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$$5 - 3^x + 3^{x-1} + 3^{x-2} = 93$$

$$3^x \left( \frac{3+1+0.3}{3} \right) = 93$$

$$3^x = \frac{279}{31}$$

$$3^x + \frac{3^x}{3} + 3^x \cdot 3^2 = 93$$

$$3^x \cdot \left( \frac{31}{3} \right) = 93$$

$$3^x = 9$$

$$3^x = 3^2$$

$$3^x \left( 1 + \frac{1}{3} + 3^2 \right) = 93$$

$$3^x = \frac{93}{31/3}$$

$$\boxed{x=2}$$

$$6 - f(x) = 2 - 2^x$$

$$f(1) = 0 \quad (1, 0)$$

$$f(2) = -2 \quad (2, -2)$$

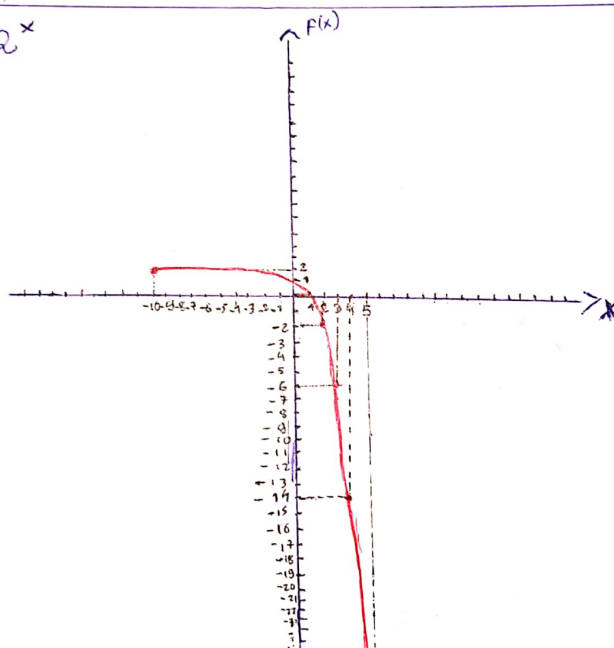
$$f(3) = -6 \quad (3, -6)$$

$$f(4) = -14 \quad (4, -14)$$

$$f(5) = -30 \quad (5, -30)$$

$$f(-10) = \frac{2047}{1024}$$

$$f(-10) \approx 2 \quad (-10, 2)$$



$$x=1$$

$$x=2$$

$$x=3$$

$$x=4$$

$$x=5$$

$$7 - \log_2(x-1) + \log_2(x-2) = 1$$

$$\log_2((x-1) \cdot (x-2)) = 1$$

$$\log_2(x^2 - 2x - x + 2) = 1$$

$$x^2 - 2x - x + 2 = 2^1$$

$$x^2 - 2x - x = 0$$

$$x^2 - 3x = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x' = \frac{3 + \sqrt{9}}{2} \rightarrow 3$$

$$x'' = \frac{3 - \sqrt{9}}{2} \rightarrow 0$$

$$\boxed{x=3}$$

$$8 - f(x) = \log_{\frac{1}{2}}(x+2)$$

$$f(2) = -2$$

$$f(6) = -3$$

$$f(-1) = 0$$

$$f(0) = -1$$

$$f(14) = -4$$

$$f(2) = \log_{\frac{1}{2}} 4 \rightarrow (2^{-1})^x = 2^2 \rightarrow -x = 2 \rightarrow \boxed{x = -2}$$

$$f(6) = \log_{\frac{1}{2}} 8 \rightarrow (2^{-1})^x = 2^3 \rightarrow -x = 3 \rightarrow \boxed{x = -3}$$

$$f(-1) = \log_{\frac{1}{2}} 1 \rightarrow (2^{-1})^x = 2^0 \rightarrow -x = 0 \rightarrow \boxed{x = 0}$$

$$f(0) = \log_{\frac{1}{2}} 2 \rightarrow (2^{-1})^x = 2^1 \rightarrow -x = 1 \rightarrow \boxed{x = -1}$$

$$f(14) = \log_{\frac{1}{2}} 16 \rightarrow (2^{-1})^x = 2^4 \rightarrow -x = 4 \rightarrow \boxed{x = -4}$$

