

- QCM5 - Sujet 1 - Correction

Questions	Réponses
1. $z = (1 + i)^2$	<input type="checkbox"/> $z = 2 + 2i$ <input type="checkbox"/> $z = 2 - 2i$ <input checked="" type="checkbox"/> $z = 2i$ <input type="checkbox"/> $z = 0$
2. $z = \frac{1}{1+i} + \frac{1}{1-i}$	<input checked="" type="checkbox"/> $z = 1$ <input type="checkbox"/> $z = 2$ <input type="checkbox"/> $z = \frac{1}{2}$ <input type="checkbox"/> $z = i$
3. $z = \frac{1-i}{1+i}$	<input type="checkbox"/> $z = i$ <input checked="" type="checkbox"/> $z = \frac{1}{i}$ <input type="checkbox"/> $z = -1$ <input checked="" type="checkbox"/> $z = -i$
4. $z = \sqrt{2} - \sqrt{2}i$	<input type="checkbox"/> $z = \sqrt{2}e^{-i\frac{\pi}{4}}$ <input type="checkbox"/> $z = \frac{\sqrt{2}}{2}e^{i\frac{3\pi}{4}}$ <input checked="" type="checkbox"/> $z = 2e^{-i\frac{\pi}{4}}$ <input checked="" type="checkbox"/> $z = -2e^{i\frac{3\pi}{4}}$
5. $z = e^{i\theta} + e^{-i\theta}$	<input type="checkbox"/> $z = 1$ <input checked="" type="checkbox"/> $z = 2 \cos(\theta)$ <input type="checkbox"/> $z = 2i \sin(\theta)$ <input type="checkbox"/> $z = 2$
6. $z = ie^{i\theta}$	<input type="checkbox"/> $z = e^{-i\theta}$ <input type="checkbox"/> $z = e^{i(\theta+\pi)}$ <input type="checkbox"/> $z = e^{i(\theta+1)}$ <input checked="" type="checkbox"/> $z = e^{i(\theta+\frac{\pi}{2})}$
7. $z^2 - 4z + 8 = 0$	<input checked="" type="checkbox"/> $z \in \{2 + 2i, 2 - 2i\}$ <input type="checkbox"/> $z \in \{2e^{i\frac{\pi}{4}}, -2e^{i\frac{\pi}{4}}\}$ <input checked="" type="checkbox"/> $z \in \{2\sqrt{2}e^{i\frac{\pi}{4}}, 2\sqrt{2}e^{-i\frac{\pi}{4}}\}$ <input type="checkbox"/> $z \in \{2\sqrt{2}e^{i\frac{\pi}{4}}, -2\sqrt{2}e^{i\frac{\pi}{4}}\}$

- QCM5 - Sujet 2 - Correction

Questions	Réponses
1. $z = (1 - i)^2$	<input type="checkbox"/> $z = 2 - 2i$ <input checked="" type="checkbox"/> $z = -2i$ <input type="checkbox"/> $z = 2i$ <input type="checkbox"/> $z = 0$
2. $z = \frac{1}{1+i} - \frac{1}{1-i}$	<input type="checkbox"/> $z = 1$ <input type="checkbox"/> $z = \frac{1}{2}$ <input checked="" type="checkbox"/> $z = -i$ <input type="checkbox"/> $z = i$
3. $z = \frac{1+i}{1-i}$	<input checked="" type="checkbox"/> $z = i$ <input checked="" type="checkbox"/> $z = \frac{1}{2}(1+i)^2$ <input type="checkbox"/> $z = -1$ <input type="checkbox"/> $z = -i$
4. $z = -\sqrt{2} + \sqrt{2}i$	<input type="checkbox"/> $z = -\sqrt{2}e^{-i\frac{\pi}{4}}$ <input type="checkbox"/> $z = \sqrt{2}e^{i\frac{3\pi}{4}}$ <input checked="" type="checkbox"/> $z = 2e^{i\frac{3\pi}{4}}$ <input checked="" type="checkbox"/> $z = -2e^{-i\frac{\pi}{4}}$
5. $z = e^{i\theta} - e^{-i\theta}$	<input type="checkbox"/> $z = 2e^{i\theta}$ <input type="checkbox"/> $z = 2\cos(\theta)$ <input checked="" type="checkbox"/> $z = 2i\sin(\theta)$ <input type="checkbox"/> $z = 2\sin(\theta)$
6. $z = -e^{i\theta}$	<input type="checkbox"/> $z = e^{-i\theta}$ <input checked="" type="checkbox"/> $z = e^{i(\theta+\pi)}$ <input type="checkbox"/> $z = \frac{1}{e^{i\theta}}$ <input type="checkbox"/> $z = e^{i(\theta+\frac{\pi}{2})}$
7. $z^2 - 4z + 16 = 0$	<input type="checkbox"/> $z \in \{4e^{i\frac{\pi}{3}}, -4e^{i\frac{\pi}{3}}\}$ <input checked="" type="checkbox"/> $z \in \{2 + 2i\sqrt{3}, 2 - 2i\sqrt{3}\}$ <input type="checkbox"/> $z \in \{2e^{i\frac{\pi}{3}}, 2e^{-i\frac{\pi}{3}}\}$ <input checked="" type="checkbox"/> $z \in \{4e^{i\frac{\pi}{3}}, 4e^{-i\frac{\pi}{3}}\}$