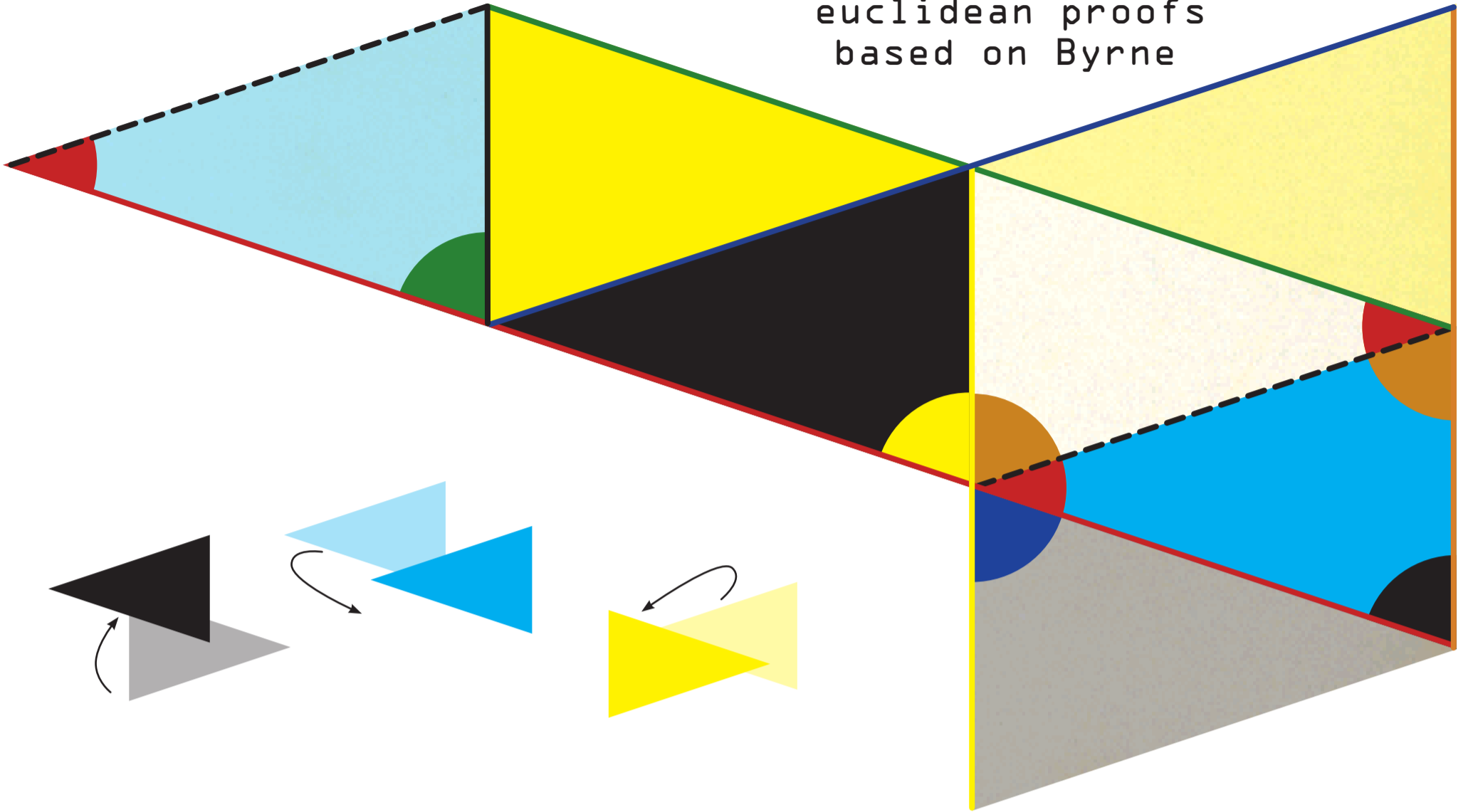
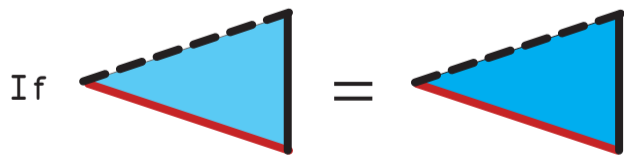


A presentation of selected euclidean proofs based on Byrne



BOOK I. PROP. VIII. THEOR.

IF two triangles have two sides of the one respectively equal to two sides of the other (= and =), and also their bases (=), equal; then the angles (and) contained by their equal sides are also equal.



Therefore the sides and , being coincident with and ,



Q.E.D.

BOOK I. PROP. XXX. THEOR.

STRAIGHT lines () which are parallel to the same straight line (), are parallel to one another.

