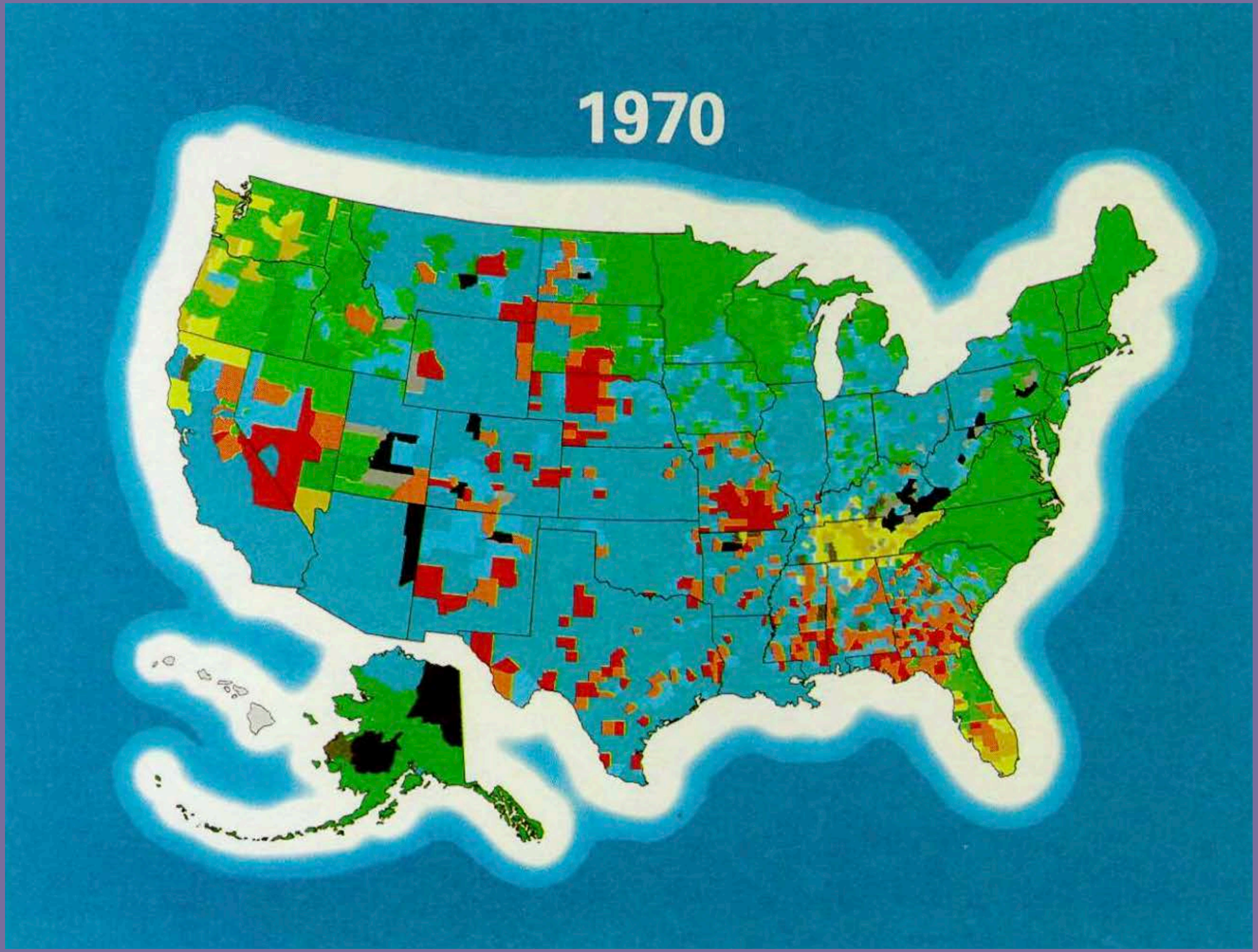
Envisioning Information

Chapter 5

Color and Information

“to put the right color in the right place.”

1) to label (color as noun)
2) to measure (color as quantity)
3) To imitate reality (color as representation)
4) To enliven or decorate (color as beauty)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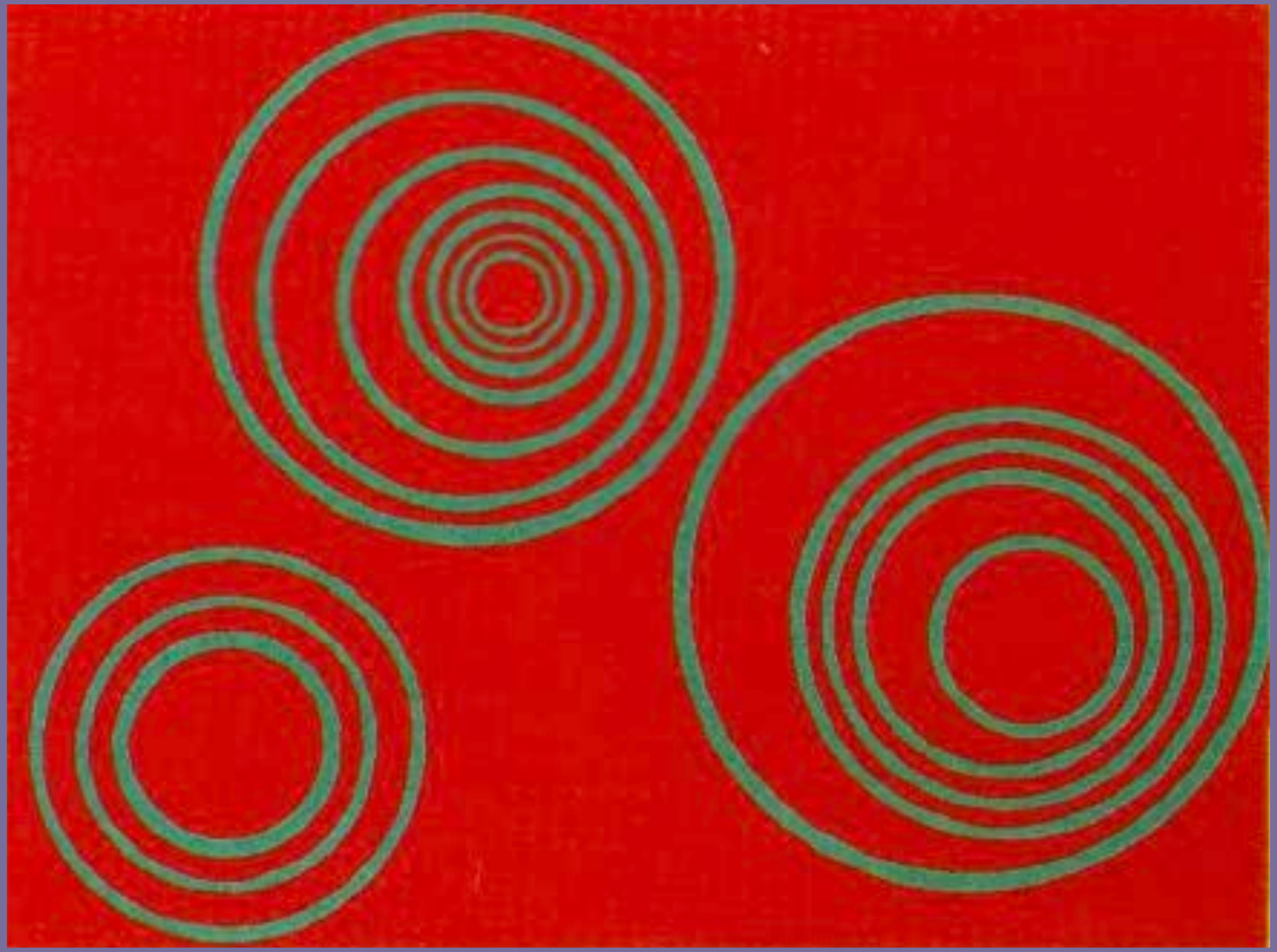


THEOREM 27. (Pythagoras' Theorem.)

