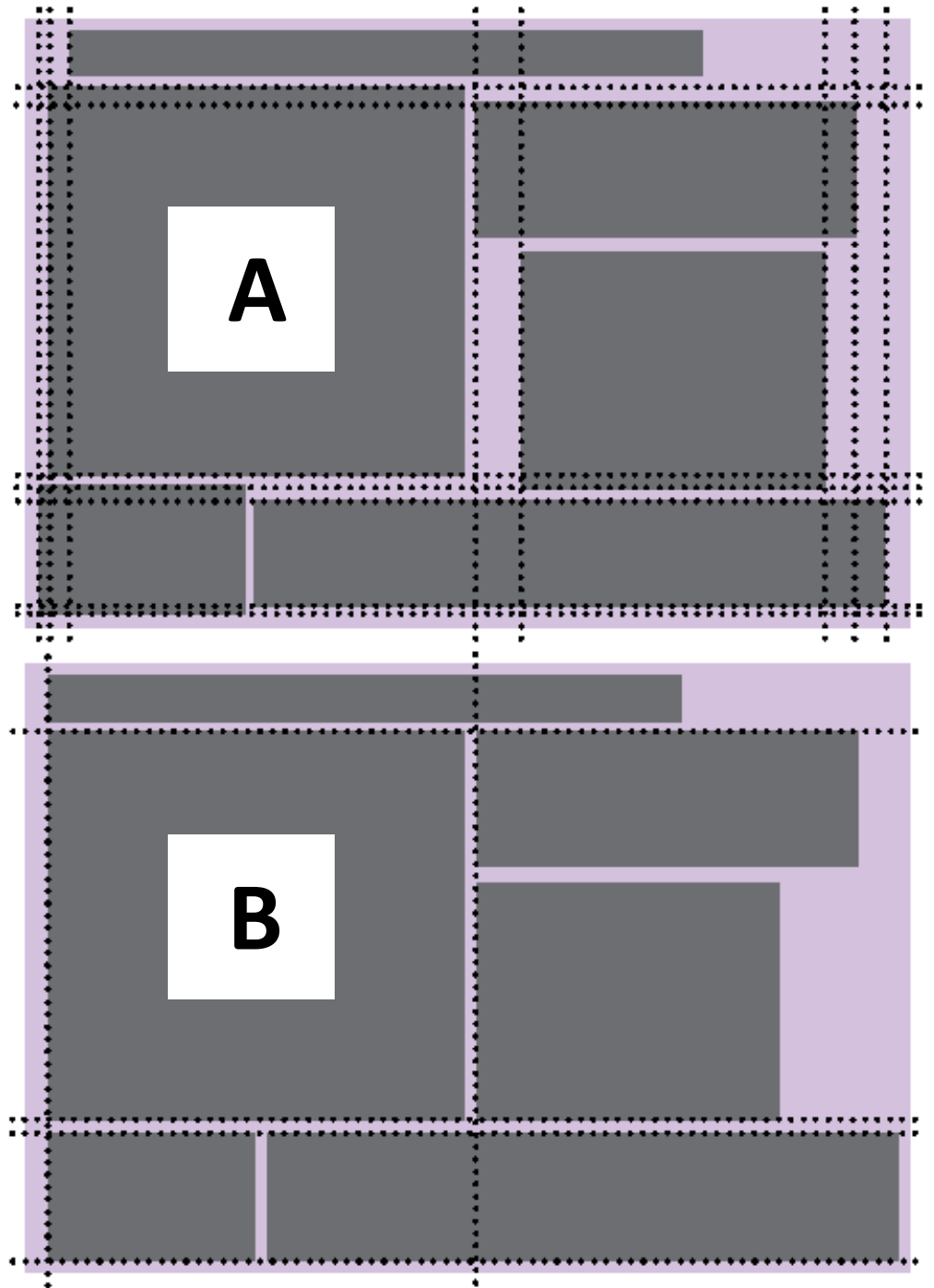
1)

Využití tvaru zobrazovaného území při kompozici prvků na listu



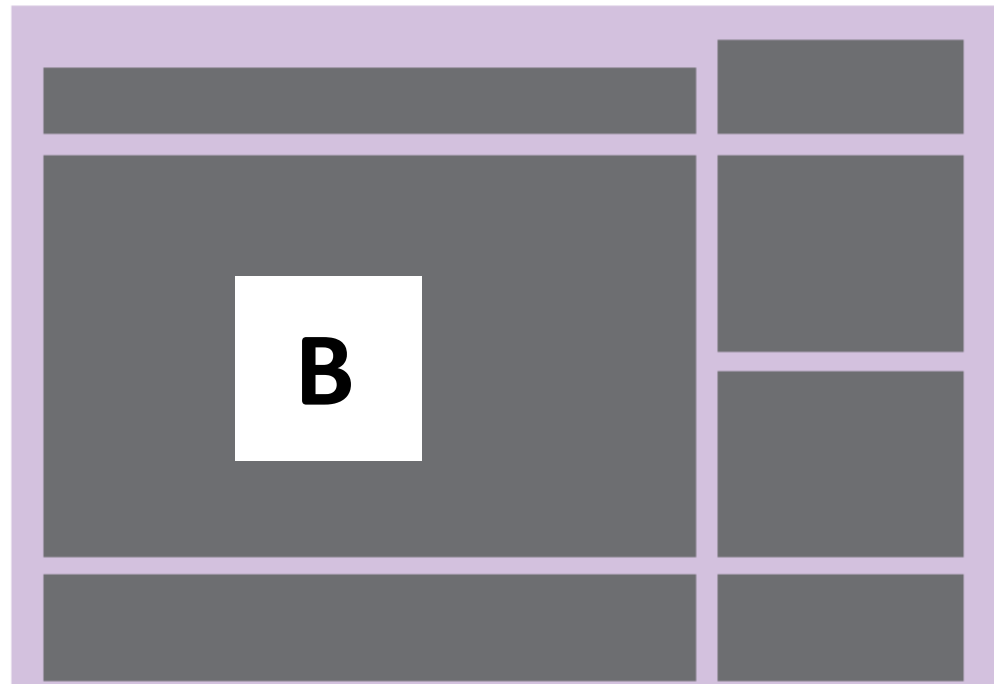
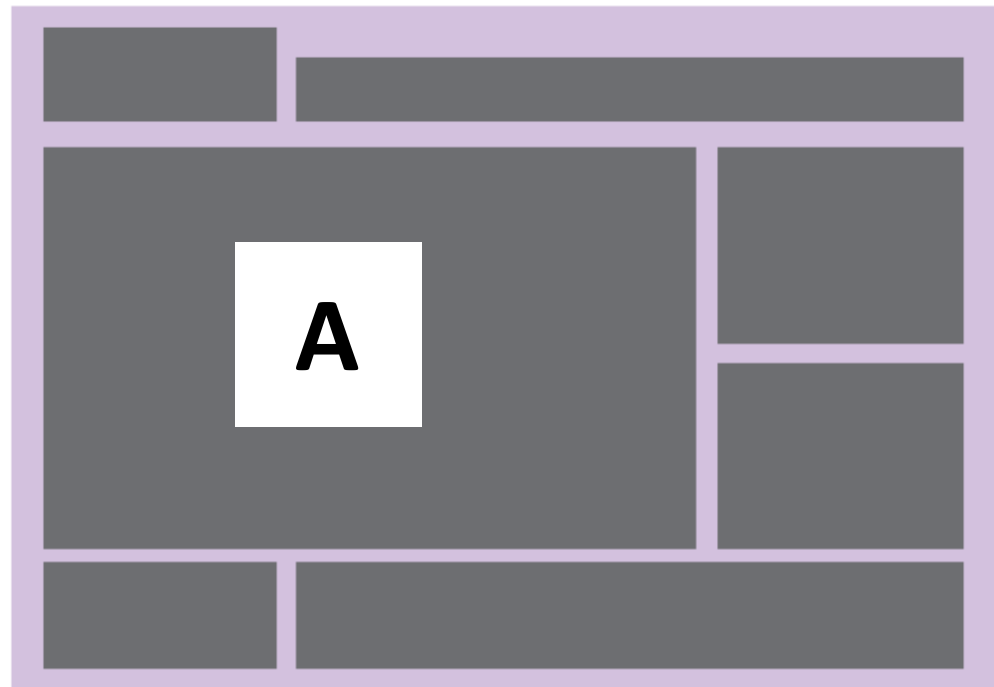
2)

Zarovnání prvků ke
kompozičním osám



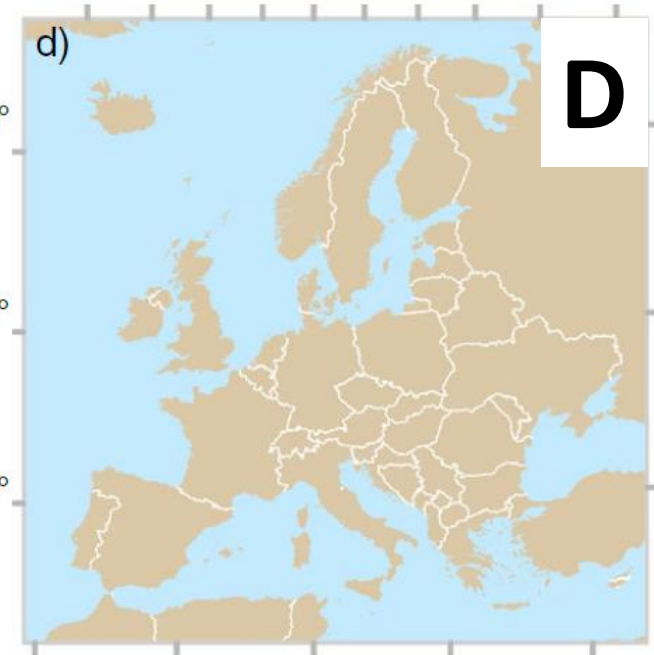
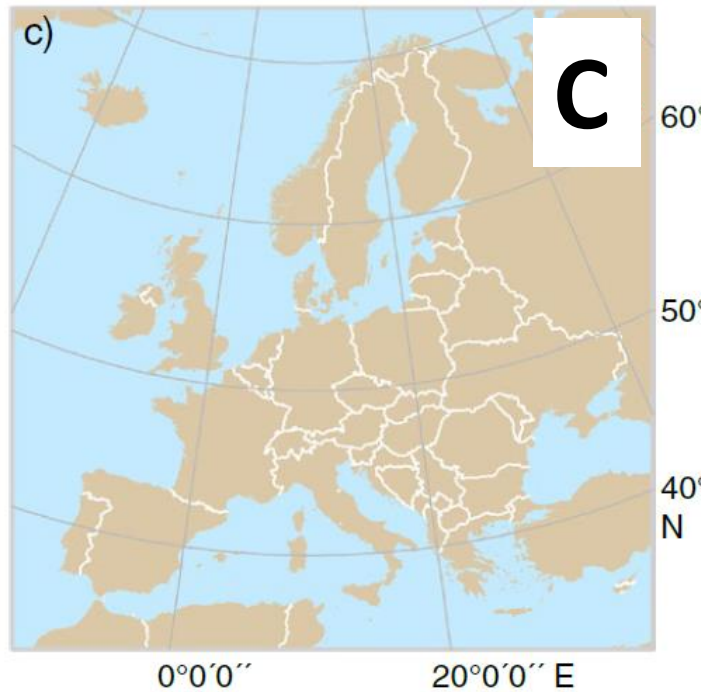
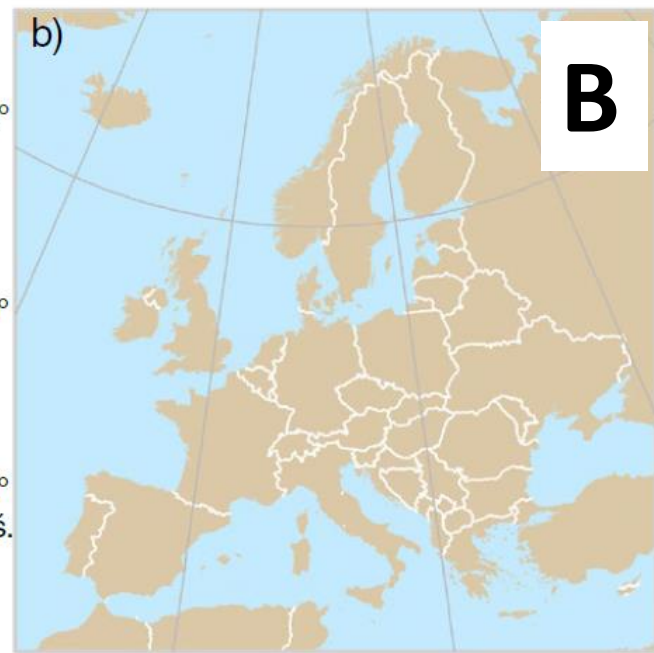
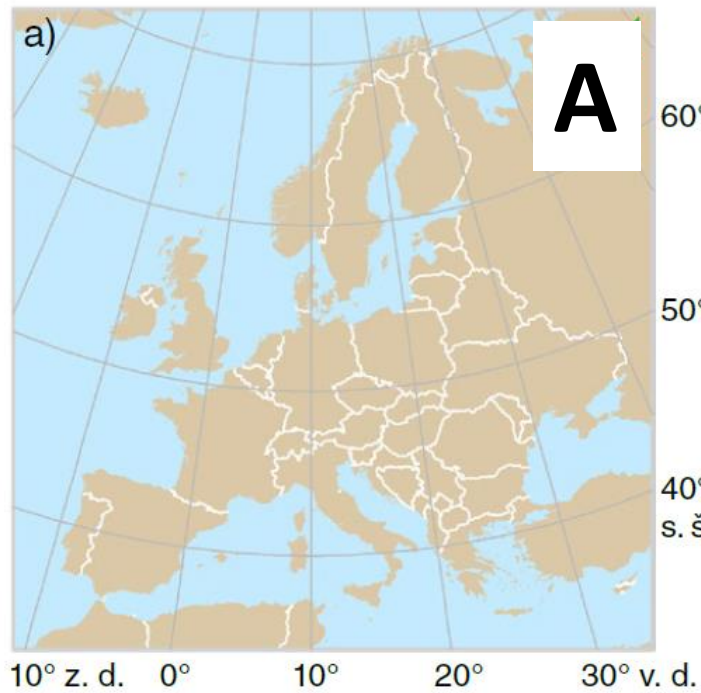
3)

