Mettre les complexes suivants sous forme algébrique simple :

1. $z = \frac{1-3i}{1+3i}$

3. $z = \frac{1+4i}{1-5i}$

1.
$$z = \frac{1}{1+3i}$$

2. $z = (i-\sqrt{2})^3$

6.
$$z = \frac{1}{\frac{1}{i+1} - 1}$$

7. $z = (1+i)^{2019}$

5. $z = \frac{(1+i)^2}{(1-i)^2}$

3.
$$z = \frac{1+4i}{1-5i}$$
4. $z = \left(\frac{\sqrt{3}-i}{1+i\sqrt{3}}\right)^9$
6. $z = \frac{1}{\frac{1}{i+1}-1}$
7. $z = (1+i)^{2019}$
8. $z = \frac{2+5i}{1-i} + \frac{2-5i}{1+i}$

10.
$$z = \frac{(4-i)(3+2i)}{(4-i)(2-3i)}$$

11. $z = \frac{(3+i)(2-3i)}{-2i+5}$

12. $z = (\sqrt{3} - 2i)^4$

9.
$$z = (5 - 2i)^3$$

10. $z = \frac{1}{(4 - i)(3 + 2i)}$