In any right-angled triangle, the square on the hypotenuse is equal to the sum of the squares on the sides containing the right angle.

Given $\angle BAC$ is a right angle.

To prove the square on BC = the square on BA + the square on AC.

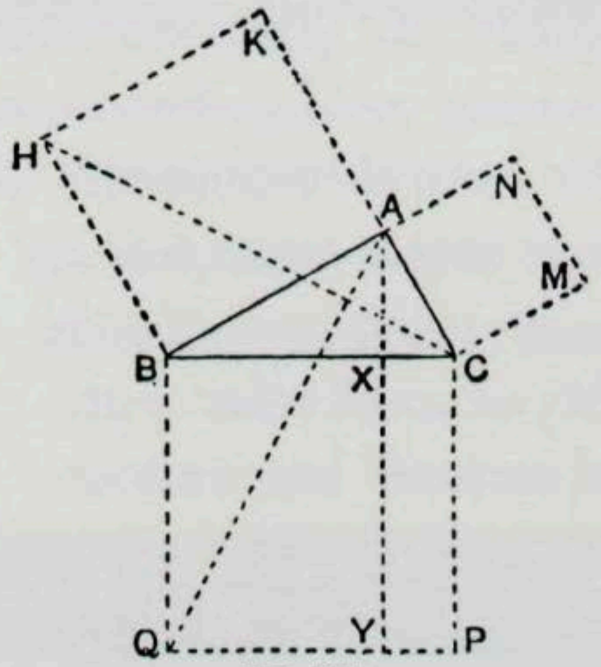


Fig. 163.

Let ABHK, ACMN, BCPQ be the squares on AB, AC, BC.

Join CH, AQ. Through A, draw AXY parallel to BQ, cutting BC, QP at X, Y.

Since $\angle BAC$ and $\angle BAK$ are right angles, KA and AC are in the same straight line.

Again $\angle HBA = 90° = \angle QBC$.

Add to each $\angle ABC$, $\therefore$ $\angle HBC = \angle ABQ$.

In the $\triangle$s HBC, ABQ.

$HB = AB$, sides of square.

$CB = QB$, sides of square.

$\angle HBC = \angle ABQ$, proved.

$\therefore$ $\triangle HBC \equiv \triangle ABQ$ (2 sides, inc. angle).

Now $\triangle HBC$ and square HA are on the same base HB and between the same parallels HB, KAC;

$\therefore$ $\triangle HBC = \frac{1}{2}$ square HA.

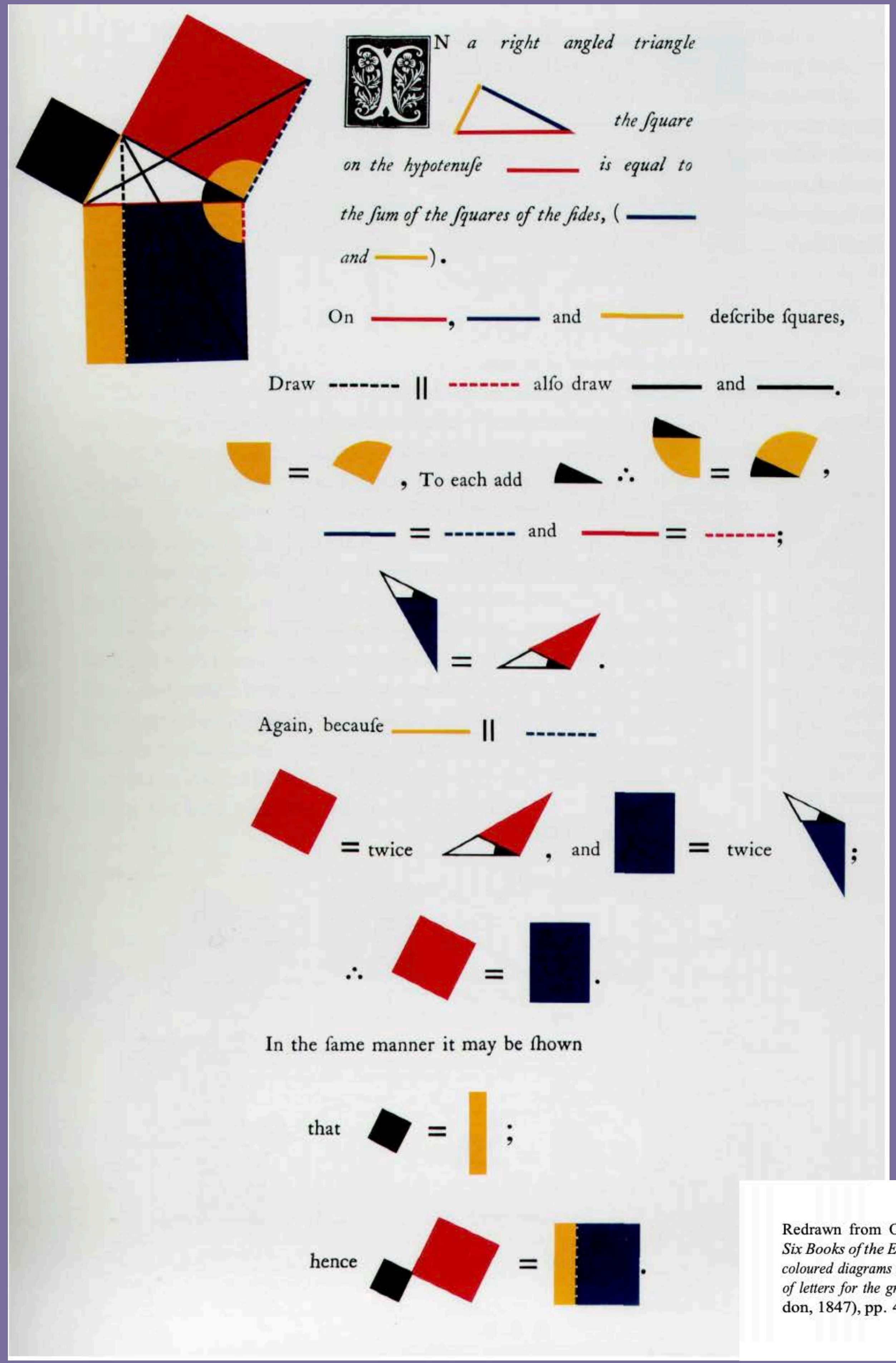
Also $\triangle ABQ$ and rectangle BQYX are on the same base BQ and between the same parallels BQ, AXY.