Propojení nebo rozbití
jednotlivých prvků
mapy na listu



4)

Souřadnicová
sít'



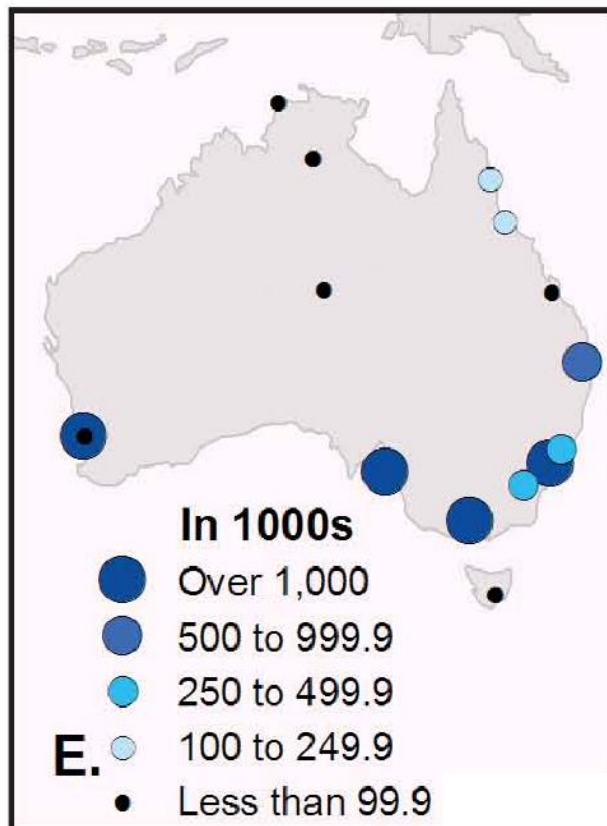
5) Vizuální kontrast I.

Vyber dvě možnosti

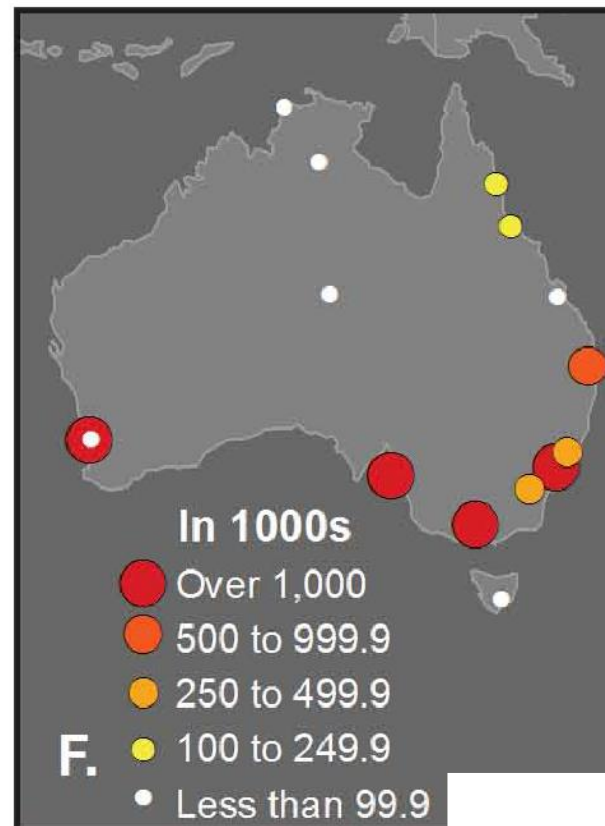


6) Vizuální kontrast II. – tematická mapa

2000 Population in Cities

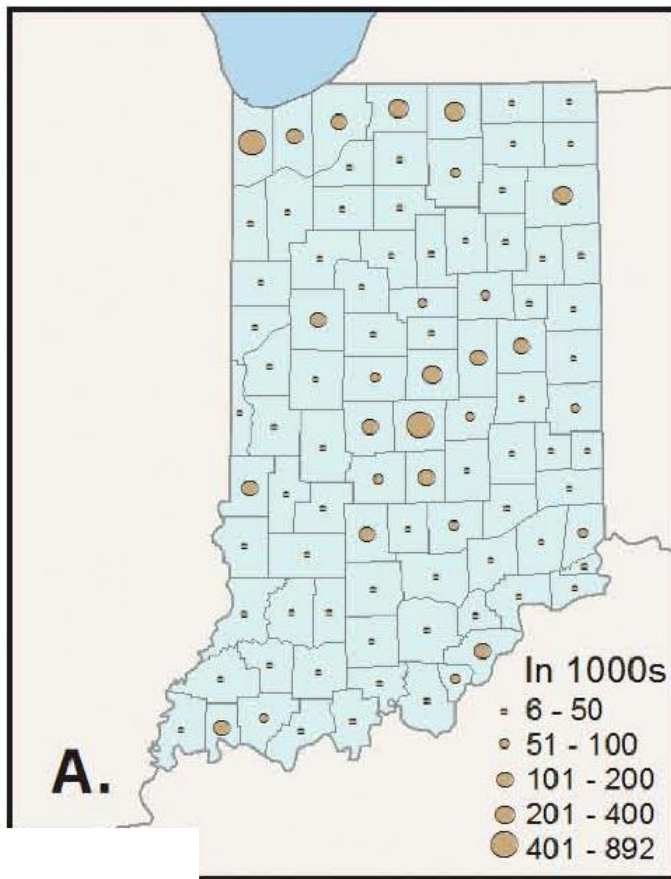


2000 Population in Cities

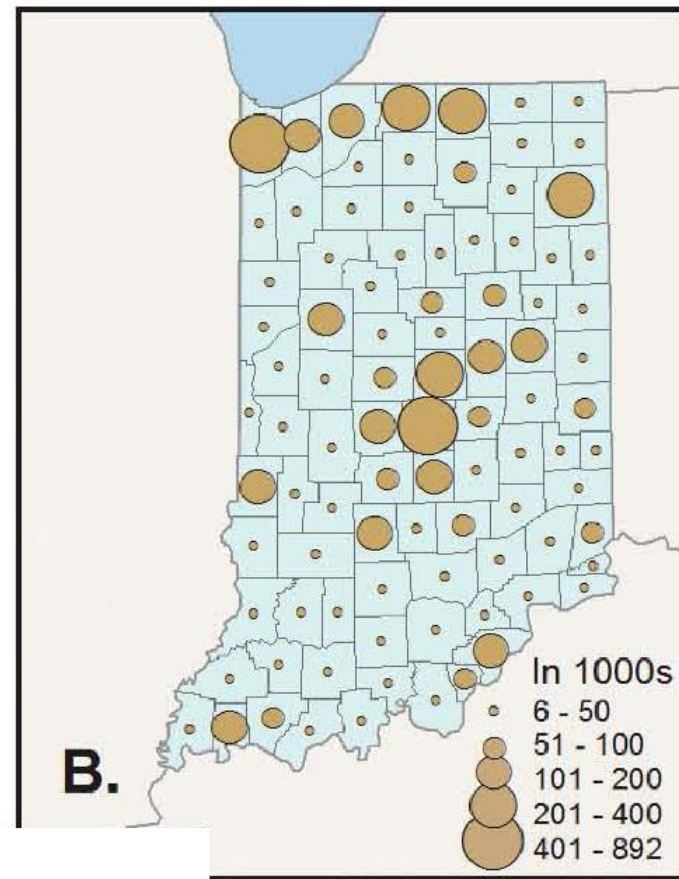


7) Čitelnost I.

2010 Population

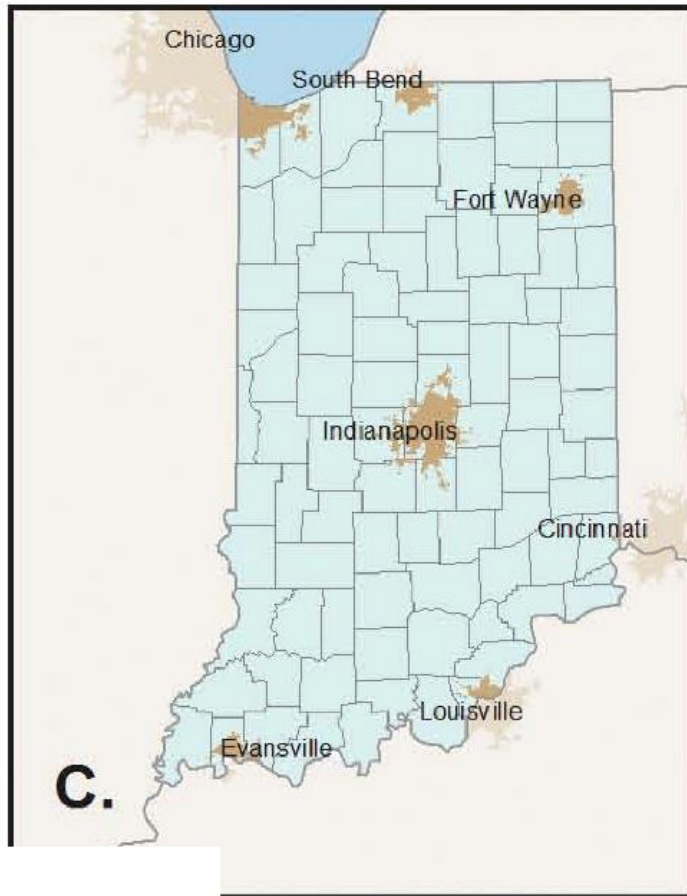


2010 Population



8) Čitelnost II.

