

4.9  
9

$$|z-2i| \leq |z| \xrightarrow{1.8 \text{ 4.5}} 1 \leq y$$

$$\operatorname{Im}(z^2) \geq 2 \rightarrow 2xy \geq 2 \rightarrow y \geq \frac{1}{x}$$

$$15 \geq |z|^2 + 2\operatorname{Im} z = x^2 + y^2 + 2y \rightarrow x^2 + (y+1)^2 \leq 16$$

