

$$f(\sqrt{a^2-1}) = -r \rightarrow a^2-1 - r\sqrt{a^2-1} = -r \quad (a^2-1) - r\sqrt{a^2-1} + r = 0 \quad (1 \text{ حل})$$

$$(\sqrt{a^2-1} - r)^2 = 0 \rightarrow \sqrt{a^2-1} = r$$

$$a^2-1 = r^2 \rightarrow a = \pm \sqrt{r^2+1}$$

$$x+r = r \xrightarrow{x=1} f(r) = 1^2 - \omega(1) + r = r$$

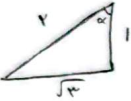
$$x+r = -r \xrightarrow{x=-r} f(-r) = (-r)^2 - \omega(-r) + r = 7r$$

$$f(r) \times f(-r) = r \times 7r = 7r^2$$

$$r \cos x + \omega \sin x = r/\omega$$

$$r \cos^2 x + \omega \cos x - r/\omega = 0 \rightarrow (r \cos x + r/\omega)(r \cos x - 1) = 0$$

$$\cos x = \frac{-r/\omega}{r} = -\frac{r}{\omega} < -1 \text{ لا يوجد}$$

$$\cos x = \frac{1}{r} \checkmark$$


$$\tan^2 x = (\sqrt{r^2-1})^2 = r^2 - 1 \rightarrow f(r, \omega) = r^2 - 1$$