Major Metropolitan Areas

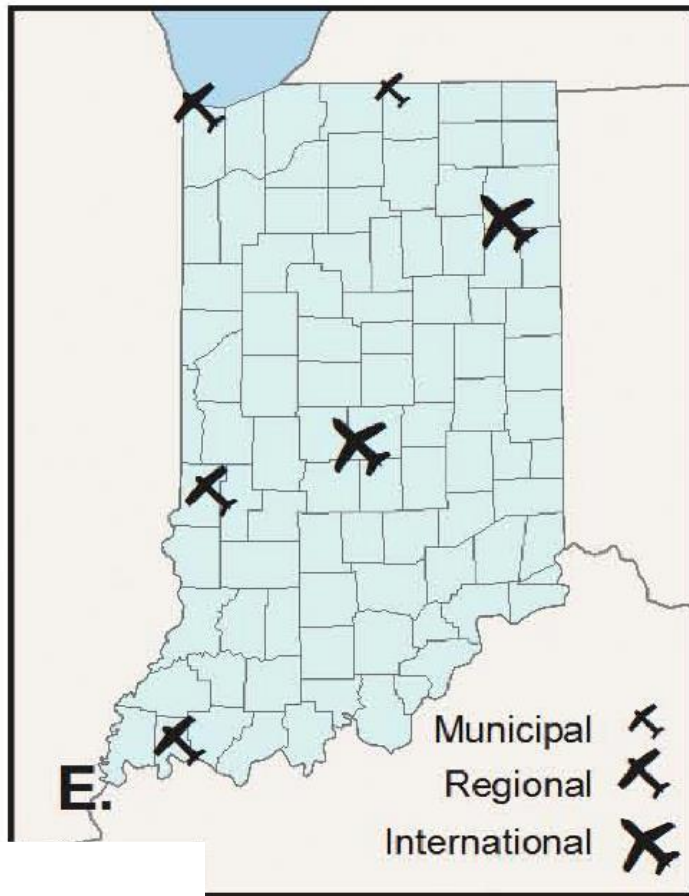


Major Metropolitan Areas

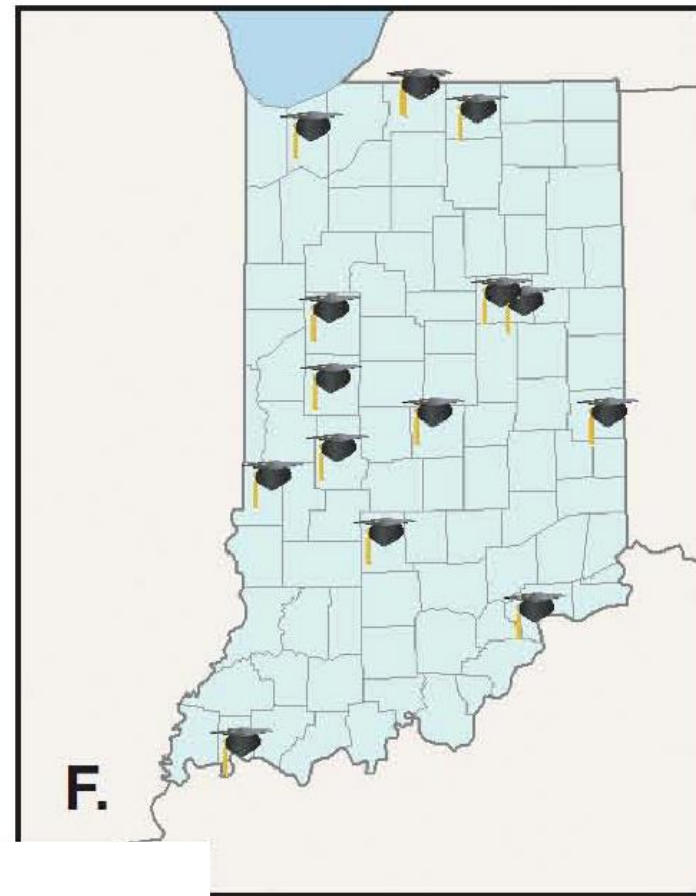


8) Čitelnost III.

Major Airports



Fifteen Top Colleges



9) Hierarchie, „pořadí vrstev“

Vyber minimálně
jednu možnost

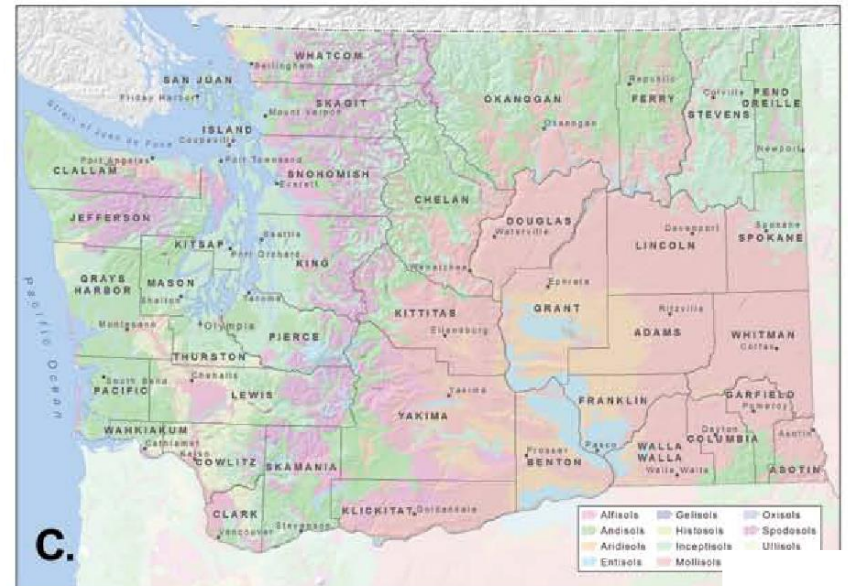
Washington State

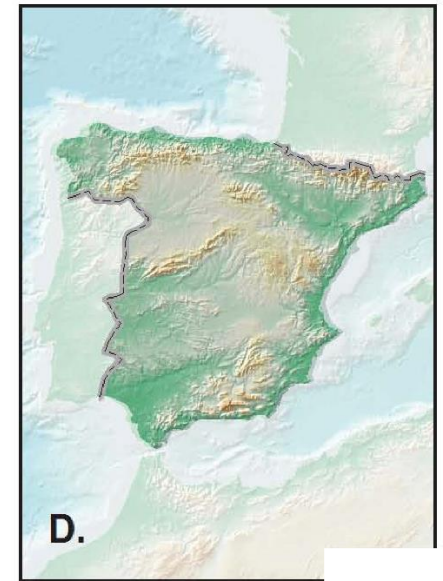
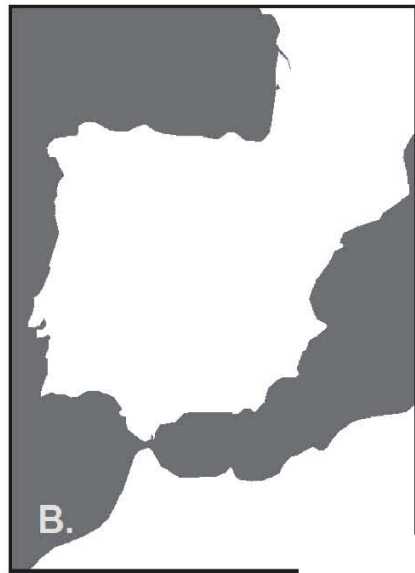
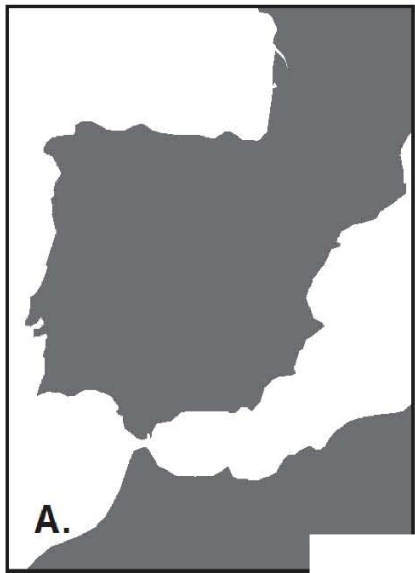


WASHINGTON STATE



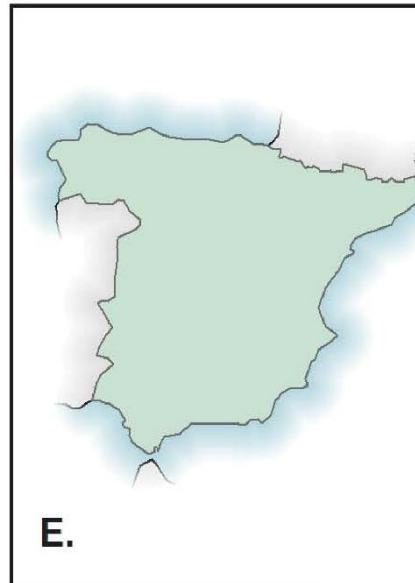
WASHINGTON SOILS





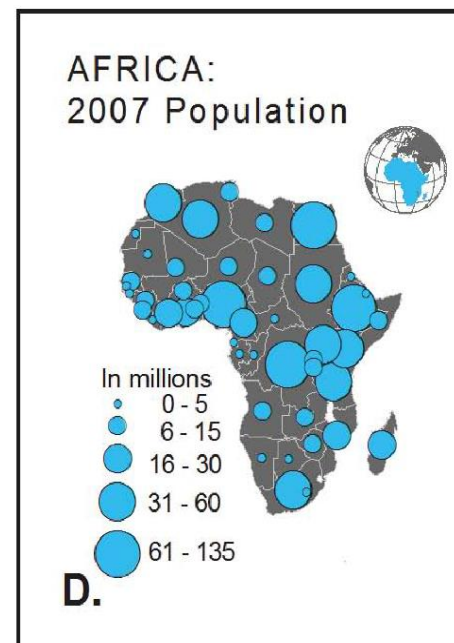
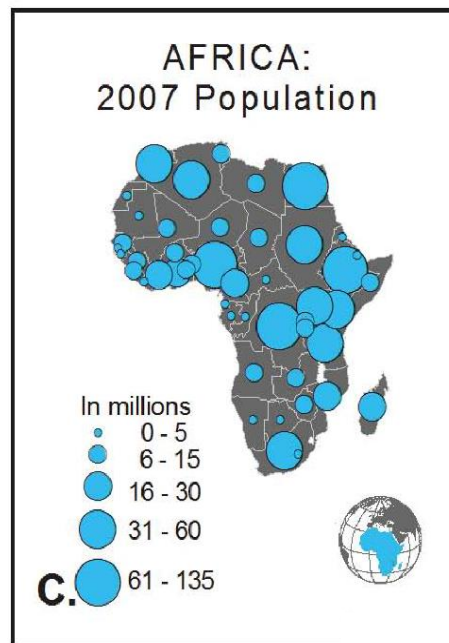
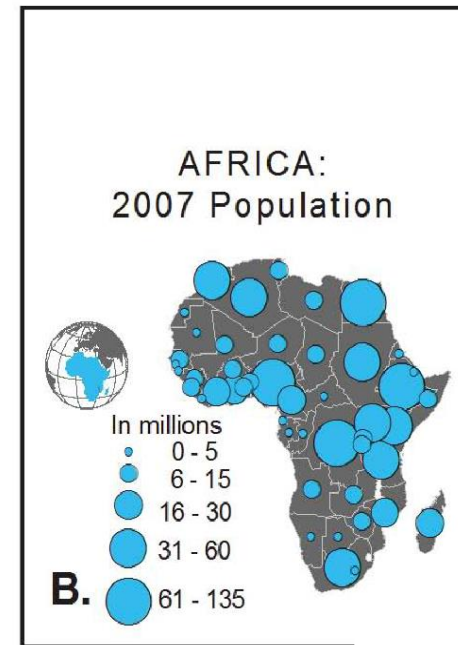
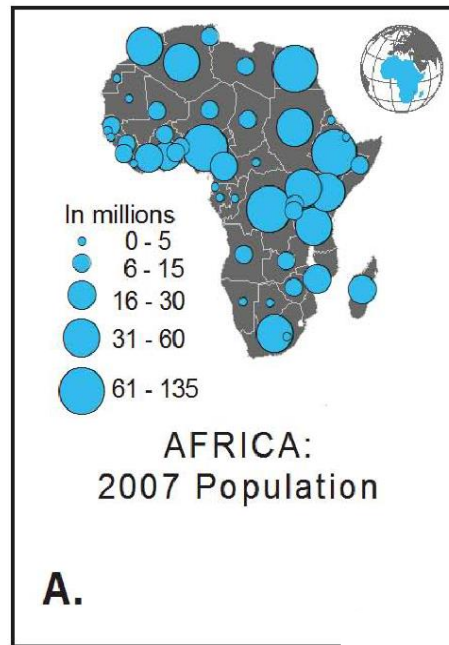
10) Figura a pozadí

Vyber
alespoň tři
možnosti



12) Vyvážení, rozmístění

**Vyber minimálně
jednu možnost**



13) Vyvážení, rozmístění

Vyber minimálně jednu možnost

A.

