

MATH 2A/5A Prep: Exponents and Radicals

1. Expand the expression $(\sqrt{x} + 1)^3$
2. Function $f(x)$ is defined by $f(x) = 2^{x^2} \cdot 4^{-x}$, find $f(3)$.
3. Simplify the expression $\frac{2^{x^2}}{4^x}$.
4. Simplify the expression $(\sqrt{x+1} - \sqrt{x})^2$
5. Simplify the number $9^{\frac{1}{4}}\sqrt{6} - \sqrt{8}$