



# การนำเสนอข้อมูลเพื่อการตัดสินใจ From Data 2 Action

ธนรักษ์ ผลิพัฒน์

Summary:  
Health needs assessment  
at a glance

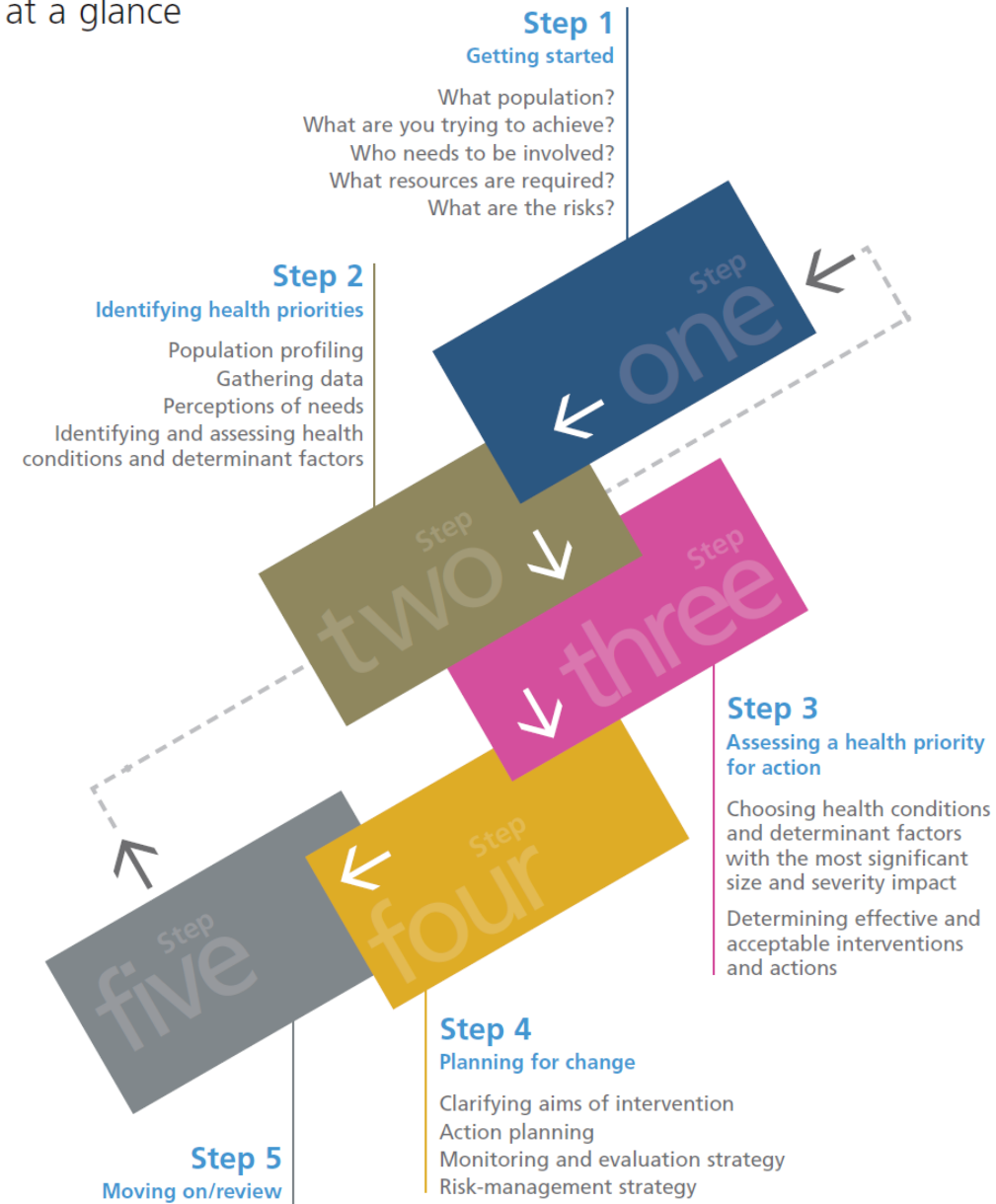


Figure 1:  
The five steps of health needs assessment

5 ขั้นตอน  
Health needs  
assessment

# Health Needs Assessment



**KNOWLEDGE  
EXPLOSION**

ความรู้สากล



**KNOWLEDGE ACCESS**

**KNOWLEDGE VALIDATION**

**KNOWLEDGE VALUATION**

**KNOWLEDGE OPTIMIZATION**

**KNOWLEDGE DISSEMINATION**

How to  
**Effectiveness/  
Benefit  
Safety  
Compatibility  
Feasibility  
Adaptation**