CUBA MARITIME LIMITS



Explanation
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod



B.



Explanation
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis

CUBA MARITIME LIMITS

C.

CUBA MARITIME LIMITS



Explanation
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim



D.

CUBA MARITIME LIMITS



Explanation
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KVÍZ – VÝSLEDKY

1)

Využití tvaru zobrazovaného území při kompozici prvků na listu

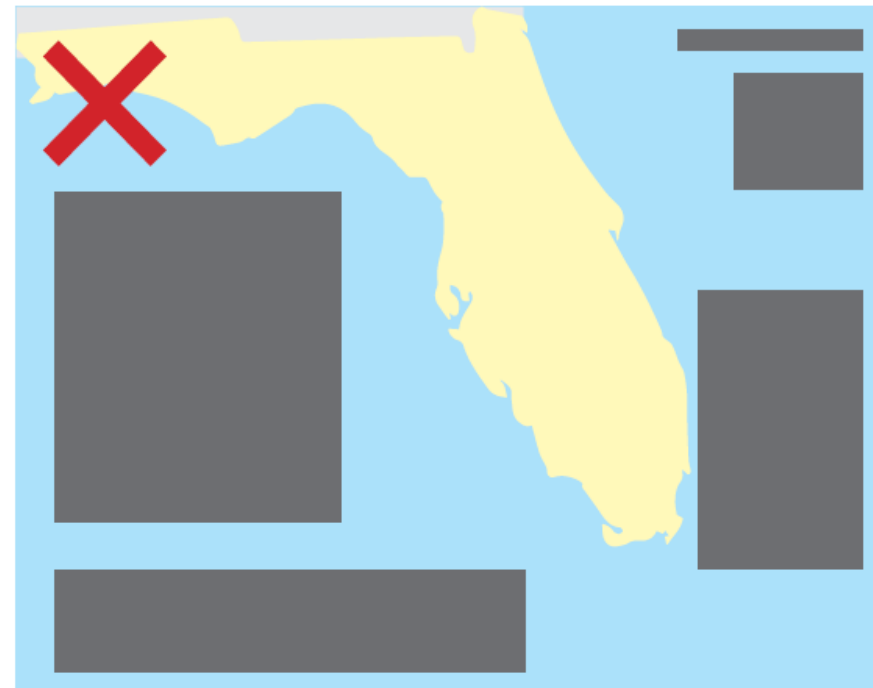
K maximálnímu využití prostoru mapového listu je třeba využívat konkrétního tvaru jednotlivých prvků mapy a umísťovat je tak, aby volné (a jinak nevyužitelné) místo bylo minimalizováno.

Zároveň bychom ale související prvky (např. mapu a její legendu a měřítko) umísťovat blízko sebe tak, aby byla zřejmá souvislost.

A



B

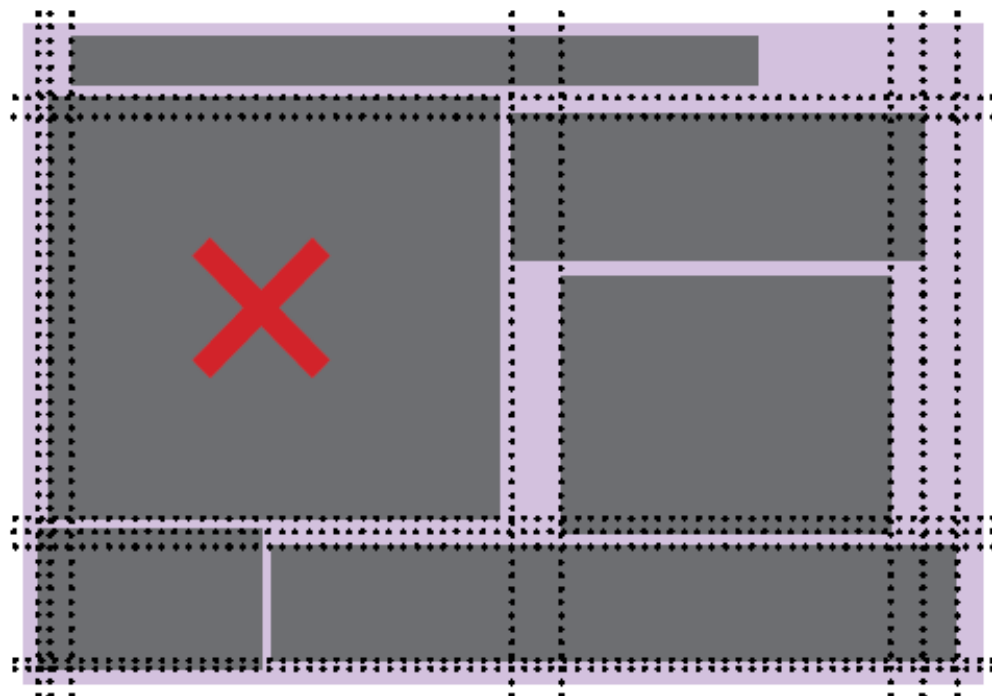


2)

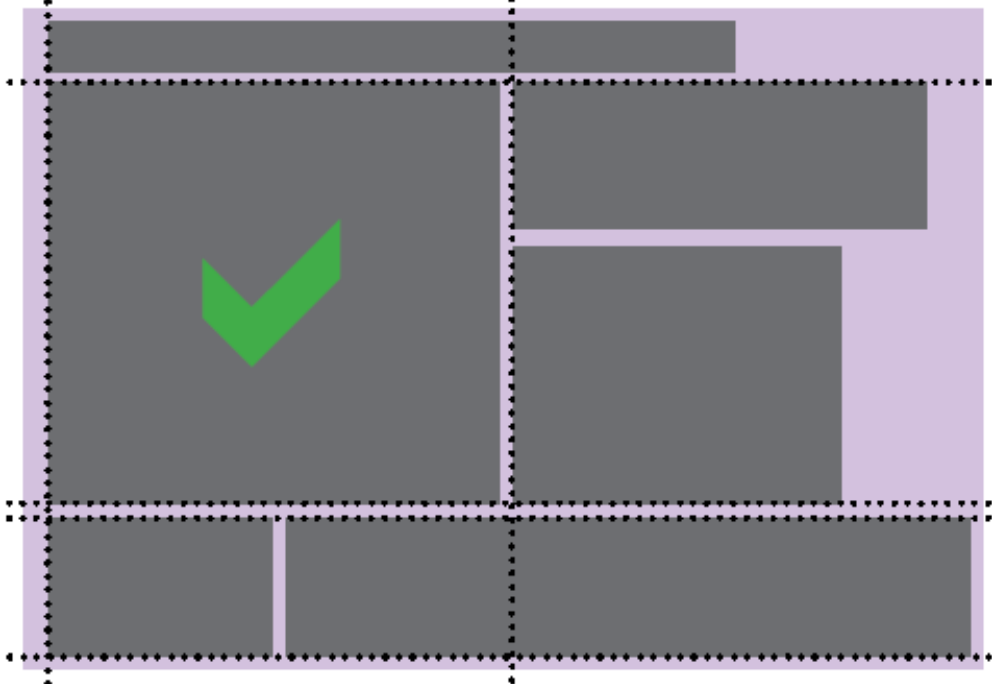
Zarovnání prvků ke
kompozičním osám

Zarovnání jednotlivých prvků k
pomyslným kompozičním osám
(kompozičnímu *gridu* stránky) je
důležitým prvkem, který má vliv
na vnímání uspořádanosti stránky

A



B

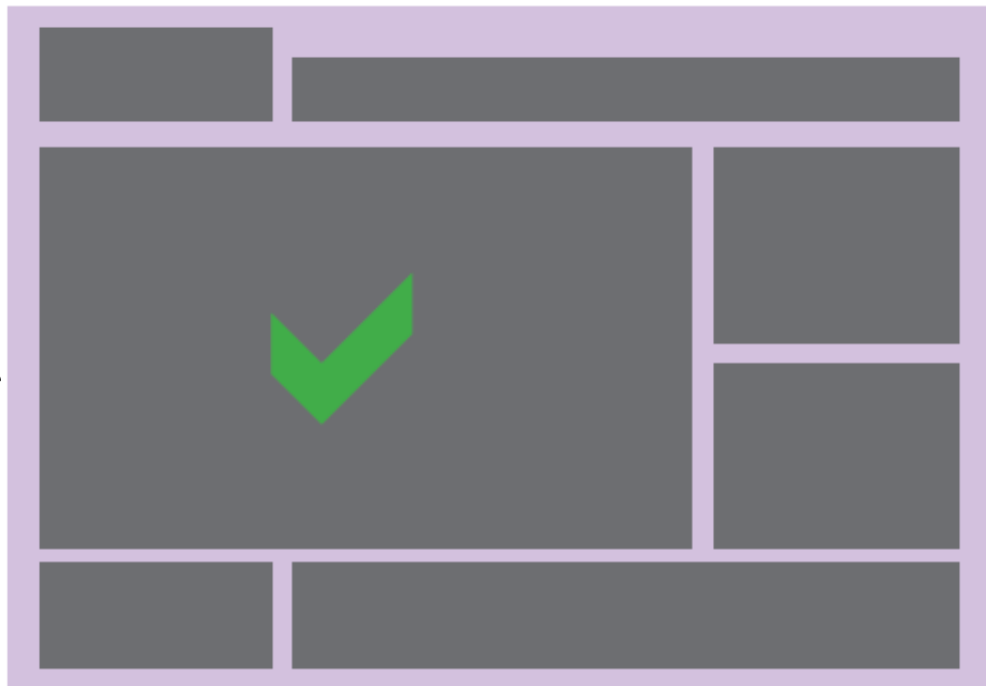


3)

