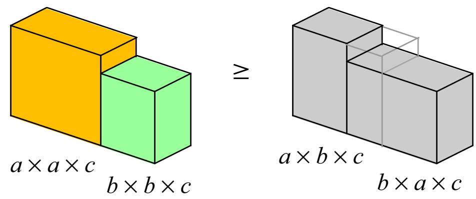

Figure 4

In Figure 4, again comparing volumes, we see that $a^2c + b^2c \geqslant 2abc$, and similar figures show that $a^2b + bc^2 \geqslant 2abc$ and $ab^2 + ac^2 \geqslant 2abc$.

Hence, we have $2(a^3 + b^3 + c^3) \geqslant 6abc$, proving Theorem 2. ■

Lemma 1 and a figure similar to Figure 2 can be used to establish the inequality $3(x^2 + y^2 + z^2) \geqslant (x + y + z)^2$, from which it follows that, if $d = \sqrt{x^2 + y^2 + z^2}$ is the length of the space diagonal of the rectangular box, then $d/\sqrt{3} \geq E/12$.

There are interpretations similar to (2) of the terms of Maclaurin's inequality for $n \geqslant 4$ in terms of n-dimensional volumes of *hyperrectangles* (or *n-orthotopes*) and their lower-dimensional facets. We leave the details to the interested reader.

REFERENCE

1. I. Ben-Ari, K. Conrad, Maclaurin's inequality and a generalized Bernoulli inequality, *Math. Mag.*, **87** (2014), 14–24.

Summary. We interpret the terms of Maclaurin's inequality for three nonnegative numbers as the volume, total face area, and total side length of a rectangular box and provide a visual proof of the inequality.

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T	R	I	G	■	■	T	A	C	K	S	■	N	A	P
O	P	A	L	■	S	A	F	A	R	I	■	A	R	I
P	I	M	U	E	P	S	I	L	O	N	■	T	N	N
■	■	■	T	A	Y	■	R	I	C	H	E	S	O	N
M	E	Y	E	R	■	R	E	F	■	■	U	C	L	A
A	T	E	I	N	T	O	■	■	B	O	L	I	D	E
A	C	T	■	■	T	A	U	■	I	S	E	■	■	■
■	H	I	D	D	E	N	F	I	G	U	R	E	S	■
■	■	■	H	I	S	■	O	N	O	■	■	R	A	D
E	F	F	O	R	T	■	■	C	H	I	C	A	G	O
S	L	I	T	■	■	L	C	A	■	C	O	S	E	T
T	A	L	I	T	H	I	A	■	R	E	P	■	■	■
A	P	E	■	S	U	B	R	O	U	T	I	N	E	S
T	A	T	■	A	M	E	L	I	E	■	E	Y	R	E
E	N	S	■	R	E	R	I	G	■	■	D	U	S	A