การใช้ความรู้

ความรู้ใหม่  
ประโยชน์ของความรู้



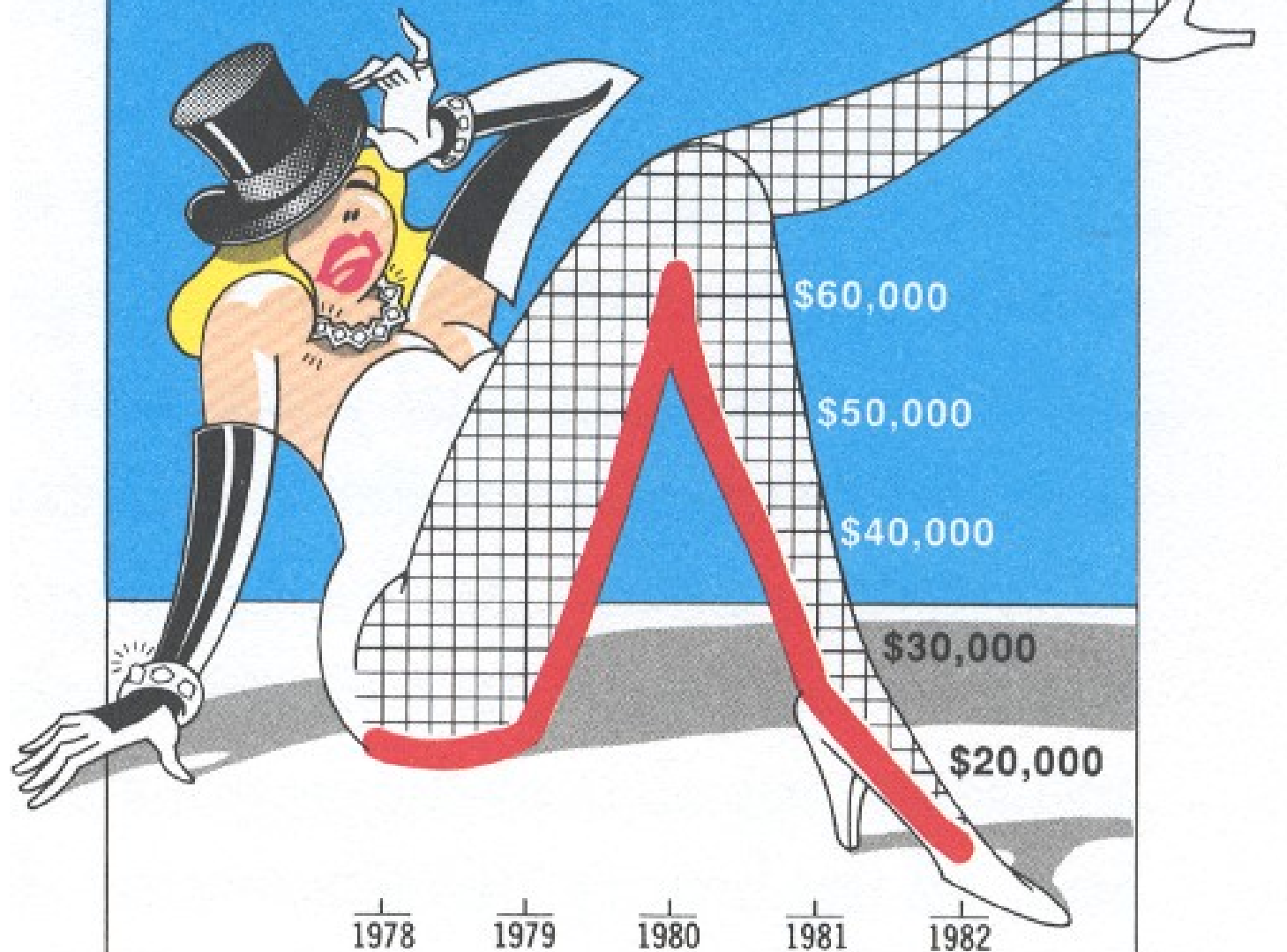
# Statistical data are boring

“The challenge is to present statistics as a visual idea rather than a tedious parade of numbers.”

