

Precalculus

7.4 Answers

1. $32(\cos 225^\circ + i \sin 225^\circ)$

2. $\cos\left(\frac{2\pi}{3}\right) + i \sin\left(\frac{2\pi}{3}\right)$

3. $54\sqrt{2}\left(\cos\left(\frac{\pi}{2}\right) + i \sin\left(\frac{\pi}{2}\right)\right)$

4. $-8 + 8i\sqrt{3}$

5. -1296

6. $-404 + 1121i$

7. $2 \operatorname{cis} 27^\circ, 2 \operatorname{cis} 99^\circ, 2 \operatorname{cis} 171^\circ, 2 \operatorname{cis} 243^\circ, 2 \operatorname{cis} 315^\circ$

8. $\operatorname{cis}(2\pi/9), \operatorname{cis}(5\pi/9), \operatorname{cis}(8\pi/9), \operatorname{cis}(11\pi/9), \operatorname{cis}(14\pi/9), \operatorname{cis}(17\pi/9)$

9. $2, 1+i\sqrt{3}, -1+i\sqrt{3}, -2, -1-i\sqrt{3}, 1-i\sqrt{3}$

10. $\frac{3\sqrt{3}}{2} + \frac{3}{2}i, -\frac{3\sqrt{3}}{2} - \frac{3}{2}i, -3i$

11. $1+i\sqrt{3}, -\sqrt{3}+i, -1-i\sqrt{3}, \sqrt{3}-i$

12. $\{4; -2+2\sqrt{3}i; -2-2\sqrt{3}i\}$

13. $\{4+4i\sqrt{3}, -8, 4-4i\sqrt{3}\}$