

$$\frac{1.24}{2}$$

$$\left| \frac{3 \log_4 X - 5}{\log_4 X + 2} \right| < 1$$

תחום המצוינות  
 $X > 0$

$$\boxed{X \neq \frac{1}{16}} \leftarrow \log_4 X \neq -2 \leftarrow \log_4 X + 2 \neq 0$$

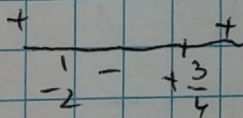
$$-1 < \frac{3 \log_4 X - 5}{\log_4 X + 2} < 1$$

$$\log_4 X = t \quad \text{נ"א}$$

$$-1 < \frac{3t - 5}{t + 2} < 1$$

$$0 < \frac{3t - 5 + t + 2}{t + 2}$$

$$0 < \frac{4t - 3}{t + 2}$$



$$t < -2$$

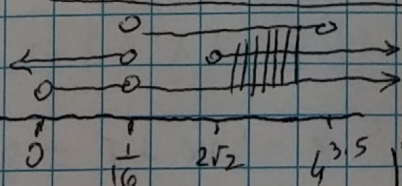
$$t > \frac{3}{4}$$

$$\log_4 X < -2$$

$$\log_4 X > \frac{3}{4}$$

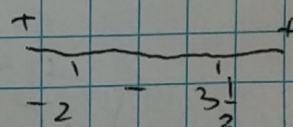
$$\boxed{X < \frac{1}{16}}$$

$$\boxed{X > 4^{\frac{3}{4}} = \frac{1}{2\sqrt{2}}}$$



$$\frac{3t - 5 - t - 2}{t + 2} < 0$$

$$\frac{2t - 7}{t + 2} < 0$$



$$-2 < t < 3\frac{1}{2}$$

$$-2 < \log_4 X < 3\frac{1}{2}$$

$$\boxed{\frac{1}{16} < X < 4^{3.5}}$$

תחום המצוינות

$$\boxed{\sqrt{8} = 2\sqrt{2} < X < 4^{3.5} = 2^7 = 128}$$