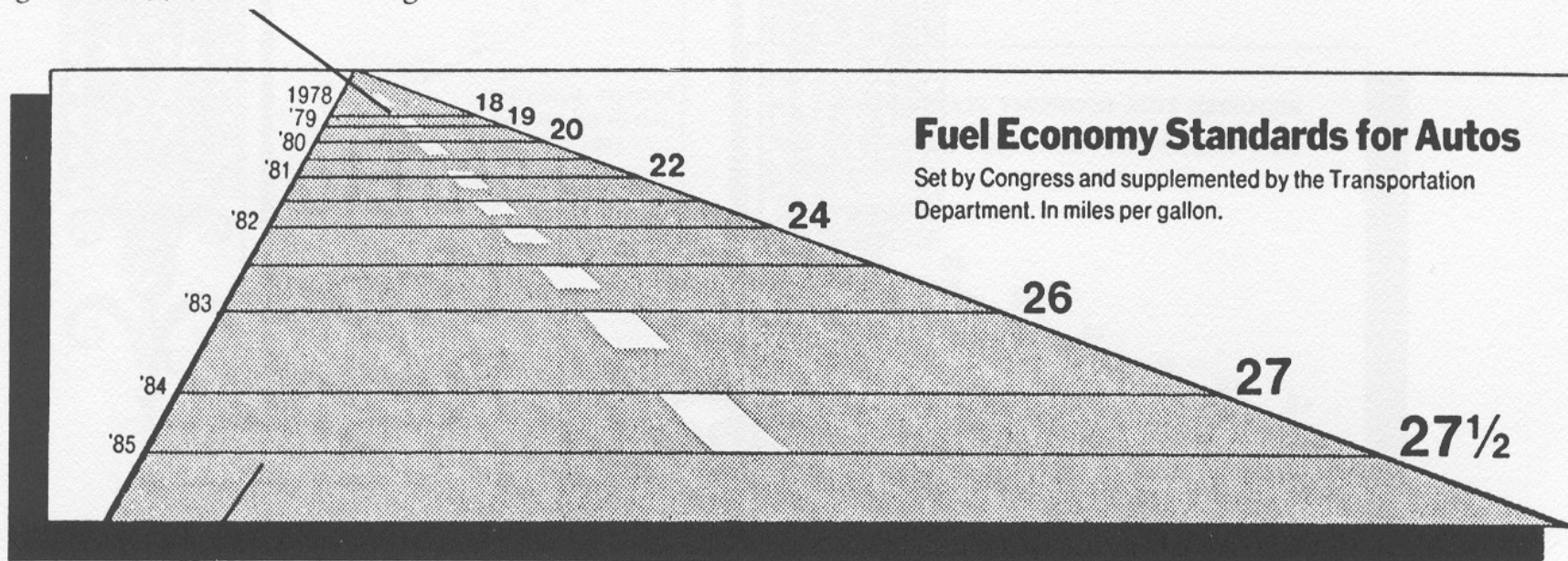


# DIAMONDS WERE A GIRL'S BEST FRIEND

Average price of a one-carat D-flawless

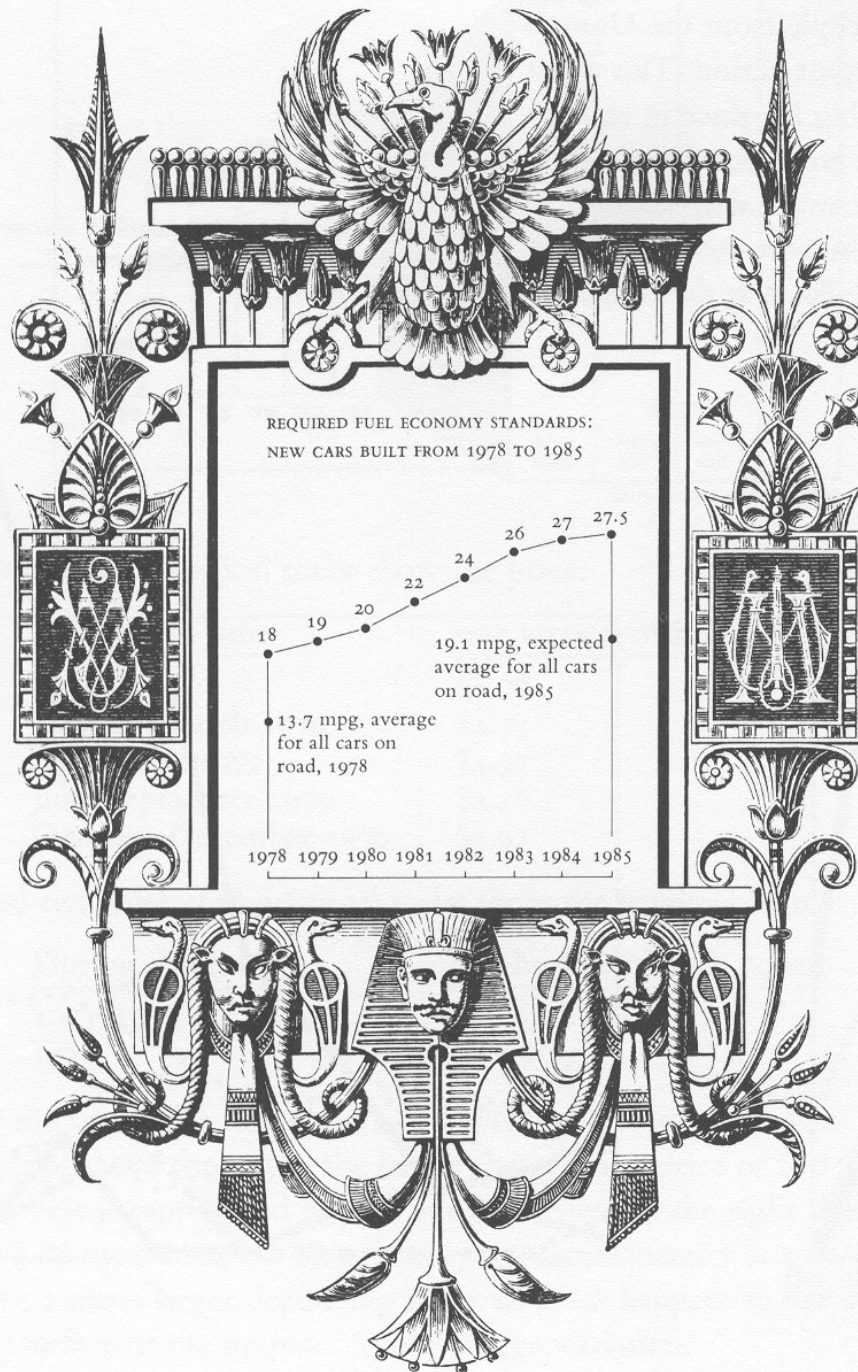


This line, representing 18 miles per gallon in 1978, is 0.6 inches long.



This line, representing 27.5 miles per gallon in 1985, is 5.3 inches long.

*New York Times*, August 9, 1978, p. D-2.







# The doctrine that statistical data are boring

If the statistics are boring, then you've got  
the wrong numbers.

Finding the right numbers requires as much specialized  
skill – **statistical skill** – and hard work as creating a  
beautiful design or covering a complex news story.



# Graphical displays should

- Show the data
- Induce the viewer to think about **the substance** rather than about methodology, graphic design, the technology of graphic production, or something else
- Avoid distorting what the data have to say
- Present many number in a small space

# Graphical displays should



- Make large data sets coherent
- Encourage the eye to compare different pieces of data
- Reveal the data at several levels of detail, from a broad overview to the fine structure
- Serve a reasonably clear purpose: description, exploration, tabulation, or decoration
- Be closely integrated with the statistical and verbal descriptions of a data set



# Attractive displays of statistical information

- Have a properly chosen format and design
- Use words, numbers, and drawing together
- Reflect a balance, a proportion, a sense of relevant scale
- Display an accessible complexity of detail





# Attractive displays of statistical information

- Often have a narrative quality, a story to tell about the data
- Are drawn in a professional manner, with the technical details of production done with care
- Avoid content-free decoration, including **chartjunk**



# CARTE FIGURATIVE des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite.

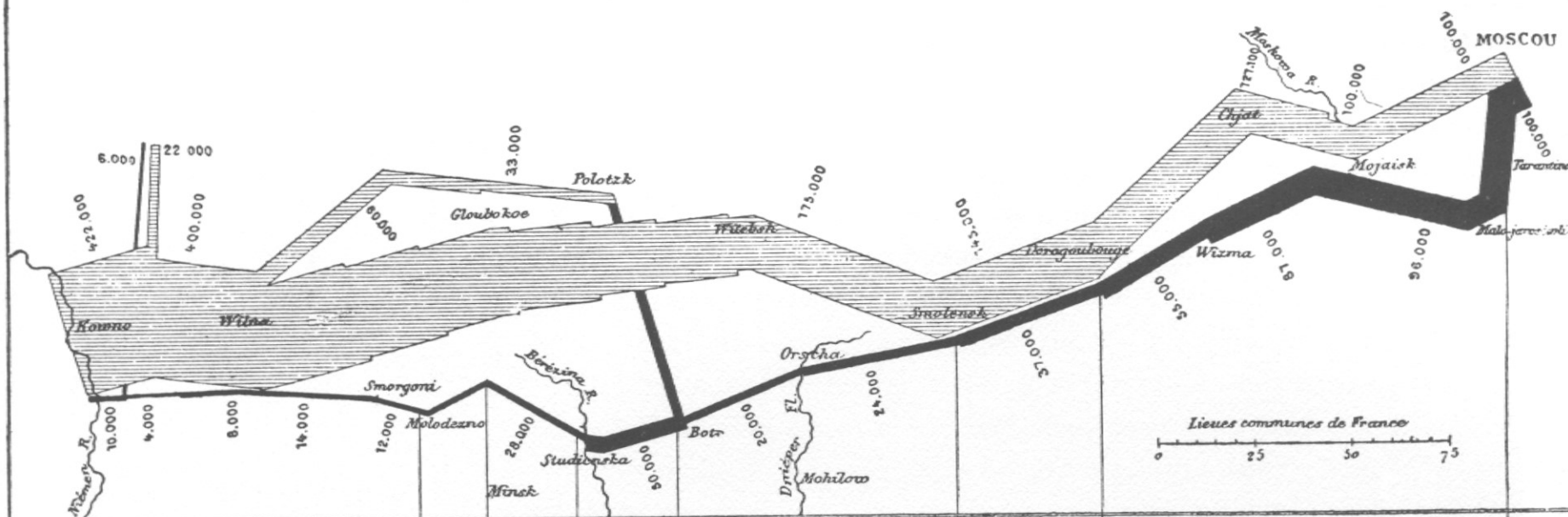
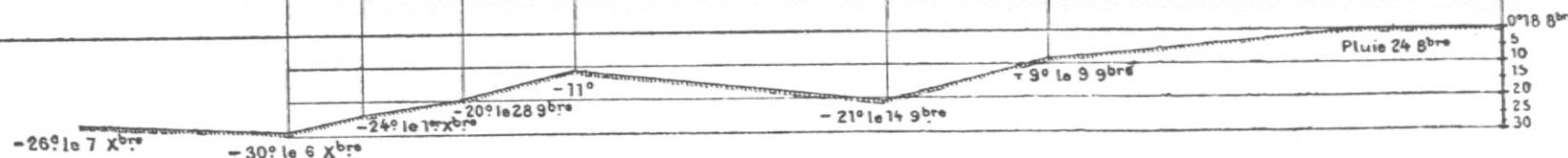


TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro



Xbre = December

9bre = November

8bre = October

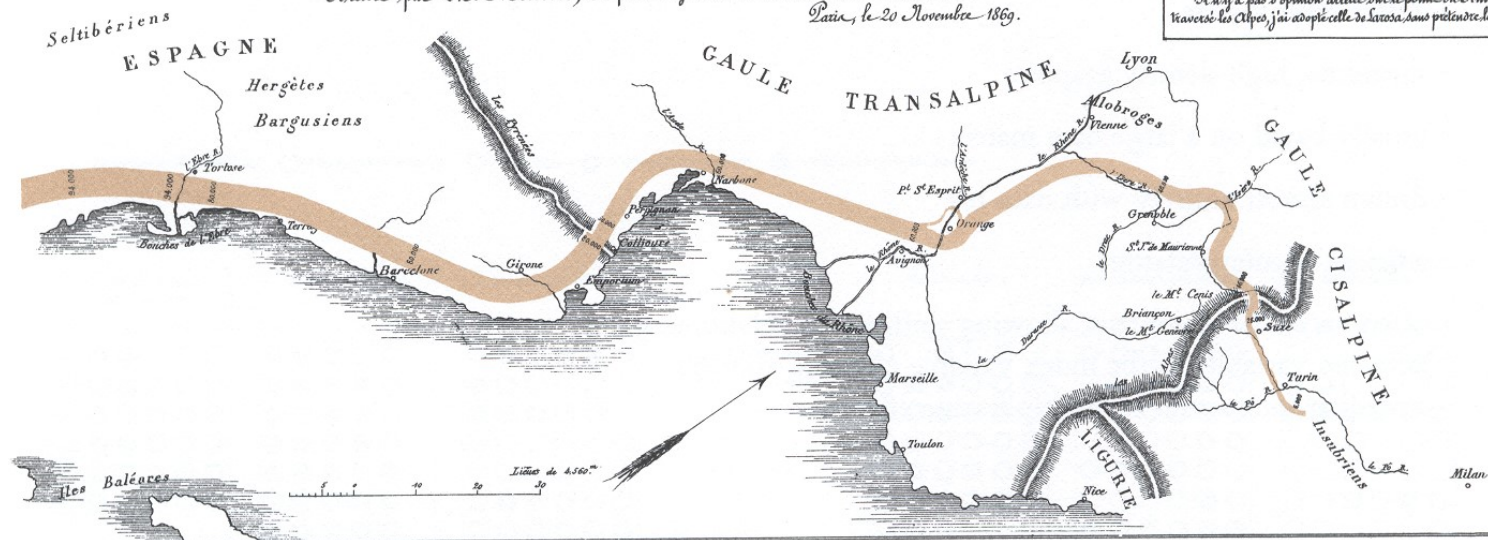
# Carte Figurative des pertes successives en hommes de l'armée qu'Annibal conduisit d'Espagne en Italie en traversant les Gaules (selon Lolybe).

Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite.

Paris, le 20 Novembre 1869.

## Légende.

Les nombres d'hommes restant à Annibal sont représentés par la largeur des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Il n'y a pas d'opinion arrêtée sur le point où Annibal a traversé les Alpes; j'ai adopté celle de Livius sans prétendre la justifier.

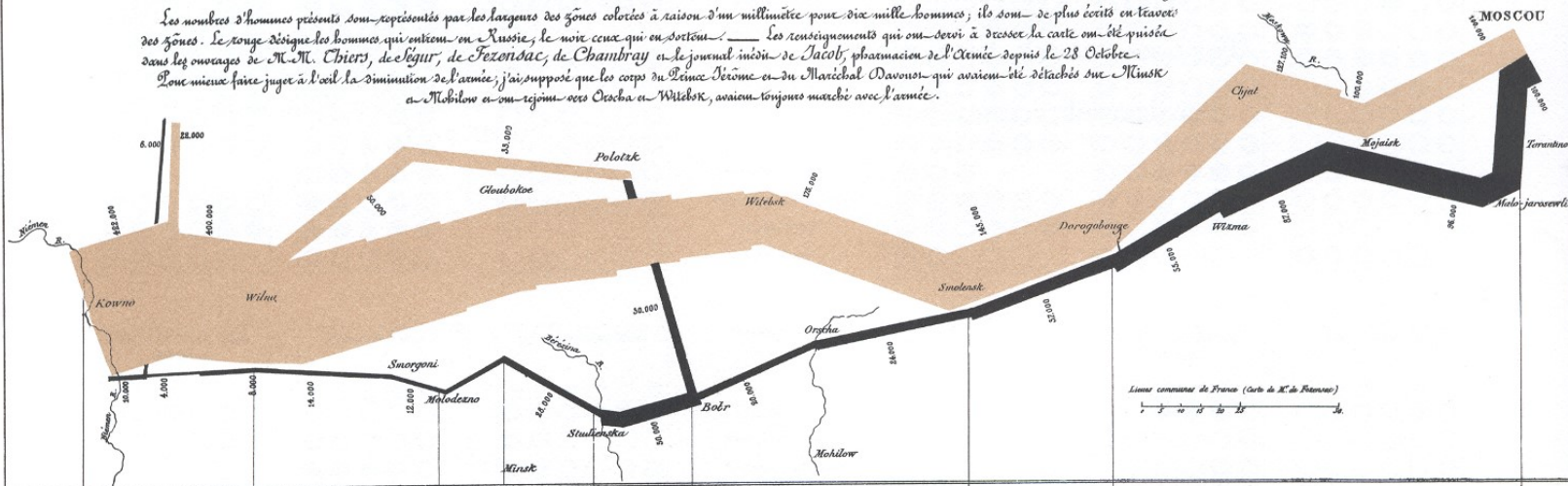


# Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

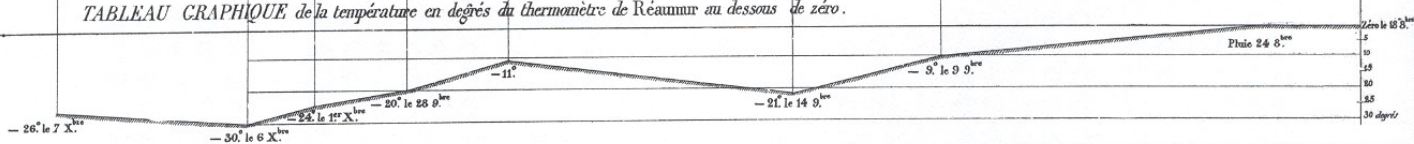
Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite.