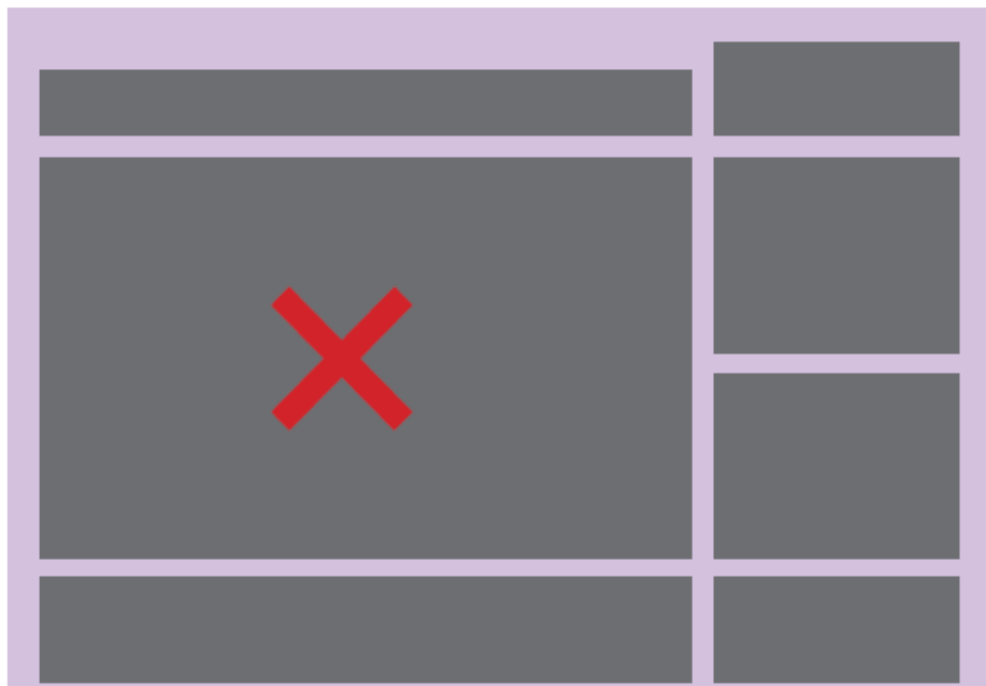
Propojení nebo rozbití jednotlivých prvků mapy na listu

Vzájemnému propojování jednotlivých prvků napomáhá, pokud nejsou ohraničeny rámečky. Kompaktního dojmu dosáhneme rozmístěním prvků na listu tak, aby nevznikaly sloupce/řady oddělené po celé výšce/délce listu.

A

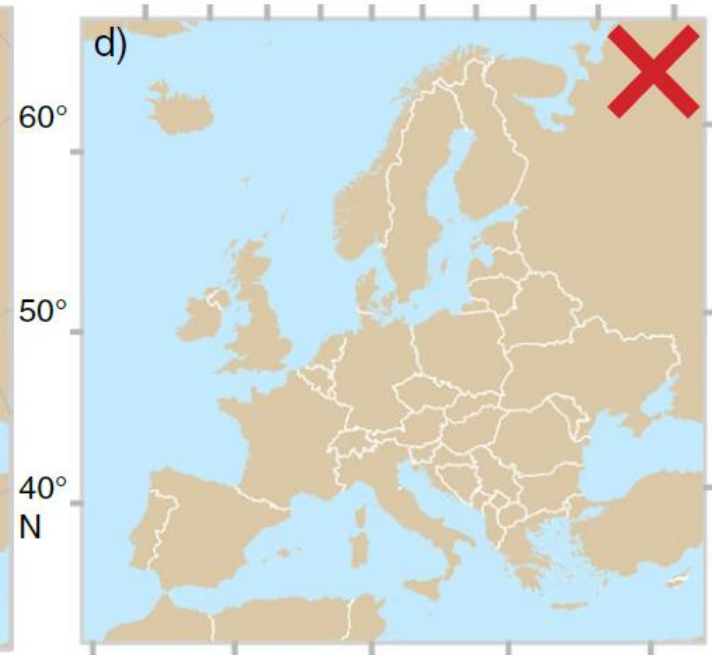
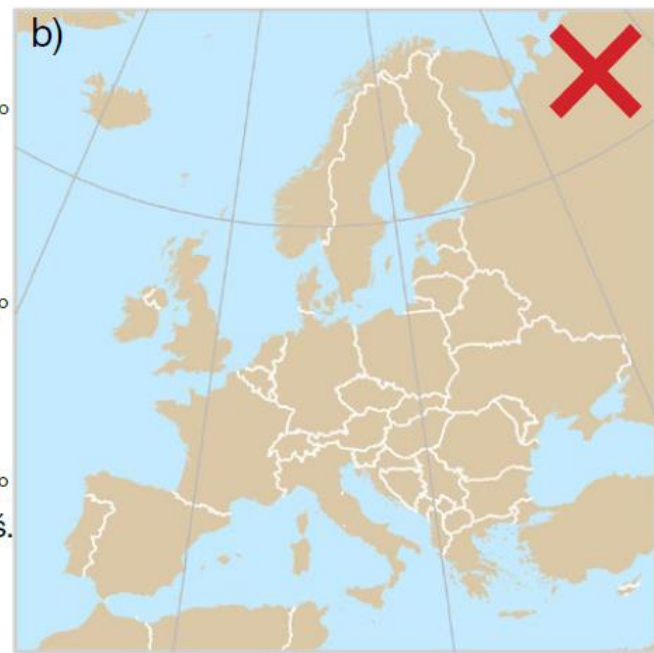
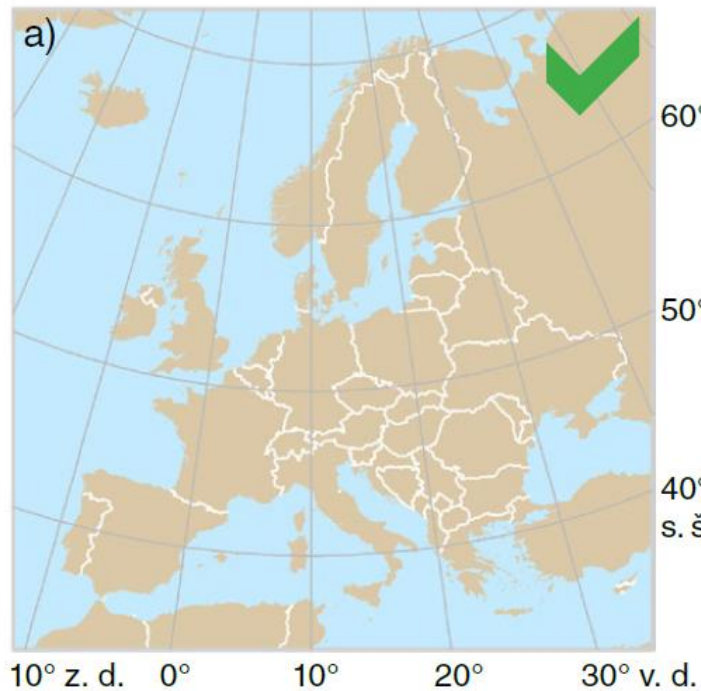


B



4)

Souřadnicová
sít'



6) Vizuální kontrast I.

Although black and white (A) provide the best visual contrast, this is not always the best color combination for maps.

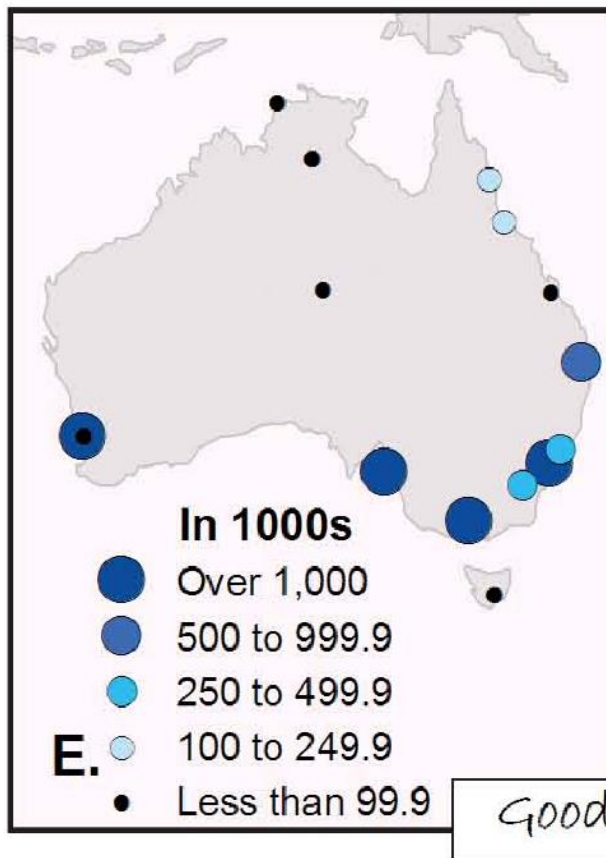
When using colors of similar high (B) or low (C) saturation (brightness), the hues (blue and green, in this case) must be distinguishable. If they are not, varying the saturation or value (lightness or darkness) of a color (as with the water in D) can create the contrast that is missing.



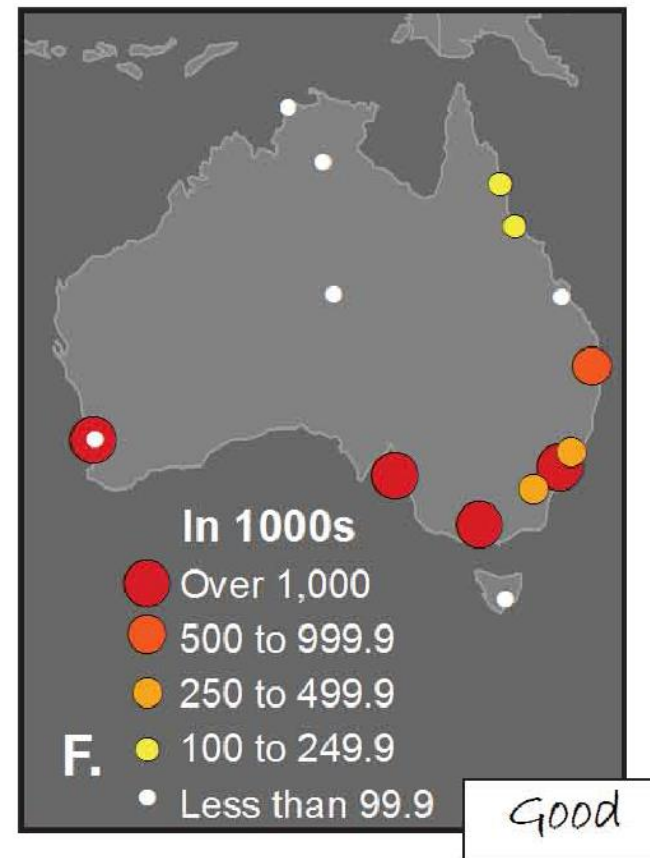
6) Vizuální kontrast II. – tematická mapa

Operational overlays should contrast with the basemap (E and F).

2000 Population in Cities



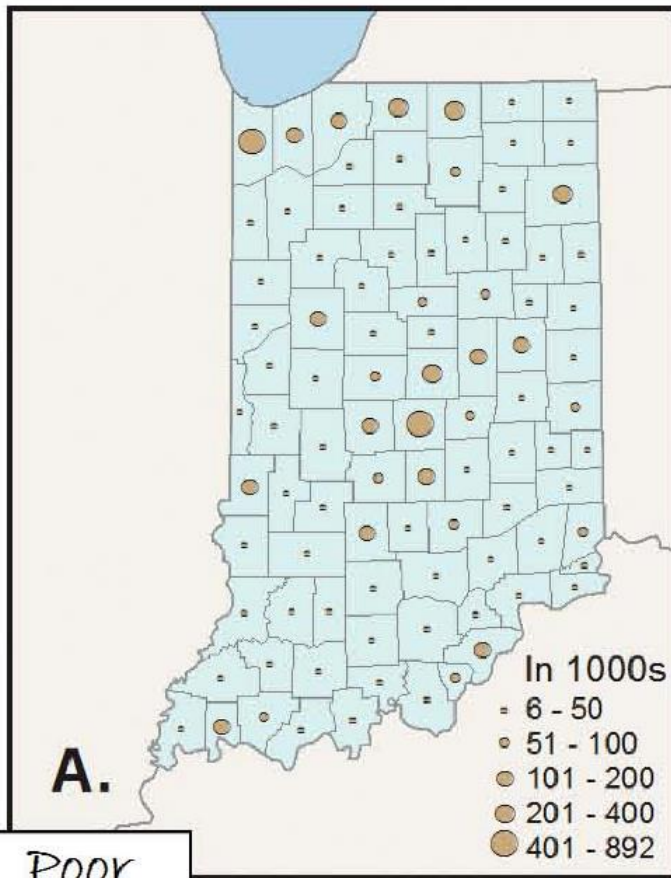
2000 Population in Cities



7) Čitelnost I.