$\therefore$ $\triangle ABQ = \frac{1}{2}$ rect. BQYX.

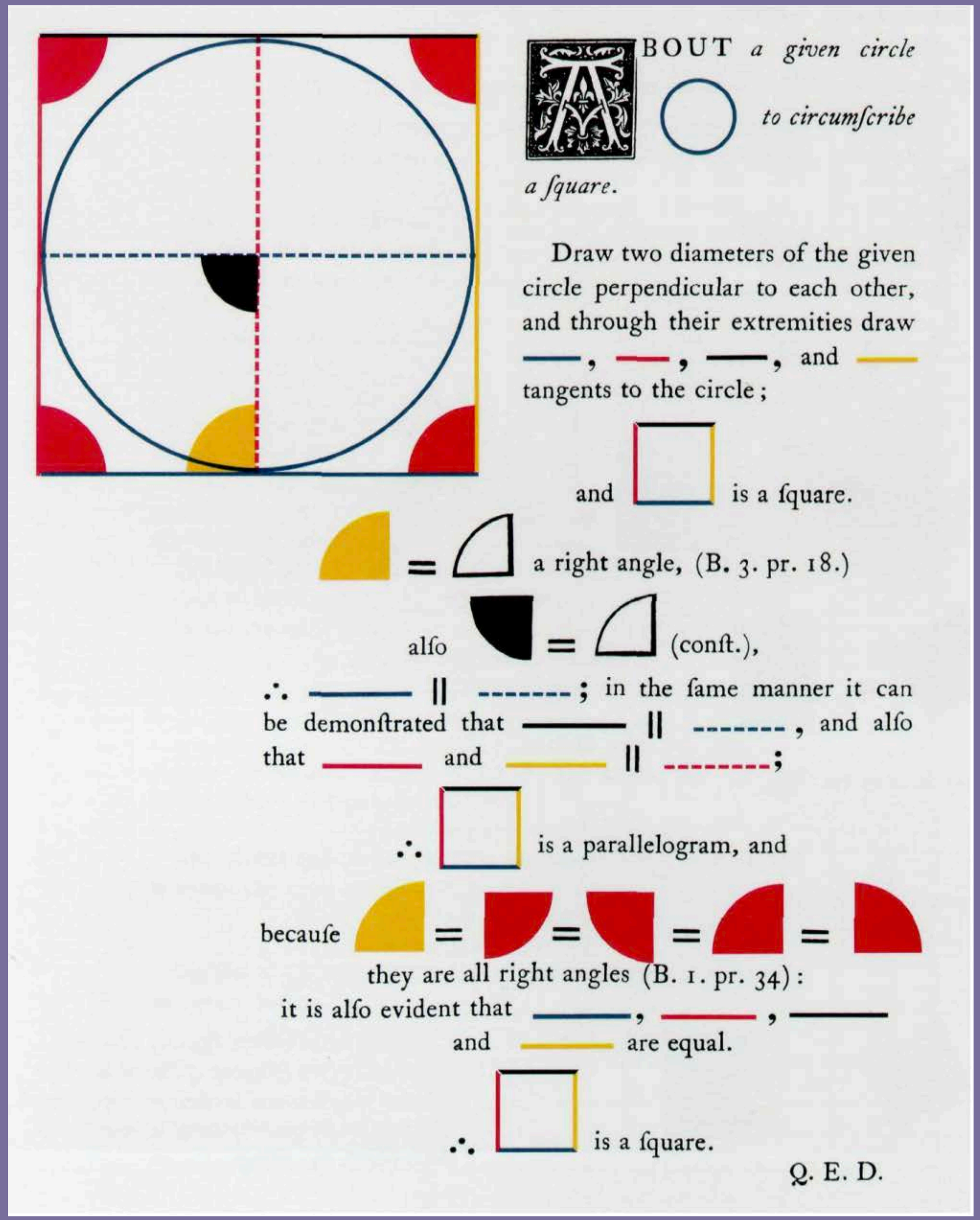
$\therefore$ square HA = rect. BQYX.

Similarly, by joining AP, BM, it can be shown that square MA = rect. CPYX;

$\therefore$ square HA + square MA = rect. BQYX + rect. CPYX
= square BP. Q.E.D.



Redrawn from Oliver Byrne, *The First Six Books of the Elements of Euclid in which coloured diagrams and symbols are used instead of letters for the greater ease of learners* (London, 1847), pp. 48-49.


ABOUT *a given circle* *to circumſcribe a ſquare.*

Draw two diameters of the given circle perpendicular to each other, and through their extremities draw , , , and tangents to the circle;

and is a ſquare.

= a right angle, (B. 3. pr. 18.)

alſo = (conſt.),

∴ || ; in the ſame manner it can be demonſtrated that || , and alſo that and || ;

∴ is a parallelogram, and

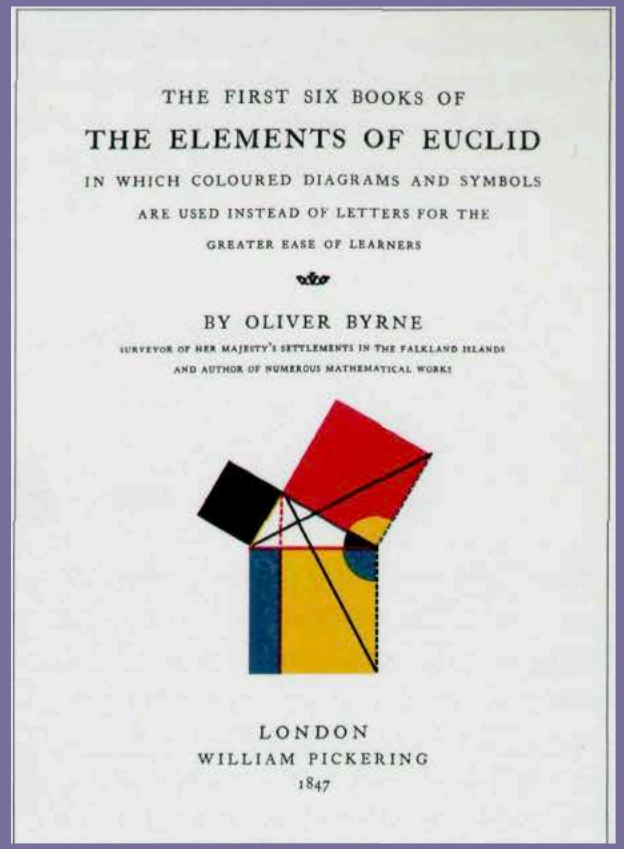
becauſe = = = =

they are all right angles (B. 1. pr. 34):

it is alſo evident that , , and are equal.

∴ is a ſquare.