Paris, le 20 Novembre 1869

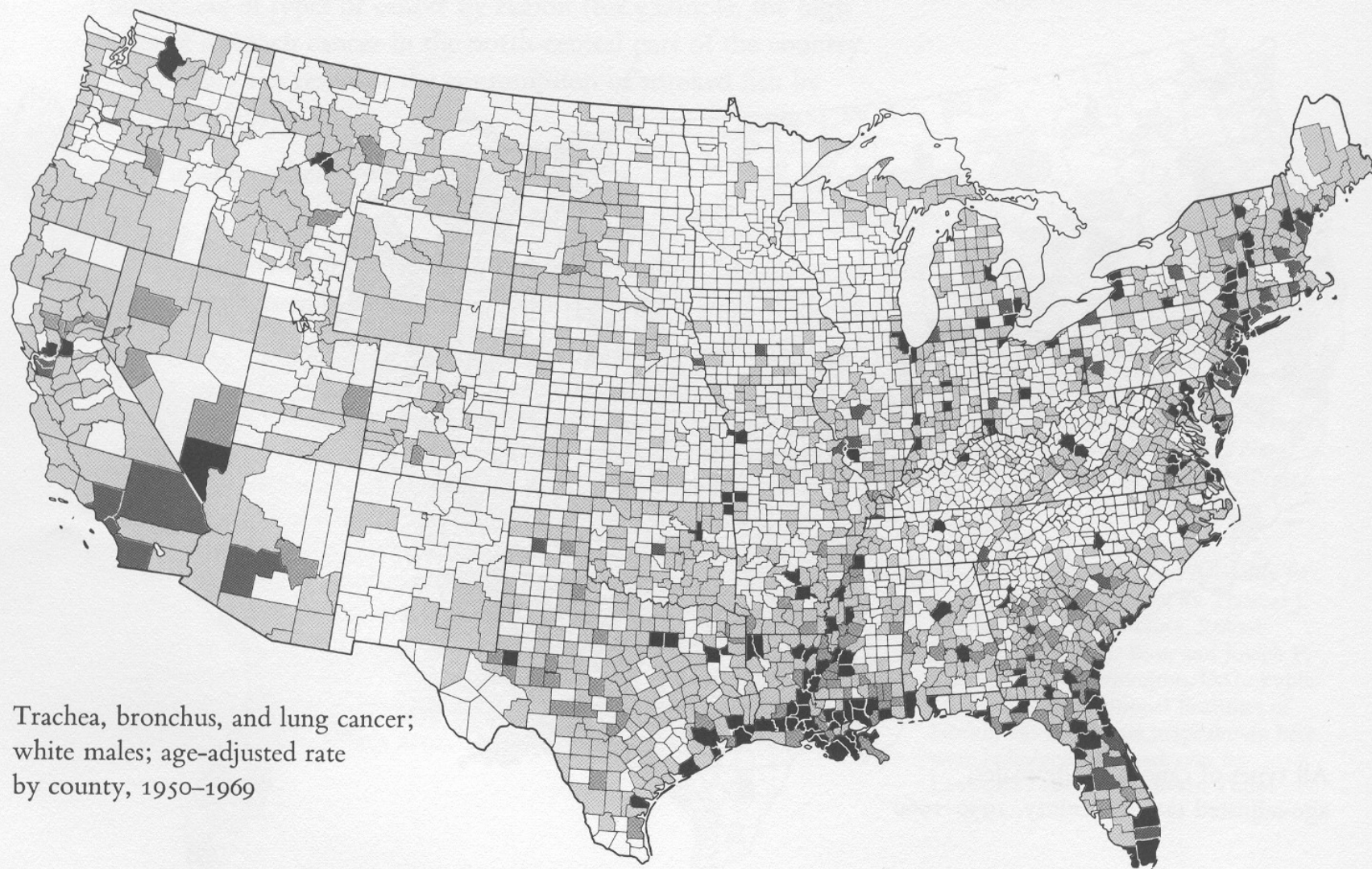
Les nombres d'hommes présents sont représentés par la largeur des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie; le noir ceux qui en sortent. Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Ligny, de Fezonzac, de Chambray et le journal inédit de Jacoby, pharmacien de l'Armée depuis le 28 Octobre. Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davoust qui avaient été détachés sur Minsk et Mohilew et qui rejoignent avec Ouchakov et Wittelsch, avaient toujours marché avec l'armée.



## TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.



Les Cosaques passent au galop le Nilman gelé.



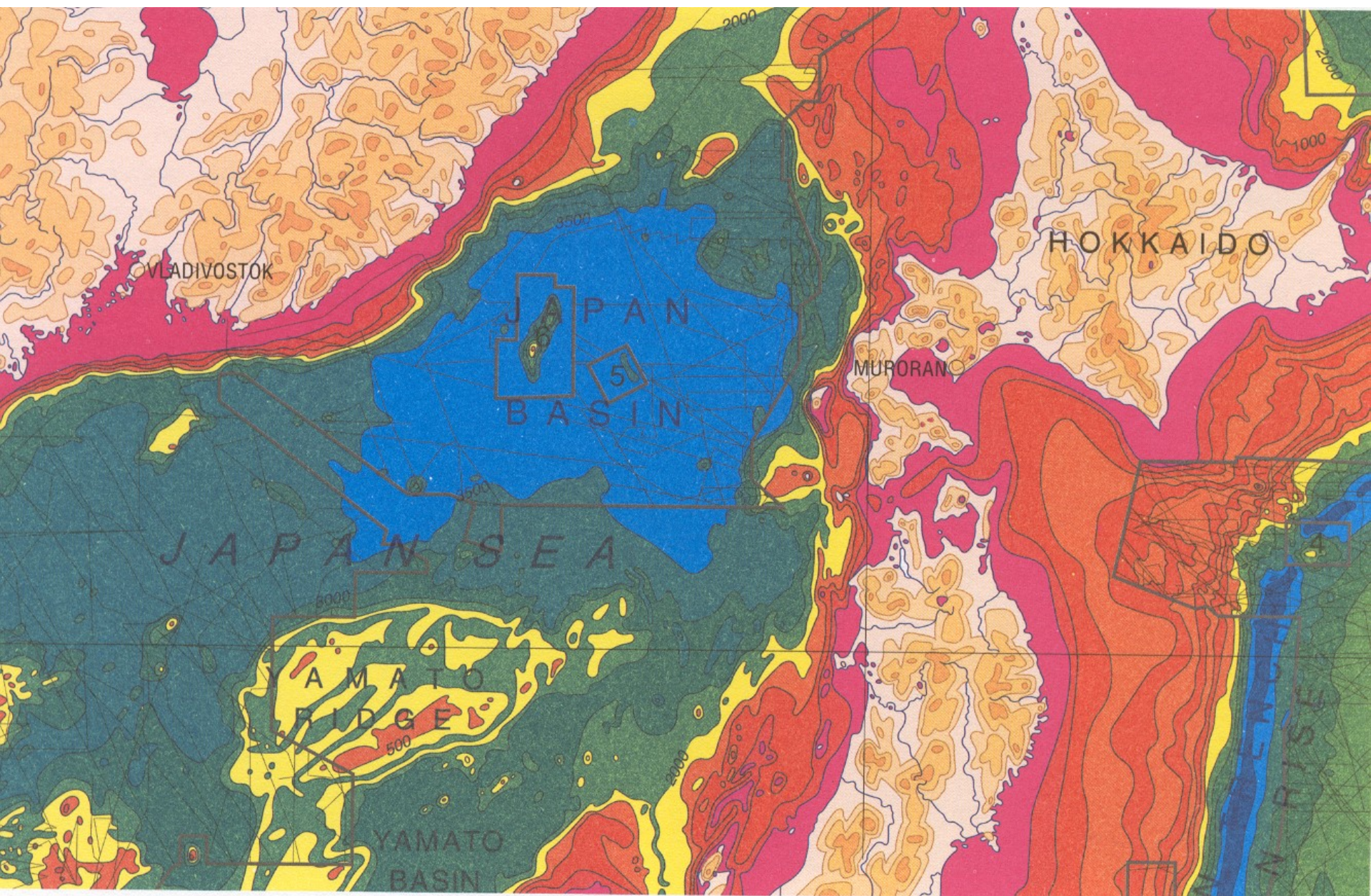
Trachea, bronchus, and lung cancer;  
white males; age-adjusted rate  
by county, 1950-1969



