

# Räumlicher Spannungszustand

→ Zugversuche Charakteristika (tests)

$$\text{Test 1: } \epsilon_1 = \frac{\sigma_1}{E} \quad \text{und} \quad \epsilon_2 = \epsilon_3 = -\nu \epsilon_1 = -\nu \frac{\sigma_1}{E}$$

$$\text{Test 2: } \epsilon_2 = \frac{\sigma_2}{E} \quad \text{und} \quad \epsilon_1 = \epsilon_3 = -\nu \epsilon_2 = -\nu \frac{\sigma_2}{E}$$

Test 3: gemessen:

$$\epsilon_1 = \frac{\Delta l}{l} < 0, \quad \epsilon_2 = \frac{\Delta l}{l} < 0, \quad \epsilon_3 = \frac{\Delta l}{l} > 0$$

$$\rightarrow \epsilon_3 = \frac{\sigma_3}{E} \quad \text{und} \quad \epsilon_2 = \epsilon_1 = -\nu \epsilon_3 = -\nu \frac{\sigma_3}{E}$$