

Fill in the Blanks

Different Forms of Complex Numbers

$x + iy$	$r(\cos \theta + i \sin \theta) \quad [-\pi < \theta \leq \pi]$	$re^{i\theta}$
$1 + i$	$\sqrt{2} \left(\cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$	$\sqrt{2}e^{\frac{\pi i}{4}}$
$-2 + 2\sqrt{3}i$	$4 \left(\cos \frac{2\pi}{3} + i \sin \frac{2\pi}{3} \right)$	$4e^{\frac{2\pi i}{3}}$
$\frac{5}{2} - \frac{5\sqrt{3}}{2}i$	$5 \left(\cos \left(-\frac{\pi}{3} \right) + i \sin \left(-\frac{\pi}{3} \right) \right)$	$5e^{-\frac{\pi i}{3}}$
$-7i$	$7 \left(\cos \left(-\frac{\pi}{2} \right) + i \sin \left(-\frac{\pi}{2} \right) \right)$	$7e^{-\frac{\pi i}{2}}$
$-\frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2}i$	$\cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4}$	$e^{\frac{3\pi i}{4}}$
$-\frac{\sqrt{3}}{3} + \frac{1}{3}i$	$\frac{2}{3} \left(\cos \frac{5\pi}{6} + i \sin \frac{5\pi}{6} \right)$	$\frac{2}{3}e^{\frac{5\pi i}{6}}$
$5\sqrt{3} - 5i$	$10 \left(\cos \left(-\frac{\pi}{6} \right) + i \sin \left(-\frac{\pi}{6} \right) \right)$	$10e^{-\frac{\pi i}{6}}$
$-\sqrt{6}$	$\sqrt{6}(\cos \pi + i \sin \pi)$	$\sqrt{6}e^{\pi i}$
$-\sqrt{2} + \sqrt{2}i$	$2 \left(\cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$	$2e^{\frac{19\pi i}{4}}$
$-3 - i$	$\sqrt{10}(\cos(-2.82) + i \sin(-2.82))$	$\sqrt{10}e^{-2.82i}$
9	$9(\cos 0 + i \sin 0)$	$9e^{-6\pi i}$
$2.77 + 1.15i$	$3 \left(\cos \left(\frac{\pi}{8} \right) + i \sin \left(\frac{\pi}{8} \right) \right)$	$3e^{\frac{\pi i}{8}}$
$-\frac{1}{2}$	$\frac{1}{2}(\cos \pi + i \sin \pi)$	$\frac{1}{2}e^{-3\pi i}$
$-4 - 4\sqrt{3}i$	$8 \left(\cos \frac{2\pi}{3} - i \sin \frac{2\pi}{3} \right)$	$8e^{-\frac{2\pi i}{3}}$