Q. E. D.


THE FIRST SIX BOOKS OF

THE ELEMENTS OF EUCLID

IN WHICH COLOURED DIAGRAMS AND SYMBOLS ARE USED INSTEAD OF LETTERS FOR THE GREATER EASE OF LEARNERS

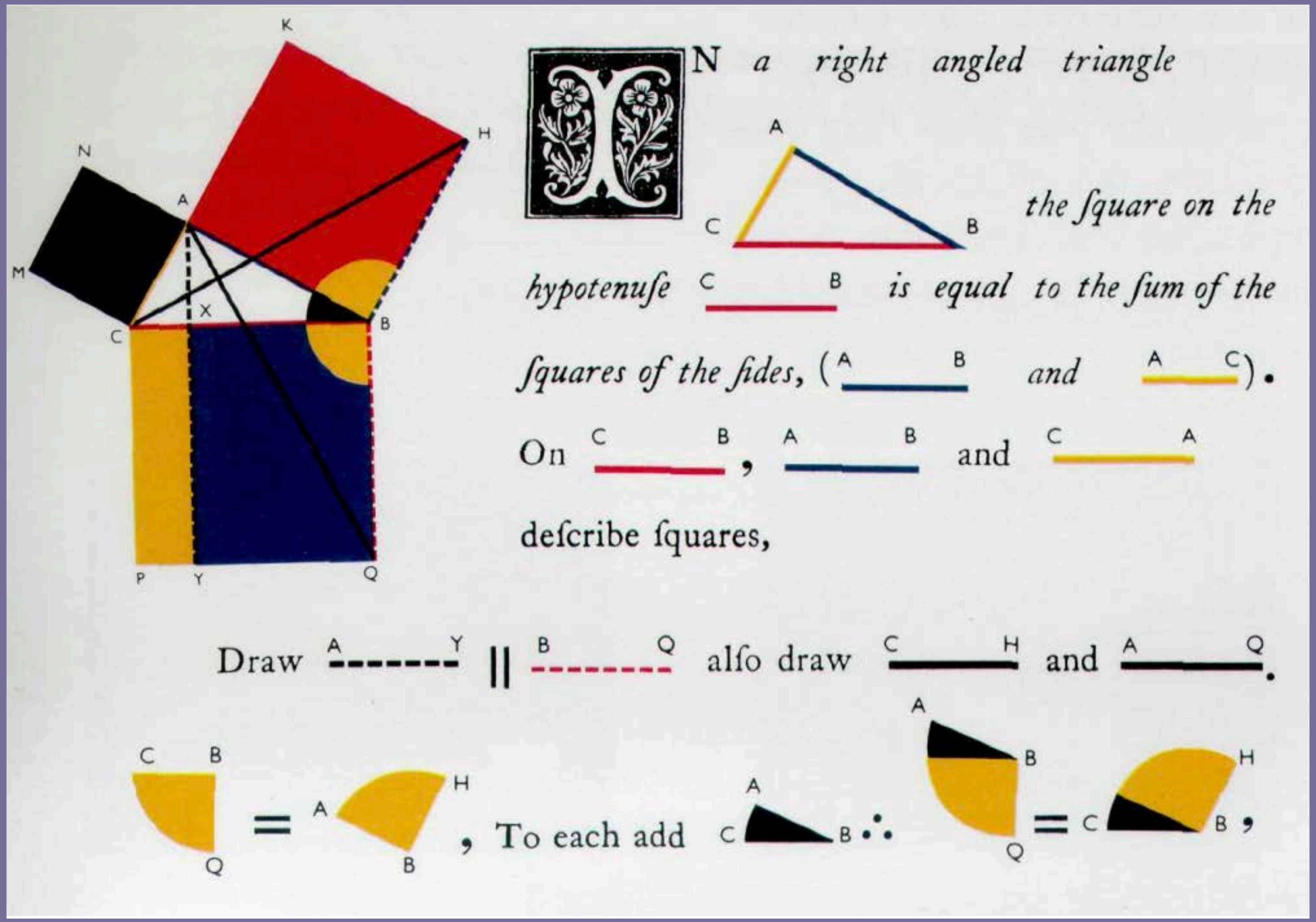
BY OLIVER BYRNE

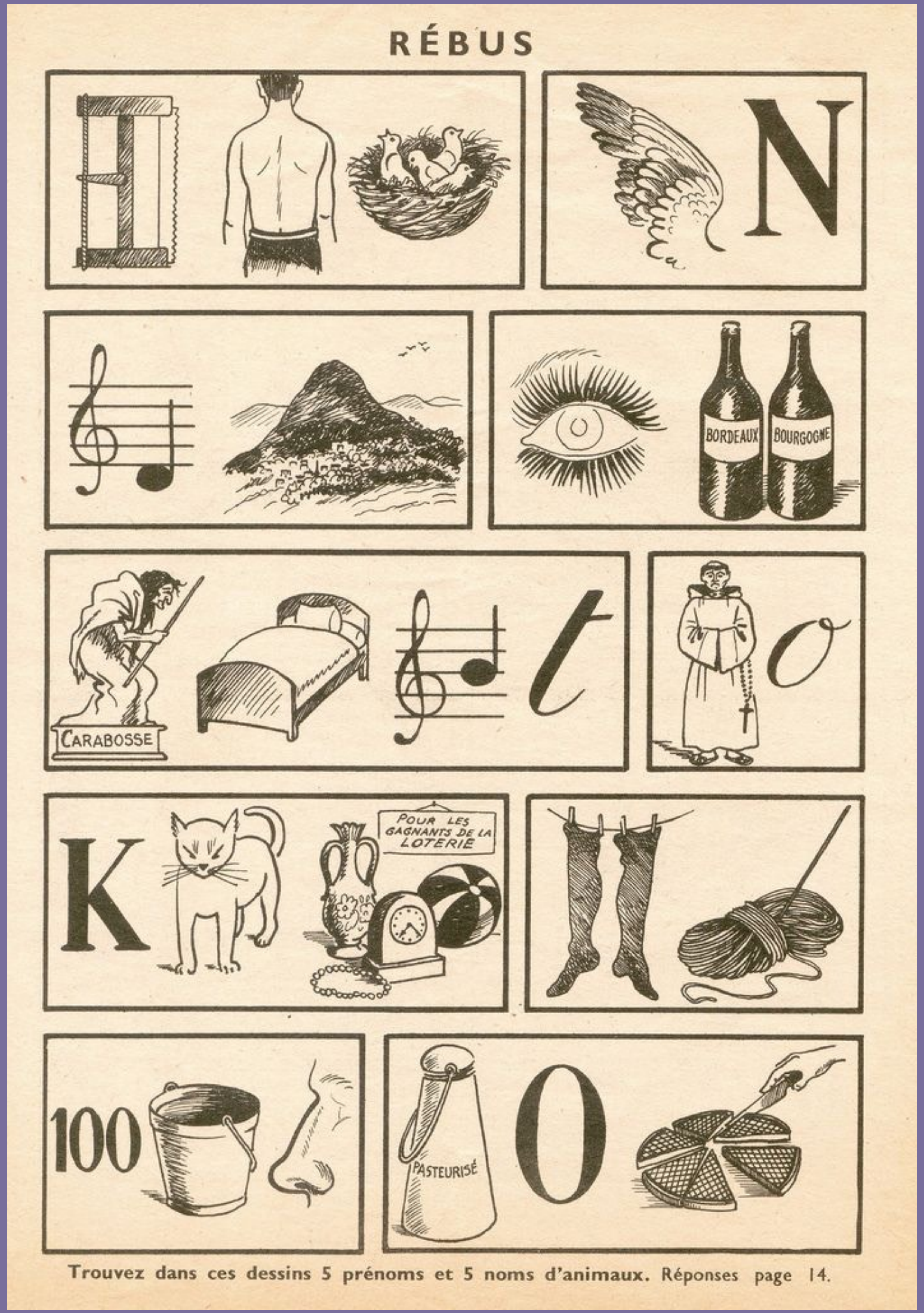
SURVEYOR OF HER MAJESTY'S SETTLEMENTS IN THE FALKLAND ISLANDS AND AUTHOR OF NUMEROUS MATHEMATICAL WORKS

