

$$1. \quad x^{\frac{3}{2}} = 8$$

$$x^{\frac{3}{2}} = 2^3$$

$$\left(x^{\frac{3}{2}}\right)^{\frac{2}{3}} = \left(2^3\right)^{\frac{2}{3}}$$

$$x^1 = 2^2$$

$$x = 4.$$

→

$$3. \quad x^{\frac{3}{2}} = 0,125$$

$$x^{\frac{3}{2}} = \frac{1}{8}$$

$$\left(x^{\frac{3}{2}}\right)^{\frac{2}{3}} = \left(2^{-3}\right)^{\frac{2}{3}}$$

$$x^1 = 2^{-2}$$

$$x = \frac{1}{4}.$$

→

$$4. \quad 3^{x+2} + 3^x = 10.$$

$$3^x \cdot 3^2 + 3^x = 10.$$

$$3^x (3^2 + 1) = 10$$

$$3^x \cdot 10 = 10$$

$$3^x = 1. = 3^0$$

$$\therefore x = 0.$$

→

$$5) 5^{-x} = 5^{-x-2} = 24$$

$$5^{-x} = 5^{-x} \cdot 5^{-2} = 24.$$

$$5^{-x} \left(1 - \frac{1}{5^2} \right) = 24$$

$$5^{-x} \left(\frac{24}{25} \right) = 24.$$

$$5^{-x} = 25 = 5^{-2}$$

$$\therefore -x = 2$$

$$\therefore x = -2.$$



$$7. (5^x + 10) \cdot (2^x - 0,0625) = 0.$$

$$5^x + 10 = 0$$

$$5^x = -10$$

N/A.

$$2^x - \frac{625}{10000} = 0$$

$$2^x = \frac{625}{10000}$$

$$2^x = \frac{5}{80} = \frac{1}{16}$$

$$2^x = 2^{-4}$$

$$x = -4.$$



$$13. \quad 3^{x+2} - 3^{x-2} = 80.$$

$$3^x \cdot 3^2 - 3^x \cdot 3^{-2} = 80$$

$$3^x \left(9 - \frac{1}{9} \right) = 80.$$

$$3^x \left(\frac{80}{9} \right) = 80$$

$$3^x = 9.$$

$$3^x = 3^2$$

$$\therefore x = 2.$$



