

lec 4 . Hw . 2 .

$$\tilde{r} = \text{range of } z . = \rho(\tilde{r})$$

$$\rho(r) = ar^2 + b \quad a, b \in \mathbb{R}.$$

$$\tilde{\rho}(\tilde{r}) = 2a\tilde{r} = \rho(\tilde{r})$$

$$\implies a = \frac{\rho(\tilde{r})}{2\tilde{r}}$$

$$\tilde{\rho}(\tilde{r}) = \rho(\tilde{r}) \quad \text{is.}$$

$$\rho(\tilde{r}) = \frac{\rho(\tilde{r})}{2\tilde{r}} \cdot \tilde{r}^2 + b = \rho(\tilde{r})$$

$$\implies \frac{1}{2}\tilde{r}\rho(\tilde{r}) + b = \rho(\tilde{r})$$

$$b = \rho(\tilde{r}) - \frac{1}{2}\tilde{r}\rho(\tilde{r})$$