

From Zelenak: the expression within the radical

$$(a + b + c) \cdot (b + c - a) \cdot (c + a - b) \cdot (a + b - c)$$

First Multiplication

$$(a + b + c) \cdot (b + c - a) = -a^2 + b^2 + 2 \cdot b \cdot c + c^2$$

Second Multiplication

$$(-a^2 + b^2 + 2 \cdot b \cdot c + c^2) \cdot (c + a - b) = -a^2 \cdot c - a^3 + a^2 \cdot b - b^2 \cdot c + b^2 \cdot a - b^3 + b \cdot c^2 + 2 \cdot b \cdot c \cdot a + c^3 + c^2 \cdot a$$

Third Multiplication

$$\begin{aligned} & (-a^2 \cdot c - a^3 + a^2 \cdot b - b^2 \cdot c + b^2 \cdot a - b^3 + b \cdot c^2 + 2 \cdot b \cdot c \cdot a + c^3 + c^2 \cdot a) \cdot (a + b - c) \\ &= 2 \cdot a^2 \cdot c^2 + 2 \cdot b^2 \cdot c^2 + 2 \cdot a^2 \cdot b^2 - a^4 - b^4 - c^4 \end{aligned}$$

Therefore:

$$(a + b + c) \cdot (b + c - a) \cdot (c + a - b) \cdot (a + b - c) = 2 \cdot a^2 \cdot c^2 + 2 \cdot b^2 \cdot c^2 + 2 \cdot a^2 \cdot b^2 - a^4 - b^4 - c^4$$

The right side of the equation is the same expression as that within the radical presented on the last line of Dave Lindell's "ScottsR.doc"

Zelenak's equation includes, within the radical, the factors of the expression presented in Lindell's equation.