LONDON

WILLIAM PICKERING

1847


IN a right angled triangle
the ſquare on the
hypotenuſe is equal to the ſum of the
ſquares of the ſides, (and).
On , and
deſcribe ſquares,
Draw || alſo draw and .
= , To each add ∴ = ,


RÉBUS
N
BORDEAUX
BOURGOGNE
CARABOSSE
t
o
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POUR LES GAGNANTS DE LA LOTERIE
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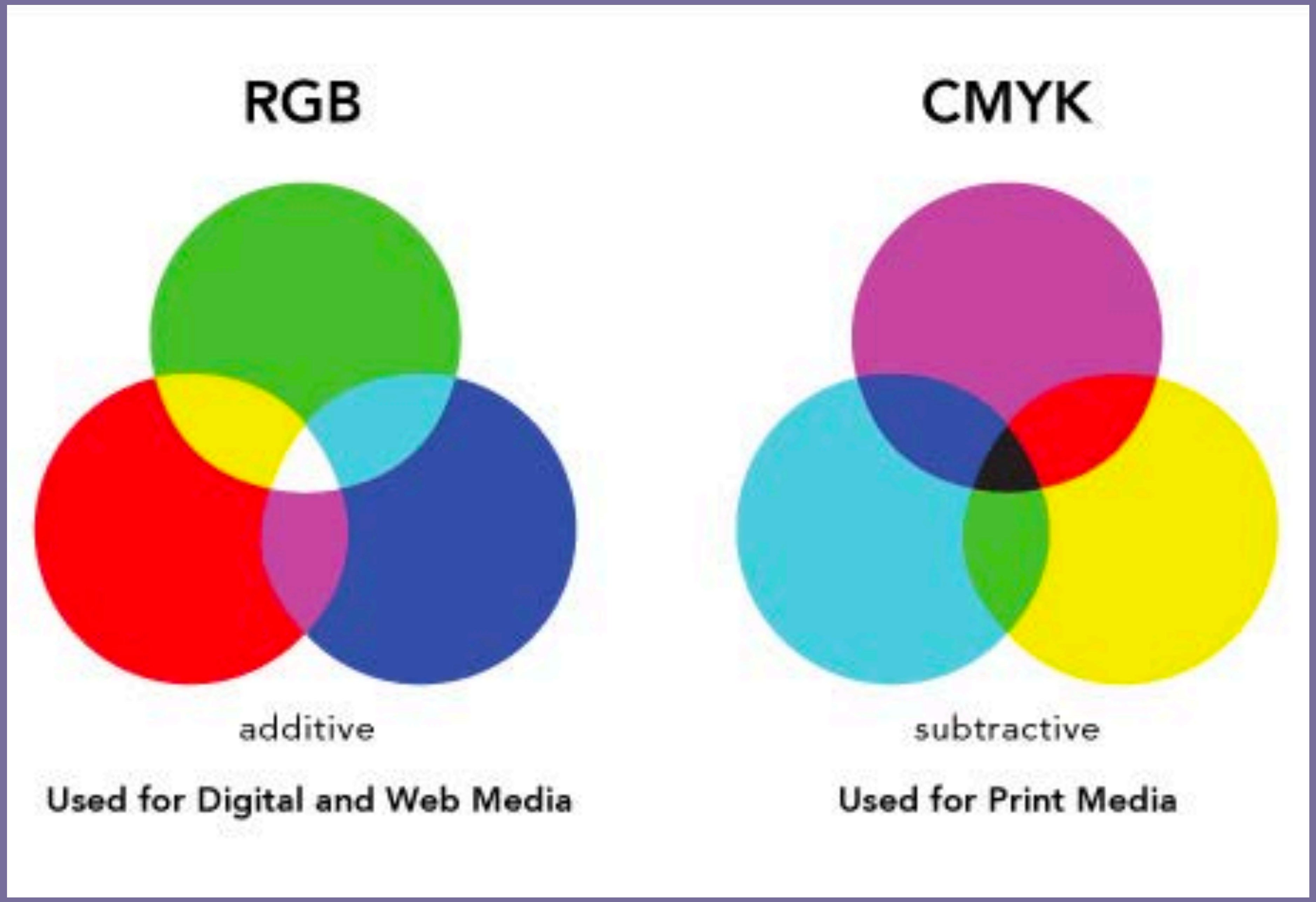
PASTEURISÉ
O
Trouvez dans ces dessins 5 prénoms et 5 noms d'animaux. Réponses page 14.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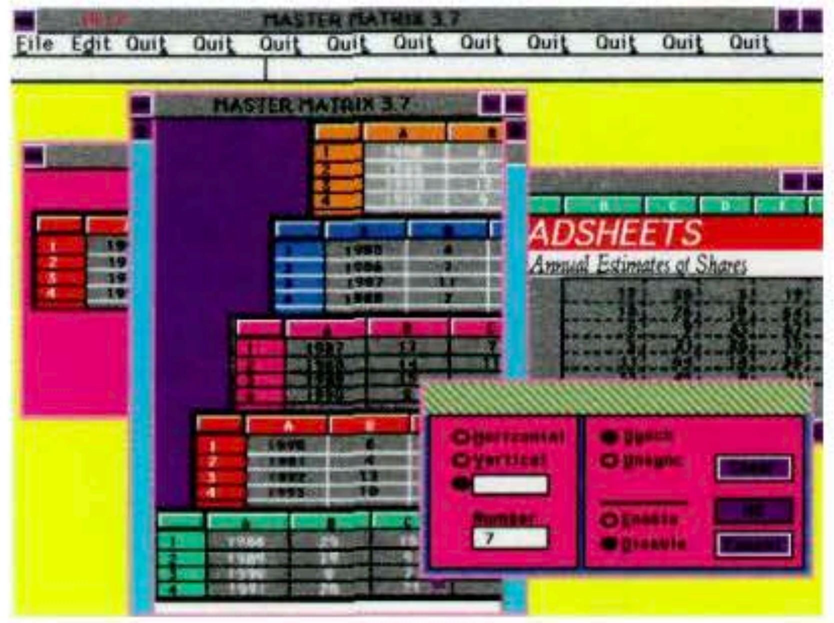
additive
Used for Digital and Web Media
CMYK
subtractive
Used for Print Media


