3
$$y_1 = wz_1^2 + \varepsilon_1^2$$
, $\varepsilon_0^2 = w(0,1)$

arguax $\log P(D|w)^{\frac{2}{2}}$ arguin $\frac{2}{2}(y_1^2 - wz_1^2)$
 ε_1^2 has Normal dispribution with mean $\underline{0}$ and set $\underline{1}$.

The pdf of ε_0^2 can be written as following:

$$\frac{-\frac{1}{2}(\frac{2}{2}y_1^2)}{c} = \frac{-\frac{1}{2}\varepsilon}{\sqrt{2\pi}}$$

$$\frac{-\frac{1}{2}(\frac{2}{2}y_1^2)}{\sqrt{2\pi}} = \frac{-\frac{1}{2}(y_1^2 - z_1^2)}{\sqrt{2\pi}}$$
 $\frac{1}{2\pi}$
 $\frac{1}{2\pi}$

The pdi of
$$\varepsilon_{i}$$
 can be written as following:

$$\frac{-\frac{1}{2}\left(\frac{2-r^{2}}{6}\right)^{2}}{1} = \frac{-\frac{1}{2}\left(\frac{2-r}{6}\right)^{2}}{1} = \frac{-\frac{1}{2}\left(\frac{2-r}{$$

$$\frac{2i\cdot d}{2\pi} P(D|W) = \prod_{i=1}^{n} P(y_i|x_i,W) = \prod_{i=1}^{n} \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}(y_i-x_i,W)}$$

$$\Rightarrow \log P(D|W) = \underbrace{\frac{1}{2\pi}} \log P(y_i|x_i,W) = \underbrace{\frac{1}{2\pi}} \log \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}(y_i-x_i,W)}$$

$$\Rightarrow \log P(D|W) = \underbrace{\frac{2}{2\pi}} \log \frac{1}{\sqrt{2\pi}} + \log e^{-\frac{1}{2}(y_i-x_i,W)^2}$$

$$\Rightarrow \log P(D|W) = \underbrace{\frac{2}{2\pi}} \log \frac{1}{\sqrt{2\pi}} + \log e^{-\frac{1}{2}(y_i-x_i,W)^2}$$

$$= \int_{i\pi}^{\pi} \log P(D|w) = \frac{2}{i\pi} \int_{2\pi}^{\pi} \frac{1}{\sqrt{2\pi}} dy e^{-\frac{1}{2}(y_{i}^{2}-2iw)^{2}}$$

$$= \frac{2}{i\pi} \int_{2\pi}^{\pi} \frac{1}{\sqrt{2\pi}} - \frac{1}{2}(y_{i}^{2}-2iw)^{2}$$

$$= \frac{2}{i\pi} \int_{2\pi}^{\pi} \frac{1}{\sqrt{2\pi}} - \frac{1}{2}(y_{i}^{2}-2iw)^{2}$$

$$= 2 \operatorname{argmax} \int_{2\pi}^{\pi} P(D|w) = \operatorname{argmax} \left(\frac{2}{\sqrt{2\pi}} \int_{2\pi}^{\pi} \frac{1}{\sqrt{2\pi}} - \frac{1}{\sqrt{2\pi}} (y_{i}^{2}-2iw)^{2} \right)$$

= arg max log P(DIW) = arg max
$$\left(\frac{2}{i\pi} \cdot \frac{\log 1}{2\pi} - \frac{1}{2}(y_i - 2i\omega)^2\right)$$
= constant arg max log P(DIW) = arg max $\left(\frac{2}{2\pi} - \frac{1}{2}(y_i - 2i\omega)^2\right)$

In
$$\frac{1}{2}$$
 = constraint argmax log P(DIW) = argmax $\left(\frac{2}{2} - \frac{1}{2}(y_i - z_i w)^2\right)$

we consigned 2 = arg max $\left(-\frac{2}{2}(y_i - z_i w)^2\right)$

= arg min $\left(\frac{2}{2}(y_i - z_i w)^2\right)$