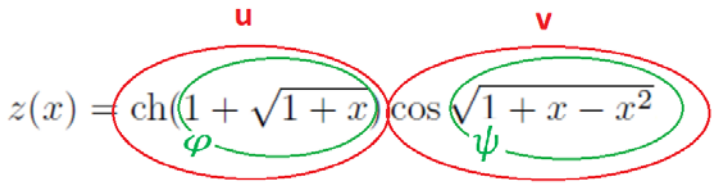
11. $z(x) = \mathrm{ch}(1 + \sqrt{1+x}) \cos\sqrt{1+x-x^2}, \quad x = 0.1(0.01)0.2;$



1.

$$z = f(u, v) = u * v$$

$$|\varepsilon| \leq \Delta_z = \Delta_{f^*} + \sum_{i=1}^{n} B_i * \Delta_i$$

$$\Delta_z = \Delta_{f^*} + B_1 \Delta_1 + B_2 \Delta_2 = 0 + B_u \Delta_u + B_v \Delta_v$$

По принципу равных влияний:

$$B_u \Delta_u = B_v \Delta_v$$

$$\Delta_u = \frac{\Delta_z}{2B_u}, \Delta_v = \frac{\Delta_z}{2B_v}$$

2.

$$u = ch(\varphi)$$

$$\Delta_u = \Delta_{u^*} + \sum_{i=1}^{n} B_i * \Delta_i$$

$$\Delta_u = \Delta_{u^*} + B_1 \Delta_1 = \Delta_{u^*} + B_\varphi \Delta_\varphi$$

По принципу равных влияний:

$$B_\varphi \Delta_\varphi = \Delta_{u^*}$$

$$\Delta_\varphi = \frac{\Delta_u}{2B_\varphi}, \Delta_{u^*} = \frac{\Delta_u}{2}$$

3.

$$v = \cos(\psi)$$

$$\Delta_v = \Delta_{v^*} + \sum_{i=1}^{n} B_i * \Delta_i$$

$$\Delta_v = \Delta_{v^*} + B_1 \Delta_1 = \Delta_{v^*} + B_\psi \Delta_\psi$$

По принципу равных влияний:

$$B_\psi \Delta_\psi = \Delta_{v^*}$$

$$\Delta_\psi = \frac{\Delta_v}{2B_\psi},\ \Delta_{v^*} = \frac{\Delta_v}{2}$$