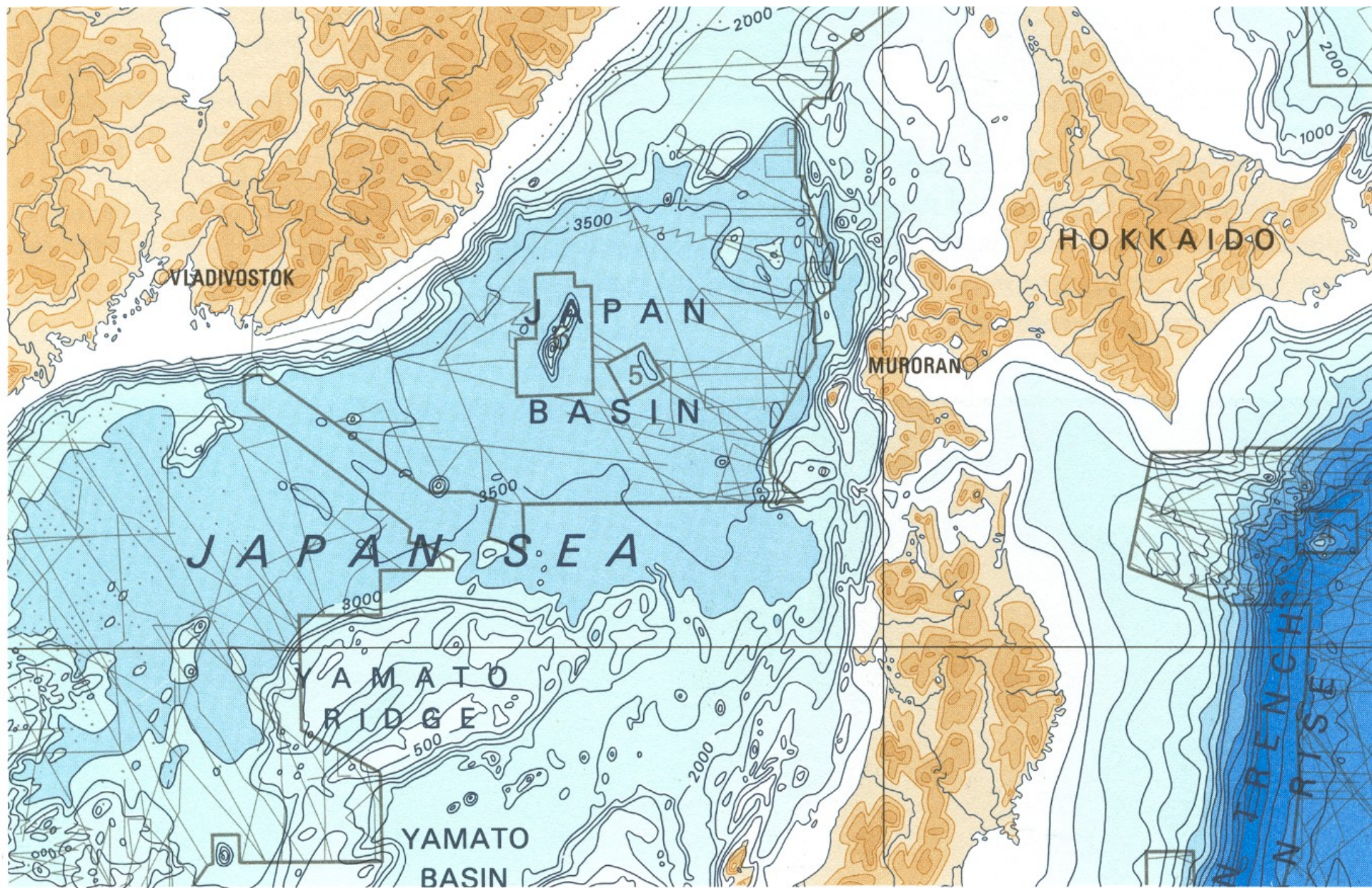


# การใช้สี



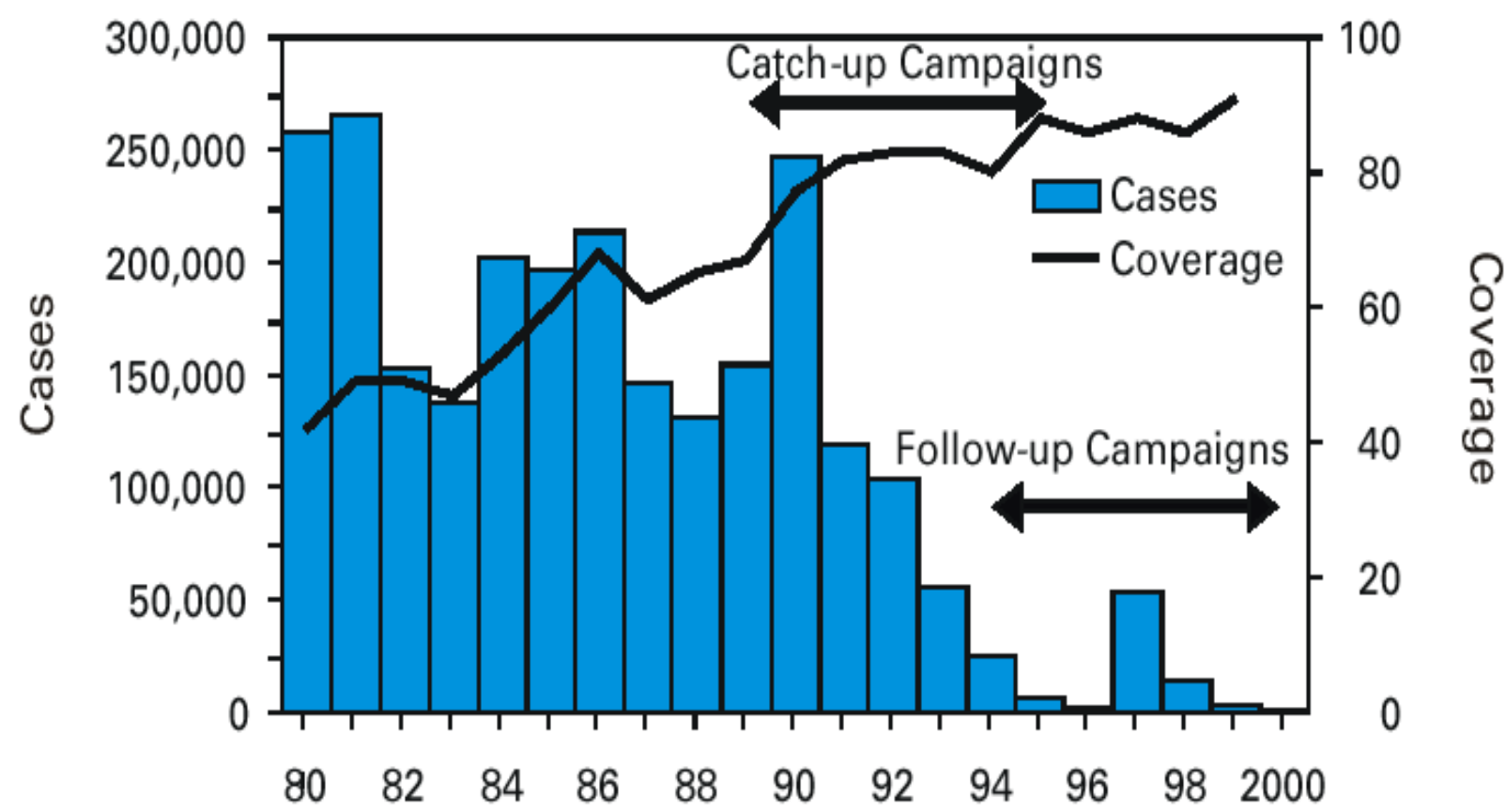






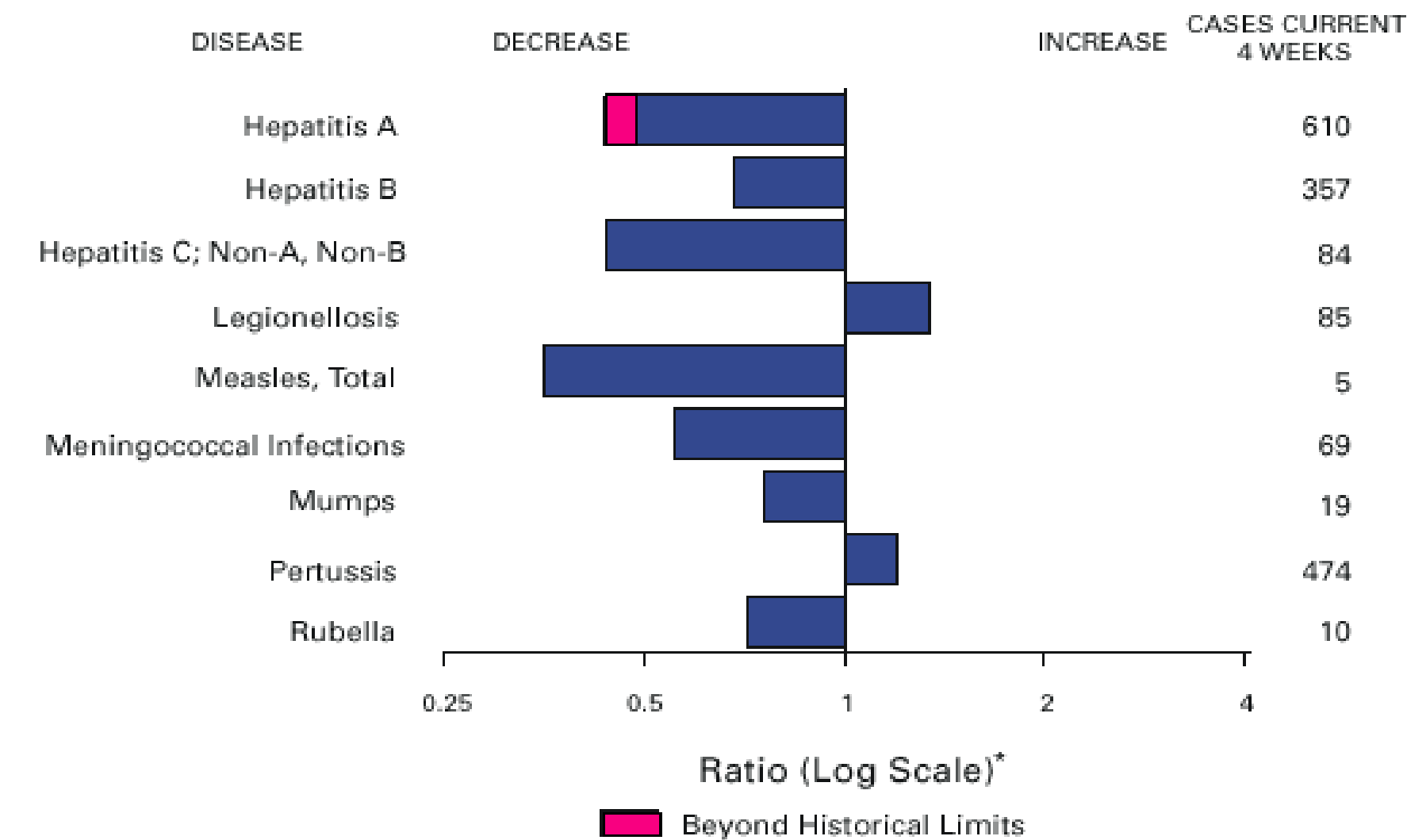


**FIGURE 1. Number of confirmed measles cases and percentage of routine infant measles vaccination coverage — Region of the Americas, 1980–2000\***



