

$$156) \quad \frac{4 \cdot 2^x}{5 \cdot 2} = \frac{2 \cdot 5^x}{5 \cdot 2}$$

$$2^{x-1} = 5^{x-1}$$

$$x = 1$$

$$154) \quad 2^{2x} - 15 \cdot 2^x - 16 = 0$$

$$(2^x)^2 - 15 \cdot 2^x - 16 = 0$$

$$t = 2^x$$

$$t^2 - 15t - 16 = 0$$

$$(t-16)(t+1) = 0$$

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↘ ~~$x \in \mathbb{R}$~~

$$2^x = 16$$

$$x = 4$$

$$160) \quad \frac{2}{3^x-1} = \frac{1}{3^x-5}$$

$$CE \quad 3^x \neq 1 \quad x \neq 0$$

$$3^x \neq 5 \quad x \neq ?$$

$$\frac{2}{3^x-1} - \frac{1}{3^x-5} = 0$$

$$3^x = t$$

$$\frac{2}{t-1} - \frac{1}{t-5} = 0$$

$$2t-10 - t+1 = 0$$

$$t = 9$$

$$3^x = 9$$

$$x = 2$$

$$161) \quad 2^x + 8 = \frac{1}{4} + 2^{1-x}$$

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

?

$$163) \quad 2^{x+3} + 4^{x+1} = 320$$

$$169) \quad \left(\frac{1}{2}\right)^{2x} - \frac{12}{2^x} + 32 = 0$$