

$$\left(\frac{b+2}{b-2} + \frac{4}{b+2} \right)^2 \cdot \frac{b^2 + 4b + 4}{b^4} =$$

$$= \left(\frac{b^2 - 4 + 4}{b+2} \right)^2 \cdot \frac{(b+2)^2}{b^4} =$$

$$= \frac{b^4}{(b+2)^2} \cdot \frac{(b+2)^2}{b^4} = 1$$

we have proved it