MASTER MATRIX 3.7
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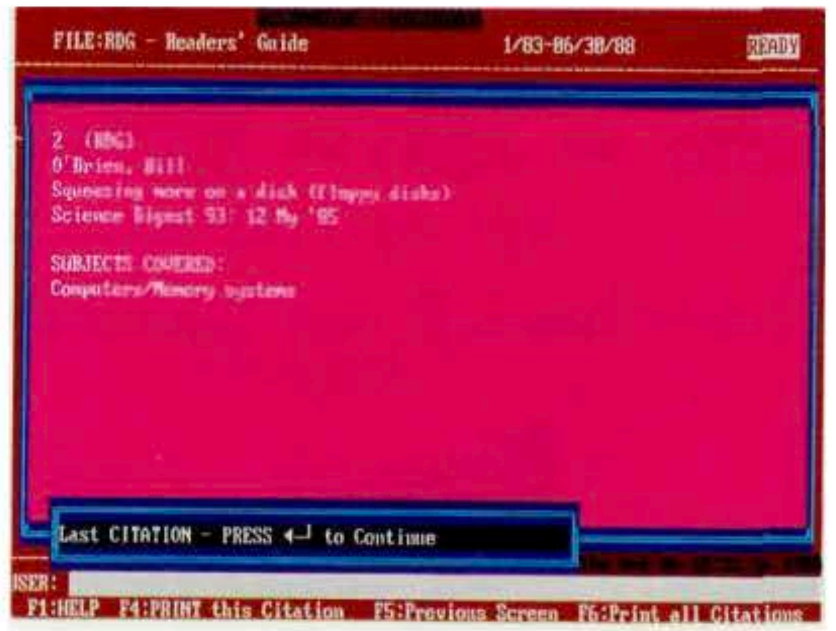
MASTER MATRIX 3.7
ADSHEETS
Annual Estimates of Shares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1/83-86/30/88
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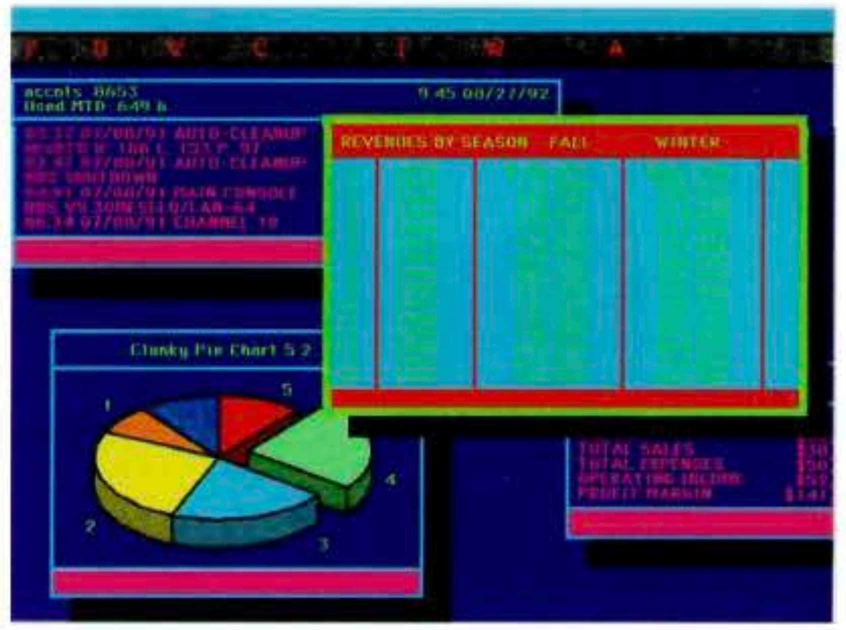
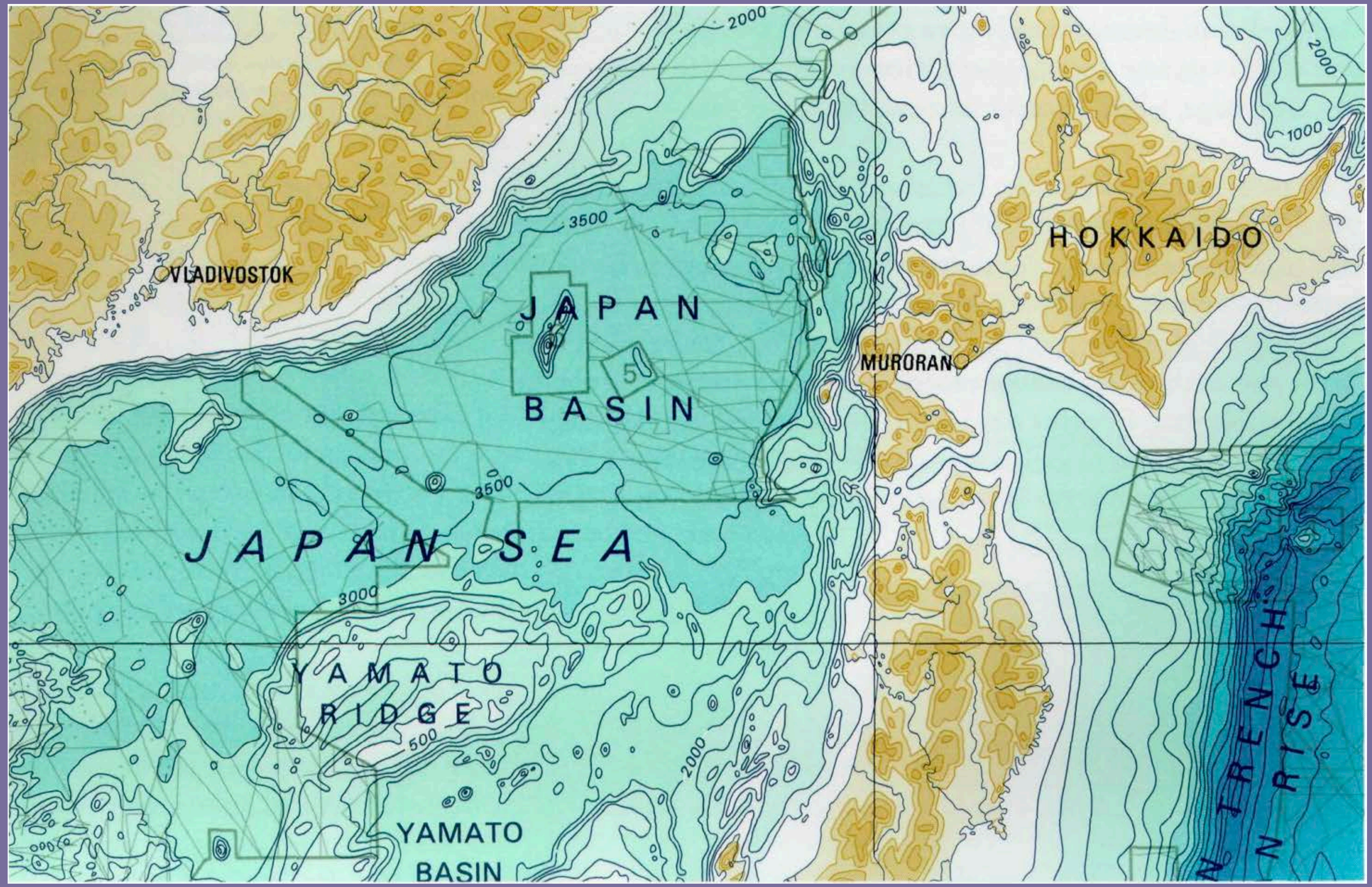

