Hinweis zur G1 d), 3. Übungsblatt:

$$|x|^2|y-\tilde{x}|^2 = |x|^2\langle y-\tilde{x}, y-\tilde{x}\rangle = |x|^2(\langle y,y\rangle-2\langle y,\tilde{x}\rangle+\langle\tilde{x},\tilde{x}\rangle) = \langle x,x\rangle-2\langle y,x\rangle+\langle y,y\rangle = |x-y|^2$$