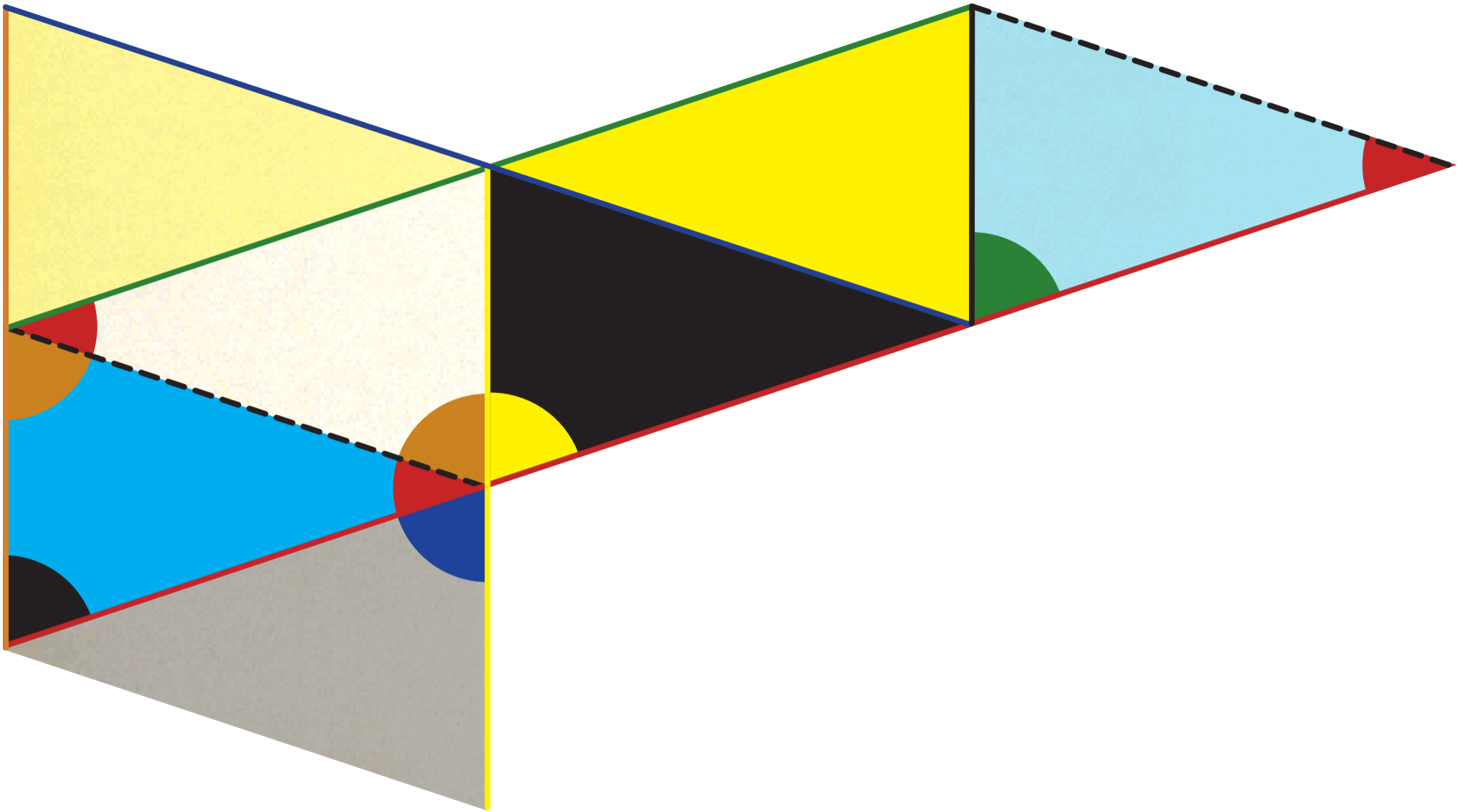
Let intersect ;

Then, = = (pr. 29.)

\therefore =

\therefore || (pr. 27.)

Q.E.D.



BOOK I. PROP. XXXI. PROB.

FROM a given point to draw a straight line parallel to a given straight line .

Draw from the point

to any point in

make = (pr. 23.)

then || (pr. 27.)

Q.E.D.

BOOK I. PROP. XXXII. THEOR.

IF any side of a triangle be produced, the external angle is equal to the sum of the two internal and opposite angles and , and the three internal angles of every triangle taken together are equal to two right angles.

Through the point draw || (pr. 31.)

Then $\left\{ \begin{array}{l} \text{black sector} = \text{yellow sector} \\ \text{orange sector} = \text{orange sector} \end{array} \right\}$ (pr. 29.)

\therefore + = (ax. 31.)

and therefore

+ + = + = (pr. 13.)

Q.E.D.