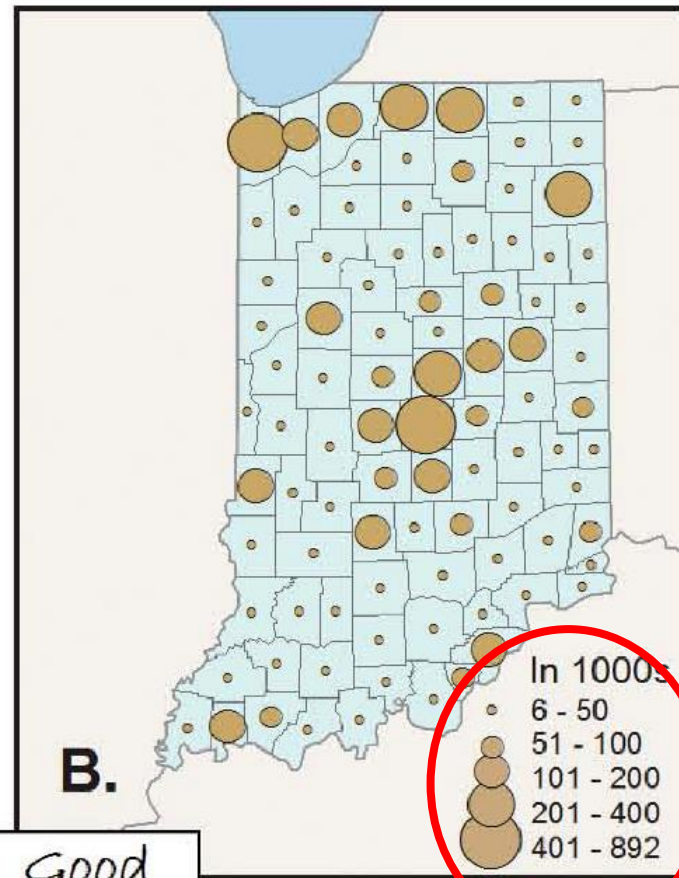
Symbols (A) that are too small are illegible. Appropriately sized symbols (B) can be easily distinguished and read.

2010 Population



POOR

2010 Population

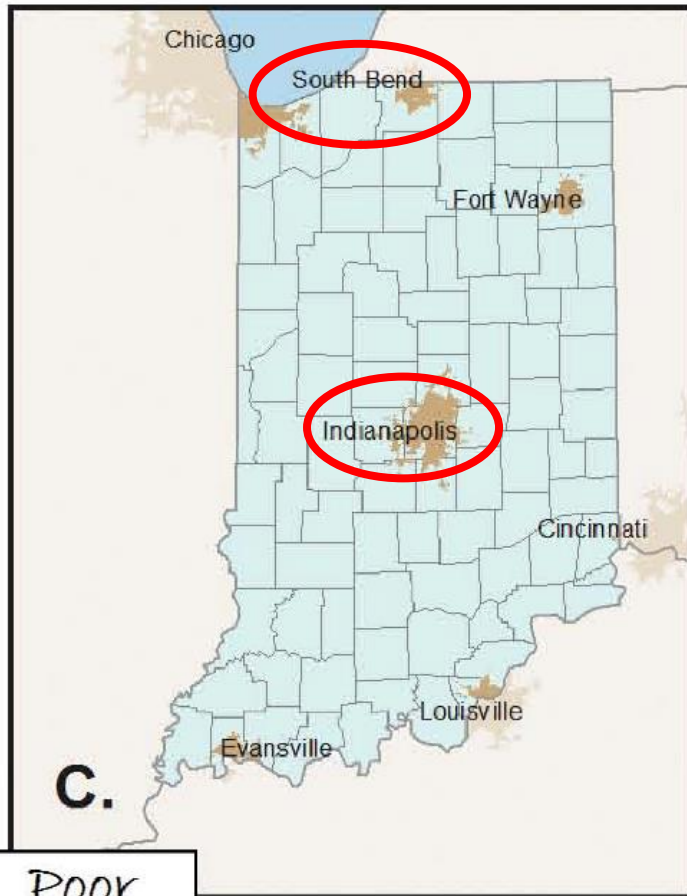


Good

8) Čitelnost II.

Labels (C) that are too small are illegible.
Appropriately sized text (D) can be easily distinguished and read.

Major Metropolitan Areas



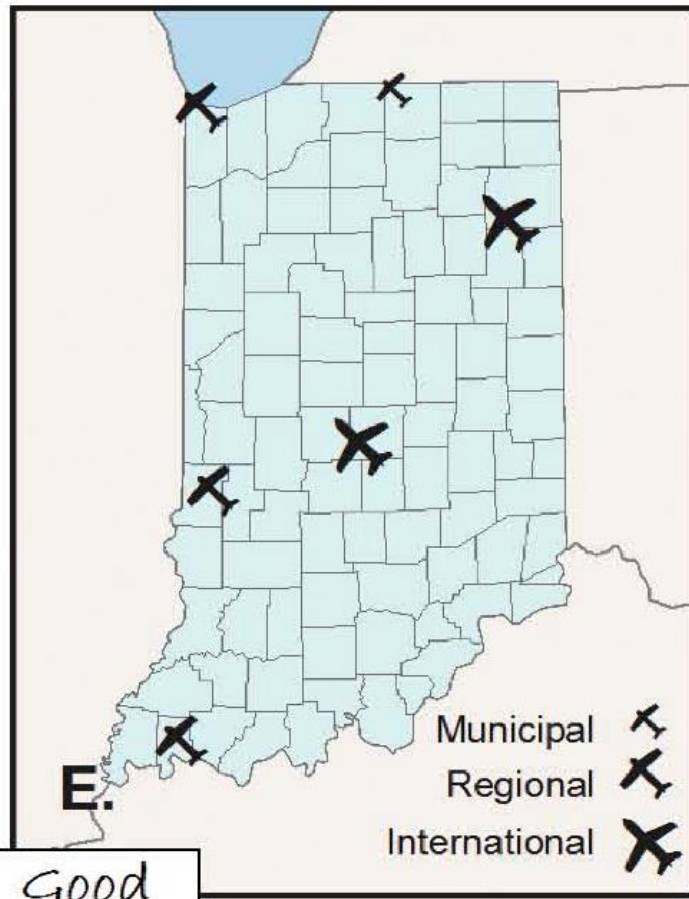
Major Metropolitan Areas



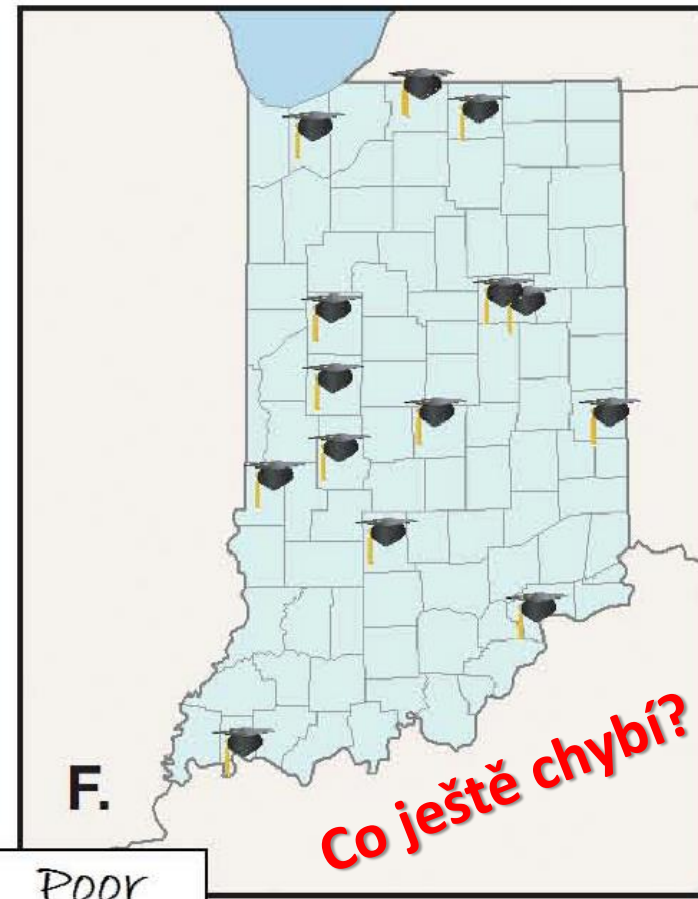
9) Čitelnost III.

Using familiar geometric icons, such as an airplane for airports (E), helps readers immediately understand the meaning of the symbol. More complex symbols, such as a mortarboard for universities (F), need to be larger to be legible.

Major Airports



Fifteen Top Colleges



10) Hierarchie, „pořadí vrstev“

When the symbols and labels are on the same visual plane (A), it is difficult for the map reader to distinguish among them and determine which are more important. For a general reference map (B), using different sizes for the text and symbols (e.g., city points and labels), different line styles (e.g., administrative boundaries), and different line widths (e.g., rivers) are some of the ways you can add hierarchy to the map. When mapping thematic data (C), the base information (e.g., county boundaries and county seats) should be kept to a minimum so that the theme (e.g., soils) is at the highest visual level in the hierarchy.

Washington State



A.

Poor

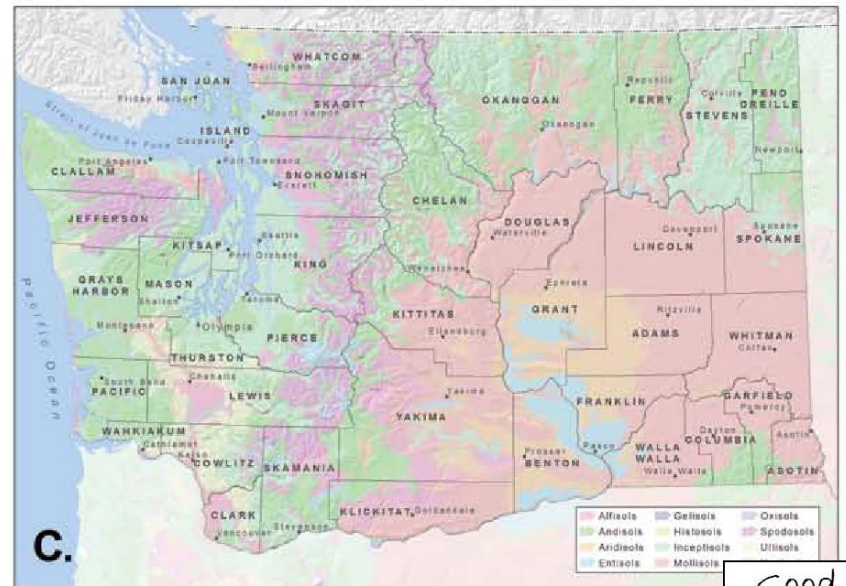
WASHINGTON STATE



B.