REVENUES BY SEASON FALL WINTER


2000
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VLADIVOSTOK
JAPAN
BASIN
MURORAN
HOKKAIDO
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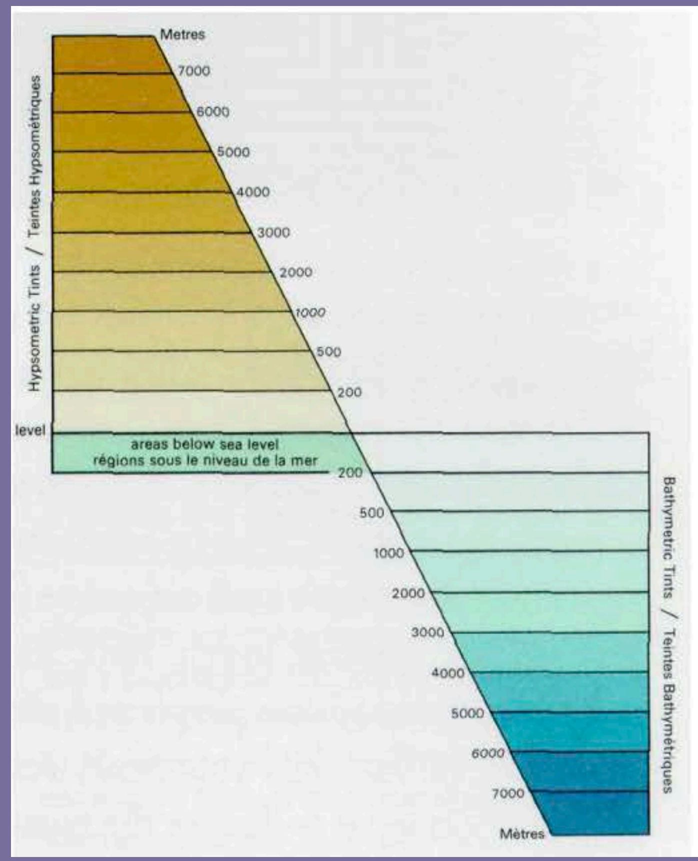
BASIN
TRENCH
RISE


