

$$1) 10^{\frac{1}{4}} \cdot 40^{\frac{1}{4}} \cdot 5^{\frac{1}{2}} = 2^{\frac{1}{4}} \cdot 5^{\frac{1}{4}} \cdot (2^3)^{\frac{1}{4}} \cdot 5^{\frac{1}{4}} \cdot 5^{\frac{1}{2}} = 2^{\frac{1}{4} + \frac{3}{4}} \cdot 5^{\frac{1}{4} + \frac{1}{4} + \frac{1}{2}} = 2^1 \cdot 5^1 = 2 \cdot 5 = 10.$$

$$2) \sqrt[4]{4-5x} = -2$$

$$4-5x = 16$$

$$-5x = 12$$

$$x = -2,4$$

$$4) 6^{2x-8} = 216^x$$

$$6^{2x-8} = (6^3)^x$$

$$2x-8 = 3x$$

$$2x-3x = 8$$

$$-x = 8$$

$$x = -8$$

$$5) \parallel^{-7x+1} \leq 121^{-2x-10}$$

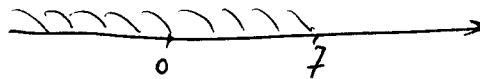
$$\parallel^{-7x+1} \leq (11^2)^{-2x-10}$$

$$\parallel^{-7x+1} \leq \parallel^{-4x-20}$$

$$-7x+1 \leq -4x-20$$

$$-3x \leq -21$$

$$x \leq 7$$



$$3) \sqrt[5]{\frac{32a^5b^{10}}{243c^{15}}} = \frac{(2^5)^{\frac{1}{5}} \cdot a^{\frac{5}{5}} \cdot b^{\frac{10}{5}}}{(3^5)^{\frac{1}{5}} \cdot c^{\frac{15}{5}}} = \frac{2ab^2}{3a^3}$$

$$6) \log_{0,2} 40 - \log_{0,2} 8 = \log_{0,2} (40:8) = \log_{0,2} 5$$