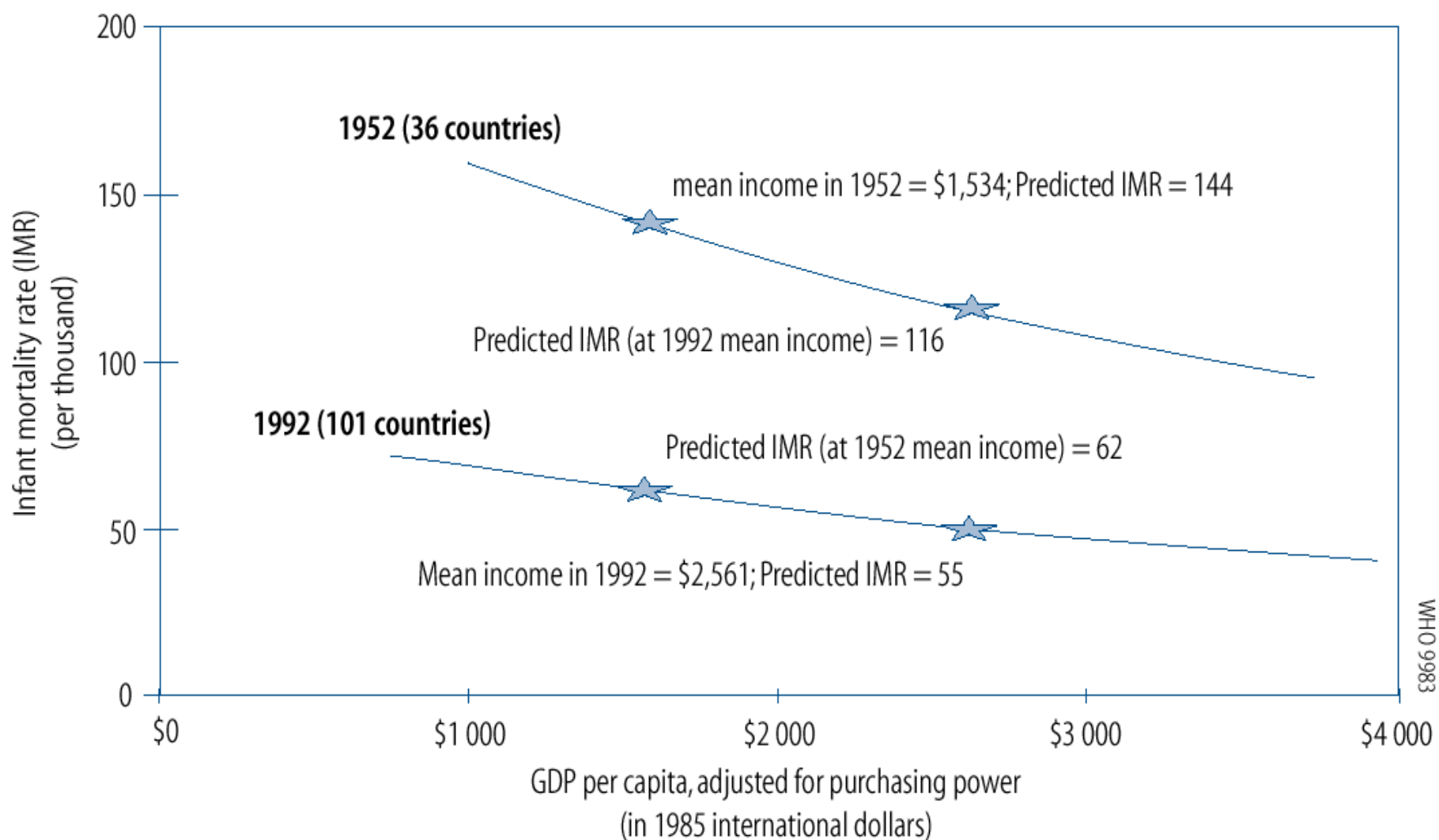
\* Data as of September 20, 2000.

**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending September 2, 2000, with historical data**



\* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**Figure 1.4 The role of improvements in income in reducing infant mortality rates**



Note: Results are based on a cross-sectional time-series regression that relates, at 5-year intervals, the natural logarithm of IMR to the natural logarithm of income, the square of the natural logarithm of income and indicator variables for time. Data sources are the same as for Annex Table 6.

# จัดทำตารางใหม่เพื่อนำเสนอ



Battery Brand	Battery Life in Hours			
	Cassette player	Radio	Flashlight	Portable Computer
Constant Charge	5	19	10	3
PowerBat	7	24	13	5
Servo-Cell	4	21	12	2
NeverDie	8	28	16	6
ElectroBlaster	10	26	15	4





Battery Brand	Battery Life in Hours				
	Radio	Flashlight	Cassette Player	Portable Computer	Battery Average
NeverDie	28	16	8	6	15
ElectroBlaster	26	15	10	4	14
PowerBat	24	13	7	5	12
Servo-Cell	21	12	4	2	10
Constant Charge	19	10	5	3	9
Usage Average	24	13	7	4	12

# ข้อเสนอในการจัดทำตาราง



- จัดเรียงข้อมูลตัวเลขตามตัวแปรที่สำคัญ
- จัดวางตัวเลขที่ต้องการเปรียบเทียบไว้ใกล้ๆ กัน
- Round heavily
- จัดแนวตัวเลขให้เหมาะสมเพื่อให้สามารถเปรียบเทียบได้ง่าย
- Captions - อธิบายทุกอย่างเพื่อให้คนอ่านเข้าใจตารางได้ง่าย
- Spacing – ใช้ช่องว่างระหว่างแถวหรือคอลัมน์เพื่อแบ่งแยกตัวเลขที่ต้องการแยกออกจากกัน เพื่อแสดงความแตกต่างให้ชัดเจนยิ่งขึ้น

# คำแนะนำในการจัดทำตาราง



- ต้องเน้นรายการที่สำคัญให้เห็นเด่นชัด
- ต้องง่ายและสะดวกต่อการเปรียบเทียบ
- ต้องเน้นการเปรียบเทียบที่สำคัญ
- ต้องกะช่องไฟให้ได้สัดส่วนและกะทัดรัด
- ต้องให้สะอาด เรียบร้อยและสวยงาม



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Excellence in statistical graphics

consists of complex ideas

communicated with

clarity, precision, and efficiency