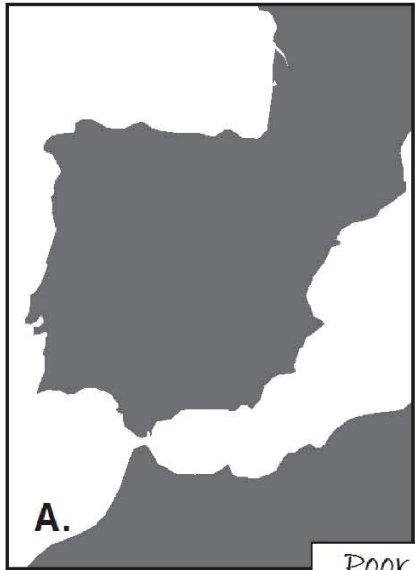
Good

WASHINGTON SOILS



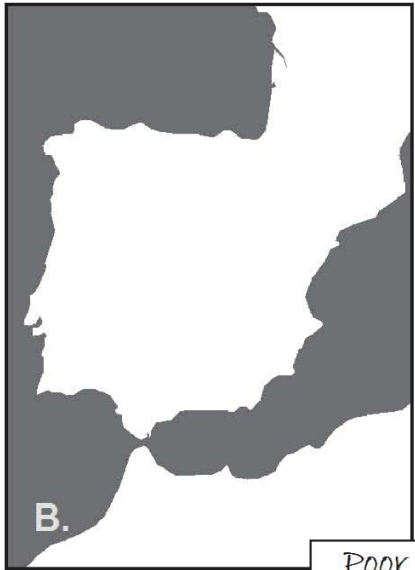
C.

Good



A.

Poor



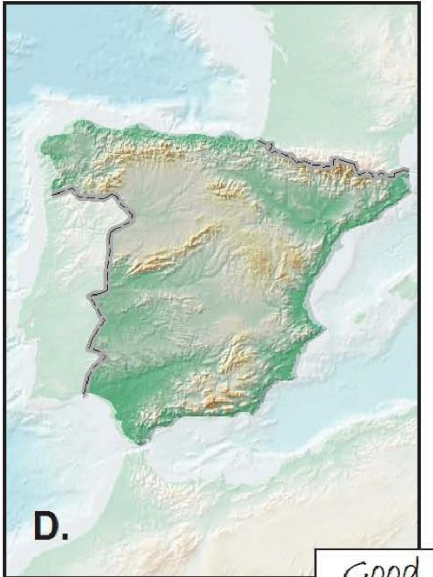
B.

Poor



C.

Good



D.

Good

10) Kontrast – figura a pozadí

It is sometimes hard to tell what is the figure and what is the ground (A and B). Simply adding detail to the map (C) can help map readers distinguish the figure from the ground. Using a whitewash (D), feathering (E), or a drop shadow (F) can also help.



E.

Good



F.

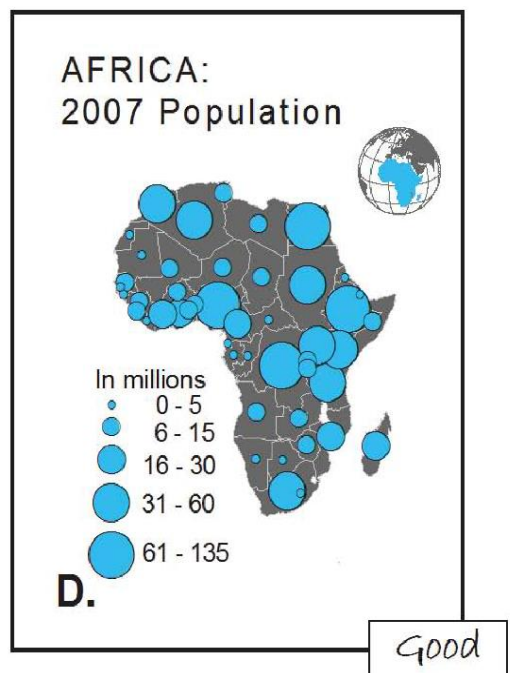
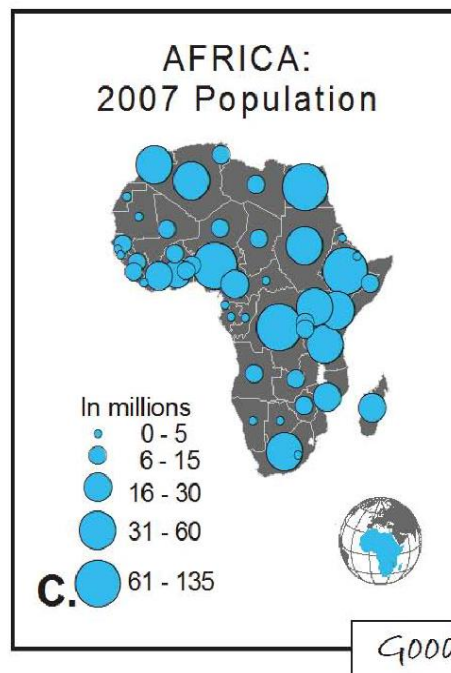
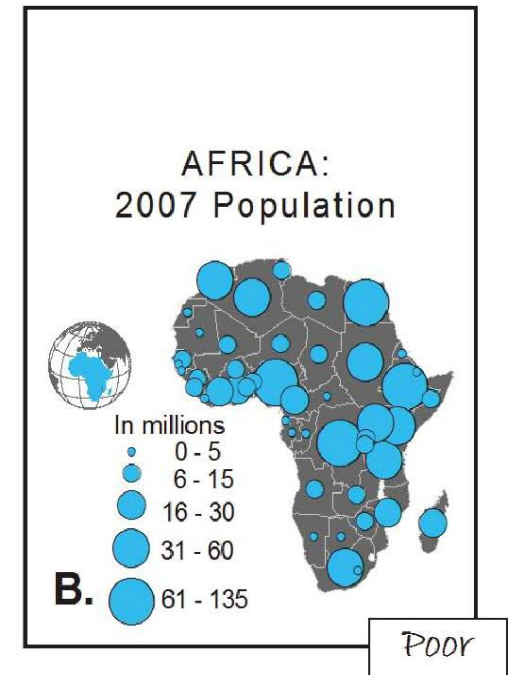
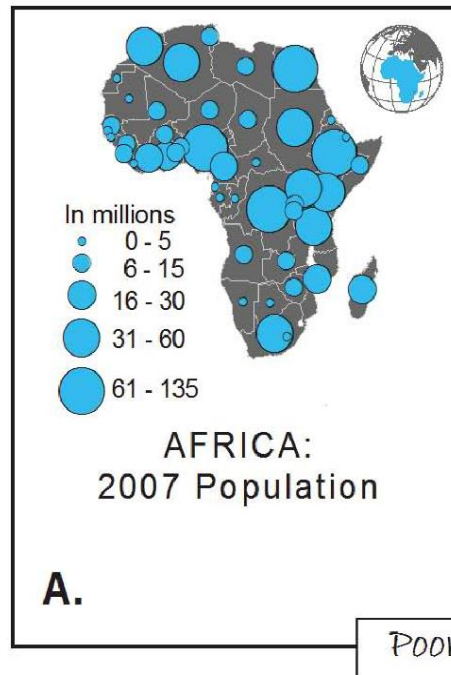
Good

12) Vyvážení, rozmístění

Positioning heavier elements together can make the page look top-heavy (A) or bottom heavy (B).

Centering the map slightly above center (C) ensures that it is in the most prominent position on the page. The position of elements can also cause the eye to move in a desired direction.

In D, the title is the first thing read, followed by the locator map, then the map of Africa, and finally the legend.



13) Vyvážení, rozmístění

A. Poor balance and white space; tips left, not unified


CUBA MARITIME LIMITS



Explanation
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B. Poor balance and white space; bottom heavy, big hole



Explanation
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CUBA MARITIME LIMITS



C. Better balance and white space; tips right, crowded

CUBA MARITIME LIMITS



Explanation
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D. Much better balance and white space

CUBA MARITIME LIMITS



Explanation
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ZDROJE

- <https://gistbok-topics.ucgis.org/CV-04-011>
- <https://gistbok-topics.ucgis.org/CV-03-029>
- <https://gistbok-topics.ucgis.org/CV-03-007>
- <https://www.natur.cuni.cz/geografie/geoinformatika-kartografie/ke-stazeni/projekty/moderni-geoinformacni-metody-ve-vyuce-gis-a-kartografie/kartogram/>
- <https://www.geograficke-rozhledy.cz/archiv/clanek/815/pdf>
- <https://tvorbamap.osu.cz/ke-stazeni/>
- <http://gis.fsv.cvut.cz/kartografie/1-8-0-kartograficke-chyby.php>
- https://www.dibavod.cz/data/gis_kartografie/kart_mystifikace.pdf
- <https://is.muni.cz/el/ped/podzim2014/Ze0013/um/50648388/Stupnice.pdf>
- http://gisak.vsb.cz/gis_ostrava/GIS_Ova_2008/sbornik/Lists/Papers/050.pdf
- https://is.muni.cz/el/ped/podzim2014/Ze0013/um/50648388/Barvy_v_mapach.pdf
- <https://is.muni.cz/el/ped/podzim2014/Ze0013/um/50648388/Legenda.pdf>
- https://is.muni.cz/el/ped/podzim2014/Ze0013/um/50648388/Kompozice_mapy.pdf
- <https://files.taylorandfrancis.com/TJOM-suppmaterial-quick-guide.pdf>

Zapamatujme si

1. Chyby v mapách ovlivňují čtení a následnou interpretaci jevu. Rozdělují se podle vzniku na chyby z nutnosti, chyby z neznalosti a nedbalosti a na pravou mystifikaci.
2. Chyby z nutnosti vyplývají principiálně ze samotných kartografických metod (kartografické zobrazení, zkreslení, měřítko, generalizace, míra přesnosti atd.).
3. Chyby z neznalosti a nedbalosti jsou většinou ovlivněny vzděláním tvůrců map v kartografii, kvalitou kontroly a recenzním řízením (faktografické chyby, chybné volby metod zpracování dat, chybné volby barev, atd.).

Kompozice posteru

- ...

Poster SW

- Obvykle doporučovány: QuarkXPress, InDesign, LaTeX a **Scribus**
- Dále: Illustrator, CorelDRAW , Omnigraffle, **Inkscape**
- Powerpoint
- Ručně dělané 😊

Formát a rozměry

- Velikost často zadané konkrétně pro danou akci
 - Obvykle: A1, A0, ...
- Orientace: na výšku versus na šířku
- Orientace na šířku: výhoda že text komplet je v úrovni očí, více lidí před posterem, ale potřeba celkově více ploch na vyvěšení

Nadpis

- Co nejstručnější, max. dva řádky
- kompromis mezi atraktivitou a informačním obsahem
- nepoužívat dvojtečky – nadužívané
- nepoužívat uvozovky
- nepoužívat celé v Caps Locku – nehezké

- abstrakt nikdy! Poster je vaším abstraktem
- pod nadpisem osobní údaje: jméno, email, instituce atd. nebo nakonec do dalších informací

Úvod

- Vzbudit zájem o téma za využití minima informací a definicí
- Uvést kontext vědního proudu (citace) stručně a uvést přínos či novost přístupu studie
- Max. 200 slov

Metodika

- Stručně popsat postup práce
- Diagram(y)
- Max. 200 slov

Výsledky

- Stručný komentář k výsledkům
- Prezentace ideálně graficky = **mapy**, grafy, tabulky
 - jejich titulek musí obstát sám o sobě
- Max. 200 slov
- Celkově nejrozsáhlejší část!