Metres
7000
6000
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Hypsometric Tints / Teintes Hypsométriques
level
areas below sea level
régions sous le niveau de la mer
200
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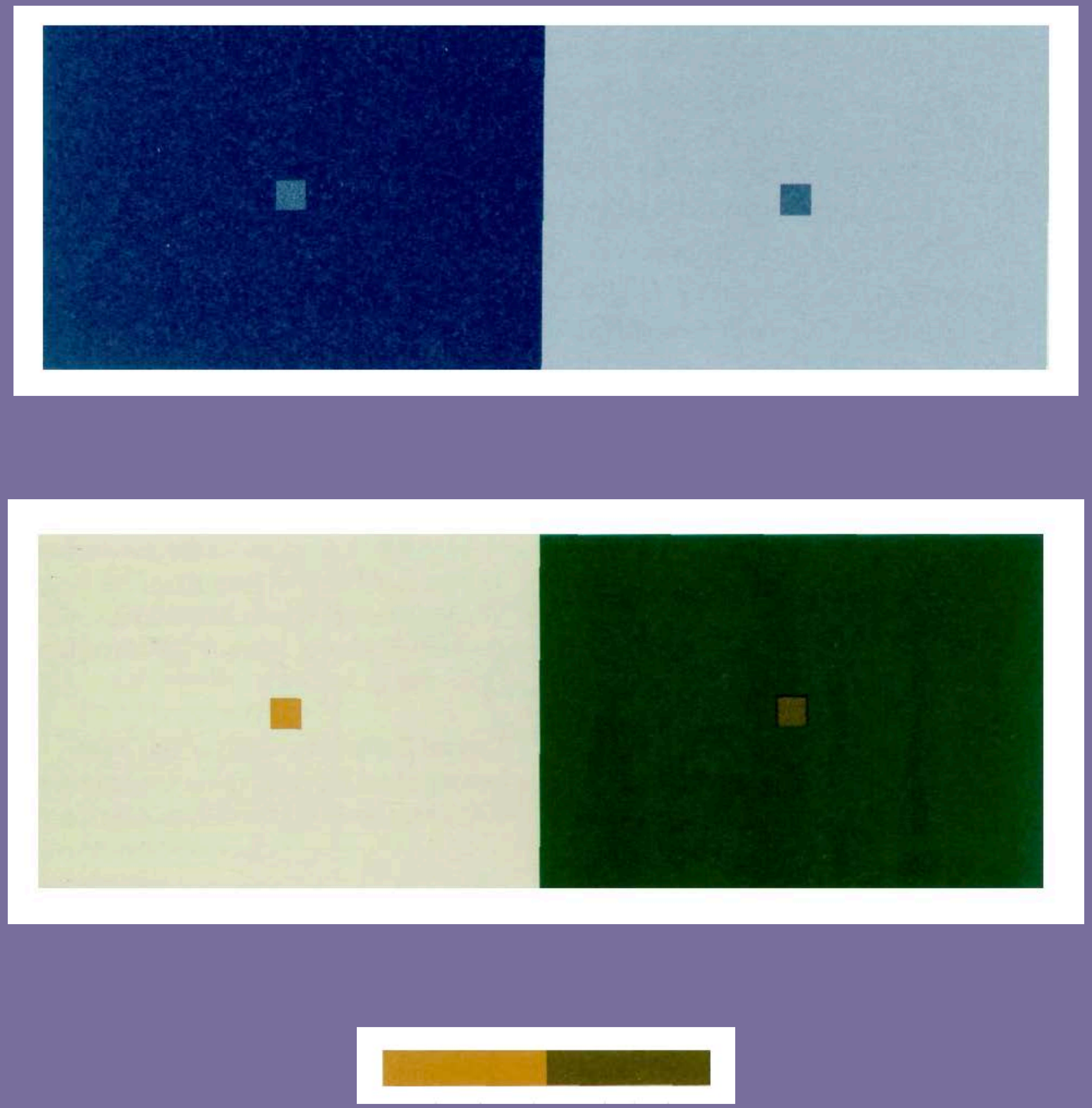
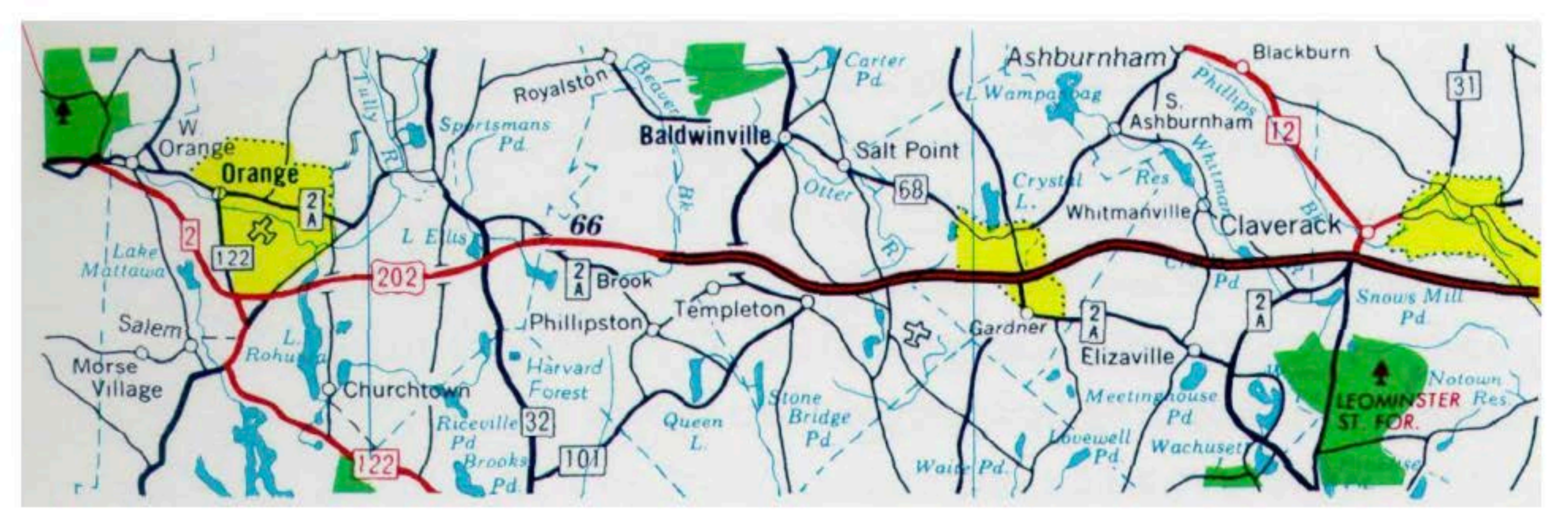
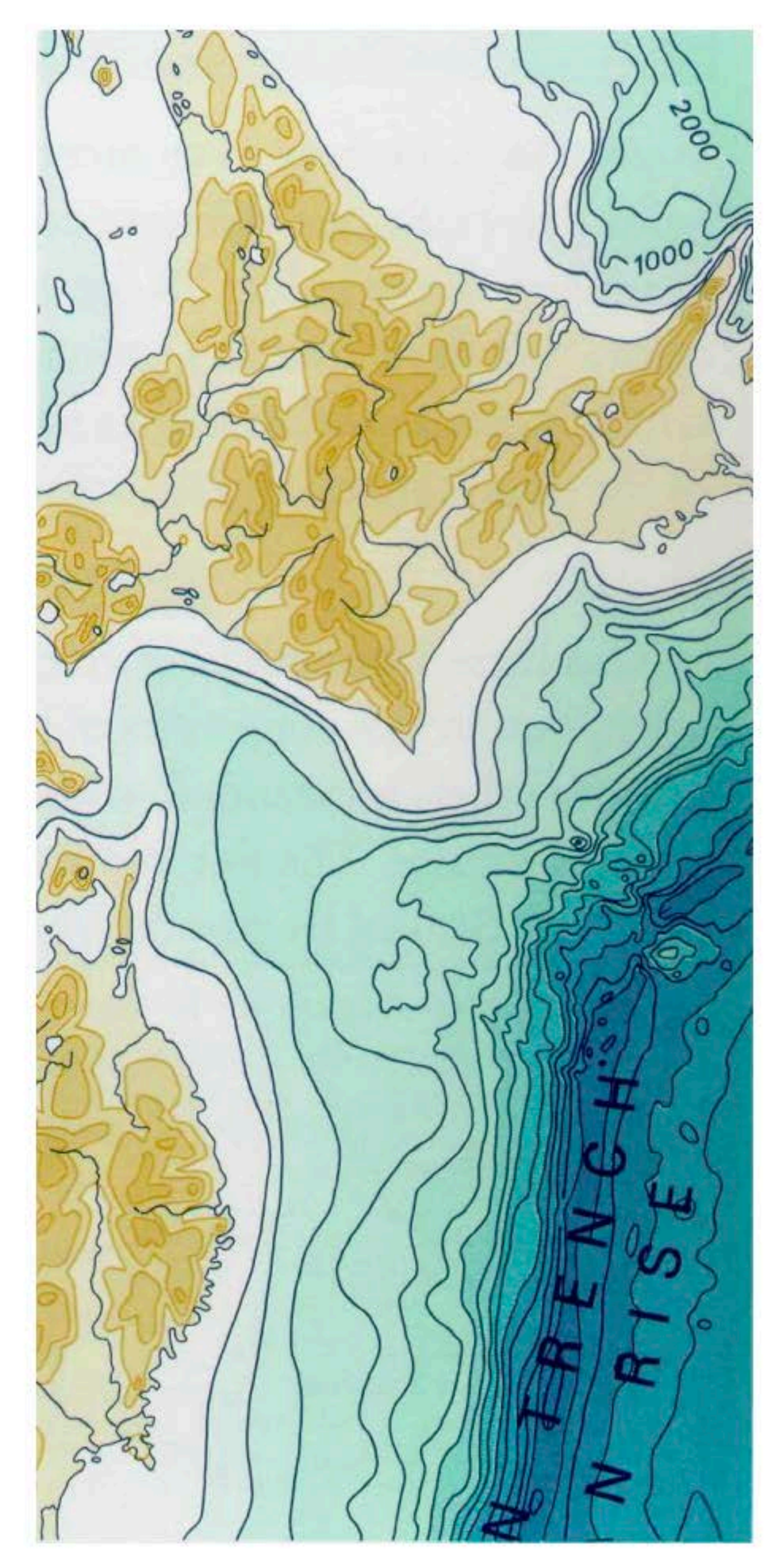
7000
Mètres
Bathymetric Tints / Teintes Bathymétriques




Royalston
Baldwinville
Salt Point
Ashburnham
Blackburn
S. Ashburnham
W. Orange
Orange
Sportsmans Pd.
Carter Pd.
Crystal L.
Whitmanville
Claverack
66
68
12
31
2
2A
122
202
32
101
Lake Mattawa
L. Ellis
Brook
Phillipston
Templeton
Gardner
Elizaville
Salem
Morse Village
Churchtown
Harvard Forest
Riceville Pd
Brooks Pd
Queen L.
Stone Bridge Pd
Meetinghouse Pd
Wachusett
Snows Mill Pd
Notown Res.
LEOMINSTER ST. FOR.


2000
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