

Az *Elemek* II. könyvének „algebrai” tartalma

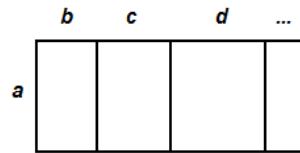
Tétel

Kifejezett algebrai azonosság

Geometriai reprezentáció

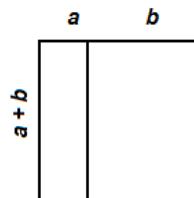
II.1.

$$a(b + c + d + \dots) = ab + ac + ad + \dots$$



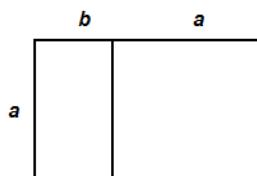
II.2.

$$(a + b)a + (a + b)b = (a + b)^2$$



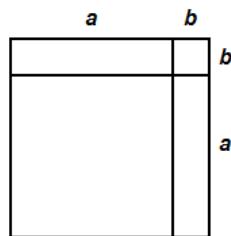
II.3.

$$(a + b)a = ab + a^2$$



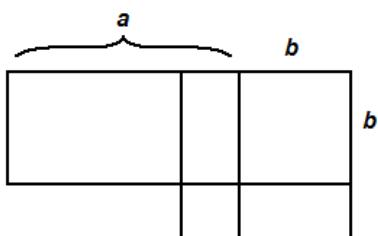
II.4.

$$(a + b)^2 = a^2 + b^2 + 2ab$$

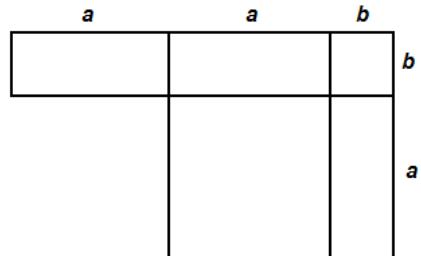


II.5.

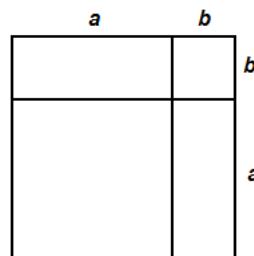
$$ab + [\frac{1}{2}(a + b) - b]^2 = [\frac{1}{2}(a + b)]^2$$



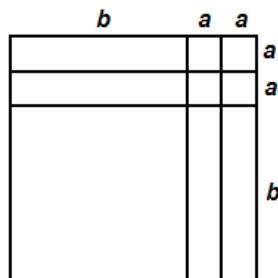
II.6. $(2a + b)b + a^2 = (a + b)^2$



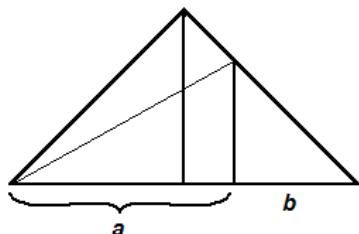
II.7. $(a + b)^2 + a^2 = 2(a + b)a + b^2$



II.8. $4(a + b)a + b^2 = [(a + b) + a]^2$



II.9. $a^2 + b^2 = 2\{[\frac{1}{2}(a + b)]^2 + [\frac{1}{2}(a + b) - b]^2\}$



II.10. $(2a + b)^2 + b^2 = 2[a^2 + (a + b)^2]$

