

$$2^{x-2} = 3 \quad (2)$$

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

$$2^x = 12$$

$$\boxed{x = 3.584}$$

$$6^x = 7 \cdot 2^x \quad (4)$$

$$6^x = 7 \cdot 2^x / \log$$

$$0.778x = 0.845 + 0.301x$$

$$0.477x = 0.845$$

$$x = 1.771$$

$$10^{x-1} = 4^{x+1} \quad (6)$$

$$10^{x-1} = 4^{x+1} \quad | \cdot \log$$

$$x-1(\log 10) = x+1(\log 4)$$

$$x-1 = 0.602 x + 0.602$$

$$0.397x = 1.602$$

$$\boxed{x = 4.035}$$

$$2^{x+3} - 2^x = 63 \quad (8)$$

$$t \cdot 2^3 - t = 63$$

$$8t - t = 63$$

$$7t = 63$$

$$t = 9$$

$$2^x = 9$$

$$x(\log 2) = \log 9$$

- . $1 \div 2 \approx 1$

$$x(\log 2) = -\sim$$

$$0.301x = 0.954 \quad | \div 301$$

$$\boxed{x = 3.169}$$

$$3^{2x} - 5 \cdot 3^x + 6 = 0 \quad (10)$$

$$t = 3^x$$

$$3^x \cdot 3^x - 5 \cdot 3^x + 6 = 0$$

$$t^2 - 5t + 6 = 0$$

$$t_1 = 3, t_2 = 2$$

$$\begin{cases} 3^x = 3^1 \\ x = 1 \end{cases} \quad \begin{cases} 3^x = 2 & | \cdot \log \\ 0.477x = 0.301 \\ x = 0.631 \end{cases}$$

$$\frac{1}{4} \cdot 5^{2x} = 5^x + 15 \quad (12)$$

$$\frac{1}{4}(t \cdot t) = t + 15 \quad | \cdot 4 \quad t = 5^x$$

$$t^2 - 4t - 60 = 0$$

$$t_1 = -6, t_2 = 10$$

$$\begin{array}{l} -6 = 5^x \\ \text{No } X \end{array} \quad \left| \begin{array}{l} 10 = 5^x \\ 1 = 0.698x \\ \boxed{x = 1.430} \end{array} \right.$$

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$$4^x - 2^{x+2} + 3 = 0 \quad (14)$$

$$4^x - 2^x \cdot 2^2 + 3 = 0 \quad t = 2^x$$

$$2^{2x} - 2^x \cdot 2^2 + 3 = 0$$

$$t \cdot t - t \cdot 4 + 3 = 0$$

$$t^2 - 4t + 3 = 0$$

$$t_1 = 1, t_2 = 3$$

$$\begin{array}{l} 2^x = 1 \\ 0.301x = 0 \end{array} \quad \left| \begin{array}{l} 2^x = 3 \\ 0.301x = 0.477 \\ \hline x = 1.585 \end{array} \right.$$

$$0.301x = 0$$

$$\boxed{x = 0}$$

$$0.301 \quad | \quad \boxed{x = 1.585}$$

$$36^x - 6^{x+1} + 8 = 0 \quad (16)$$

$$6^x \cdot 6^x - 6^x \cdot 6^1 + 8 = 0$$

$$\underline{t = 6^x}$$

$$t^2 - 6t + 8 = 0$$

$$t_1 = 4, t_2 = 2$$

$$6^x = 4$$

$$0.778x = 0.602$$

$$\boxed{x = 0.773}$$

$$6^x = 2$$

$$0.778x = 0.301$$

$$\boxed{x = 0.386}$$

$$12 \cdot 7^x + 12 \cdot 7^{-x} = 25 \quad (18)$$

$$t = 7^x$$

$$12 \cdot 7^x + 12 \cdot \frac{1}{7^x} = 25$$

$$12t + 12 \cdot \frac{1}{t} = 25 \quad | \cdot t$$

$$12t + 12 \cdot \frac{1}{t} = 25$$

$$12t^2 + 12 = 25t$$

$$12t^2 - 25t + 12 = 0$$

\sqrt{dts}

$$t_1 = \frac{4}{3}, t_2 = \frac{3}{4}$$

$$t^x = \frac{4}{3} \quad (6)$$

$$t^x = 1.333$$

$$0.845x = 1.24$$

$$x_1 = 0.147$$

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$$2 \cdot 3^x + 3^{1-x} = 7 \quad (20)$$

$$2 \cdot 3^x + 3^{1-x} = 7$$

$$2 \cdot 3^x + 3^1 \cdot \frac{1}{3^x} = 7$$

$$2 \cdot 3^x + 3 \cdot \frac{1}{3^x} = 7$$

$$2t + 3 \cdot \frac{1}{t} = 7$$

$$2t^2 + 3 = 7t$$

$$2t^2 - 7t + 3 = 0$$

\sqrt{abc}

$$t_1 = 3, t_2 = \frac{1}{2}$$

$$\begin{array}{l|l} 3^x = 3 & 3^x = \frac{1}{2} \\ \textcircled{x=1} & 0.477x = 0.301 \\ & \textcircled{x=0.631} \end{array}$$