

4.16
8

$$-4 \geq \operatorname{Im}(z^2) = 2xy \rightarrow -2 \geq xy$$

$$\frac{3}{5}\pi < \arg z < \frac{7}{4}\pi$$

$$10 \geq |z-2i| = \sqrt{x^2+(y-2)^2} \rightarrow 100 \geq x^2+(y-2)^2$$

