

$$\begin{aligned}
 & (-3^3 \sqrt{2})^{\frac{3}{2}} \\
 z &= (3^3)^{\frac{3}{2}} \cdot (\sqrt{2})^{\frac{3}{2}} \\
 &= 3^9 \cdot (\sqrt{2})^{\frac{3}{2}} \cdot \sqrt{2}^{\frac{1}{2}} \\
 &= 19683 \cdot 2 \sqrt{2}^{\frac{1}{2}} \\
 z &= 39366 \sqrt{2}
 \end{aligned}$$