

6 It is given that  $z_1 = 3e^{\frac{1}{4}\pi i}$ ,  $z_2 = \frac{3}{2}e^{\frac{1}{6}\pi i}$  and  $\omega = 2e^{\frac{1}{2}\pi i}$ .

(a) State the values of  $\omega z_1$  and  $\omega z_2$ . Give your answers in the form  $re^{i\theta}$ , where  $r > 0$  and  $-\pi < \theta \leq \pi$ . [2]

.....

.....

.....

.....

.....

(c) State the geometric effects of multiplying  $z_1$  and  $z_2$  by  $\omega$ . [2]

.....

.....

.....

.....

.....

.....

.....