MT 6-4

Answers to even numbered questions

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[2] $1,\ \frac{1+i}{\sqrt{2}},\ i,\ -\frac{1-i}{\sqrt{2}},\ -1,\ -\frac{1+i}{\sqrt{2}},\ -i,\ \frac{1-i}{\sqrt{2}}$

[4] $\cos(0)+i\sin(0),\ \cos\left(\frac{\pi}{5}\right)+i\sin\left(\frac{\pi}{5}\right),\ \cos\left(\frac{2\pi}{5}\right)+i\sin\left(\frac{2\pi}{5}\right),\ \cos\left(\frac{3\pi}{5}\right)+i\sin\left(\frac{3\pi}{5}\right),$
$\cos\left(\frac{4\pi}{5}\right)+i\sin\left(\frac{4\pi}{5}\right),\ \cos(\pi)+i\sin(\pi),\ \cos\left(\frac{6\pi}{5}\right)+i\sin\left(\frac{6\pi}{5}\right),$
$\cos\left(\frac{7\pi}{5}\right)+i\sin\left(\frac{7\pi}{5}\right),\ \cos\left(\frac{8\pi}{5}\right)+i\sin\left(\frac{8\pi}{5}\right),\ \cos\left(\frac{9\pi}{5}\right)+i\sin\left(\frac{9\pi}{5}\right)$

[6] $2^{2/5}\left(\cos\left(\frac{\pi}{4}\right)+i\sin\left(\frac{\pi}{4}\right)\right),\ 2^{2/5}\left(\cos\left(\frac{13\pi}{20}\right)+i\sin\left(\frac{13\pi}{20}\right)\right),\ 2^{2/5}\left(\cos\left(\frac{21\pi}{20}\right)+i\sin\left(\frac{21\pi}{20}\right)\right),$
$2^{2/5}\left(\cos\left(\frac{29\pi}{20}\right)+i\sin\left(\frac{29\pi}{20}\right)\right),\ 2^{2/5}\left(\cos\left(\frac{37\pi}{20}\right)+i\sin\left(\frac{37\pi}{20}\right)\right)$

[8] $\sqrt[6]{13}\left(\cos\left(\frac{\pi}{24}\right)+i\sin\left(\frac{\pi}{24}\right)\right),\ \sqrt[6]{13}\left(\cos\left(\frac{3\pi}{8}\right)+i\sin\left(\frac{3\pi}{8}\right)\right),\ \sqrt[6]{13}\left(\cos\left(\frac{17\pi}{24}\right)+i\sin\left(\frac{17\pi}{24}\right)\right),$
$\sqrt[6]{13}\left(\cos\left(\frac{25\pi}{24}\right)+i\sin\left(\frac{25\pi}{24}\right)\right),\ \sqrt[6]{13}\left(\cos\left(\frac{11\pi}{8}\right)+i\sin\left(\frac{11\pi}{8}\right)\right),\ \sqrt[6]{13}\left(\cos\left(\frac{41\pi}{24}\right)+i\sin\left(\frac{41\pi}{24}\right)\right)$

[10] $3\left(\frac{1}{2}+\frac{i\sqrt{3}}{2}\right),\ -3,\ 3\left(\frac{1}{2}-\frac{i\sqrt{3}}{2}\right)$

[12] $-\frac{5-5i}{\sqrt{2}},\ \frac{5-5i}{\sqrt{2}}$