Závěr

- Připomenutí nejdůležitějších výsledků = odpovědi na výzkumné otázky
- Podpořily/vyvrátily výsledky hypotézy?
- Vztah výsledků k ostatní publikované práci
- Budoucí směřování
- Max. 200 slov

Literatura a zdroje

- Dodržet jednotný citační styl
- Max. 5 nejdůležitějších citací

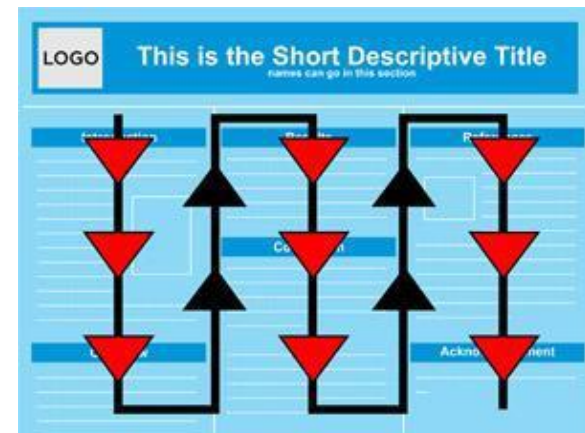
- Nezapomenout citovat i zdrojová data – jednotlivé mapy nemusí obsahovat dílčí tiřáže

Obrázky, grafy, rovnice, mapy

- Dostatečné rozlišení obrázků – min. 300 DPI
- Např.:
 - grafy z Excelu vkládat jako obrázky (vložit jinak)
 - rovnice Wordu vektorový tvar
- Mapa + legenda
 - Úplná – obsahuje právě ty znaky, které se vyskytují na příslušné mapě
 - Srozumitelná – zpracovává se s ohledem na předpokládaný okruh uživatelů, upřednostňuje se jednoduchost, hierarchizace, čitelnost a zapamatovatelnost
 - V souladu s mapovým polem – grafická podoba znaku v legendě musí být totožná s grafickou podobou znaku v mapovém poli (včetně stejné velikosti)
 - Logicky uspořádaným systémem – prvky obsahu mapy jsou členěny do skupin, v jejichž rámci je zachována posloupnost

Formátování textu

- Písmo nejlépe bezpatkové, neproporciální
- Zarovnání doleva
- Prostor kolem bloku
- Jeden font pro vlastní text, nadpisy mohou být v jiném fontu
- Stejný význam – stejná velikost
- Zdůraznění: tučně (**bold**) nebo tučné kurzíva (***bold italics***)
- Referenční velikosti (pro formát A1)
 - 85 hlavní nadpis
 - 36 nadpisy v textu
 - 24–30 vlastní text



Další doporučení

- Mimo grafické bloky maximálně 3 barvy
- Nejlépe: pozadí ve světlých tónech a text tmavý
- Nekomplikované pozadí

Kompozice ☹



PIGS IN SPACE: EFFECT OF ZERO GRAVITY AND AD LIBITUM FEEDING ON WEIGHT GAIN IN CAVIA PORCELLUS



SPACEEXES

ABSTRACT:

One ignored benefit of space travel is a potential elimination of obesity, a chronic problem for a growing majority in many parts of the world. In theory, when an individual is in a condition of zero gravity, weight is eliminated. Indeed, in space one could conceivably follow ad libitum feeding and never even gain an gram, and the only side effect would be the need to upgrade one's stretchy pants("exercise pants"). But because many diet schemes start as very good theories only to be found to be rather harmful, we tested our predictions with a long-term experiment in a colony of Guinea pigs (*Cavia porcellus*) maintained on the International Space Station. Individuals were housed separately and given unlimited amounts of high-calorie food pellets. Fresh fruits and vegetables were not available in space so were not offered. Every 30 days, each Guinea pig was weighed. After 5 years, we found that individuals, on average, weighed nothing. In addition to weighing nothing, no weight appeared to be gained over the duration of the protocol. If space continues to be gravity-free, and we believe that assumption is sound, we believe that sending the overweight — and those at risk for overweight — to space would be a lasting cure.

INTRODUCTION:

The current obesity epidemic started in the early 1960s with the invention and proliferation of elastane and related stretchy fibers, which released wearers from the rigid constraints of clothes and permitted monthly weight gain without the need to buy new outfits. Indeed, exercise today for hundreds of million people involve only the act of wearing stretchy pants in public, presumably because the constrictive pressure forces fat molecules to adopt a more compact tertiary structure (Xavier 1965).

Luckily, at the same time that fabrics became stretchy, the race to the moon between the United States and Russia yielded a useful fact: gravity in outer space is minimal to nonexistent. When gravity is zero, objects cease to have weight. Indeed, early astronauts and cosmonauts had to secure themselves to their ships with seat belts and sticky boots. The potential application to weight loss was noted immediately, but at the time travel to space was prohibitively expensive and thus the issue was not seriously pursued. Now, however, multiple companies are developing cheap extra-orbital travel options for normal consumers, and potential travelers are also creating news ways to pay for products and services that they cannot actually afford. Together, these factors open the possibility that moving to space could cure overweight syndrome quickly and permanently for a large number of humans.

We studied this potential by following weight gain in Guinea pigs, known on Earth as fond of ad libitum feeding. Guinea pigs were long envisioned to be the "Guinea pigs" of space research, too, so they seemed like the obvious choice. Studies on humans are of course desirable, but we feel this current study will be critical in acquiring the attention of granting agencies.

MATERIALS AND METHODS:

One hundred male and one hundred female Guinea pigs (*Cavia porcellus*) were transported to the International Space Laboratory in 2010. Each pig was housed separately and deprived of exercise wheels and fresh fruits and vegetables for 48 months. Each month, pigs were individually weighed by duct-taping them to an electronic balance sensitive to 0.0001 grams. Back on Earth, an identical cohort was similarly maintained and weighed. Data was analyzed by statistics.

RESULTS:

Mean weight of pigs in space was 0.0000 +/- 0.0002 g. Some individuals weighed less than zero, some more, but these variations were due to reaction to the duct tape, we believe, which caused them to be alarmed push briefly against the force plate in the balance. Individuals on the Earth, the control cohort, gained about 240 g/month ($p = 0.0002$). Males and females gained a similar amount of weight on Earth (no main effect of sex), and size at any point during the study was related to starting size (which was used as a covariate in the ANCOVA). Both Earth and space pigs developed substantial dewlaps (double chins) and were lethargic at the conclusion of the study.

CONCLUSIONS:

Our view that weight and weight gain would be zero in space was confirmed. Although we have not replicated this experiment on larger animals or primates, we are confident that our result would be mirrored in other model organisms. We are currently in the process of obtaining necessary human trial permissions, and should have our planned experiment initiated within 80 years, pending expedited review by local and Federal IRBs.

ACKNOWLEDGEMENTS:

I am grateful for generous support from the National Research Foundation, Black Hole Diet Plans, and the High Fructose Sugar Association. Transport flights were funded by SPACE-EXES, the consortium of wives divorced from insanely wealthy space-flight startups. I am also grateful for comments on early drafts by Mañana Athletic Club, Corpus Christi, USA. Finally, sincere thanks to the Cuy Foundation for generously donating animal care after the conclusion of the study.

LITERATURE CITED:

NASA. 1982. Project STS-XX: Guinea Pigs. Leaked internal memo.
Sekulić, S.R., D. D. Lukač, and N. M. Naumović. 2005. The Fetus Cannot Exercise Like An Astronaut: Gravity Loading Is Necessary For The Physiological Development During Second Half Of Pregnancy. *Medical Hypotheses*. 64:221-228
Xavier, M. 1965. Elastane Purchases Accelerate Weight Gain In Case-control Study. *Journal of Obesity*. 2:23-40.



Kompozice ☺

Add title Add title Add title

Mind the GRAPH



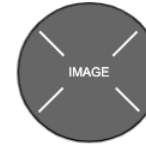
Authors

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Institute
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Introduction

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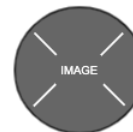
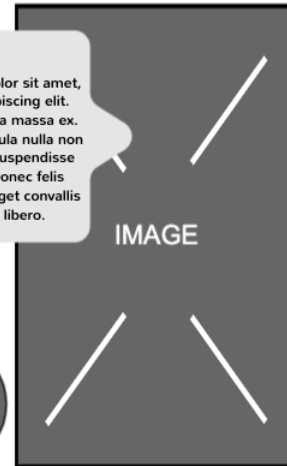
Methodology

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Content

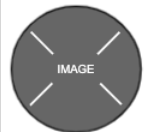
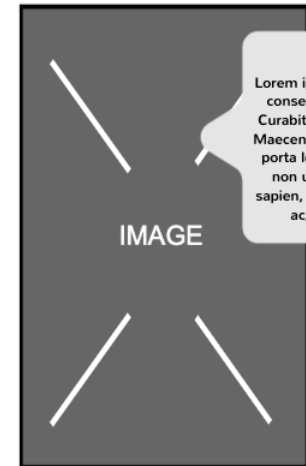
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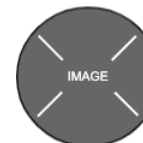
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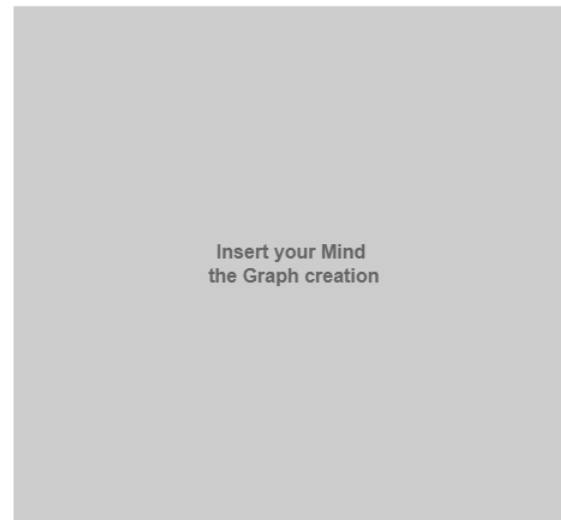
Conclusion

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Kompozice 😊

Poster title in one
or two lines

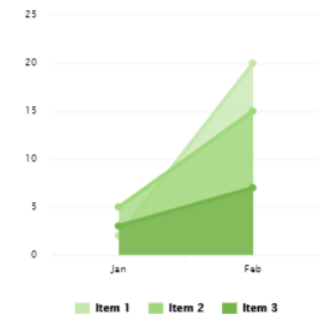


Graphic Elements



Data Analysis

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Introduction

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Methodology

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Conclusion

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Authors

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Insert your full name/e-mail contact

Institute

University
Address
Contact

Kompozice ☺

Poster title in one or two lines



Introduction

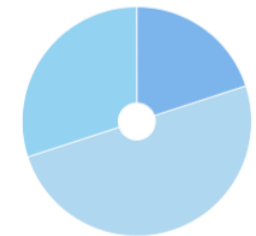
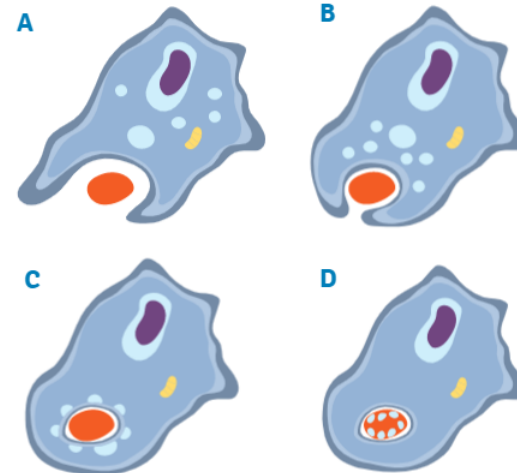
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Methodology

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Data Analysis

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■ Item 1 ■ Item 2 ■ Item 3

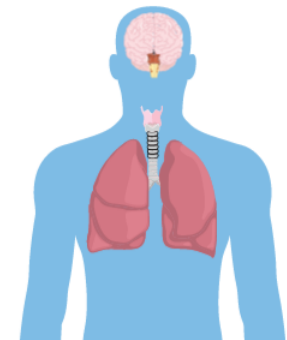
Conclusion

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Graphic Elements



Authors

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University
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Contact

Zadání

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- Nejméně 2 mapová pole
 - Podobně jako v předchozích dvou protokolech
- Mimo mapy další vědecká vizualizace
- Text ideálně max. 30% posteru
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