

Find the missing exponent :

1.  $2^3\sqrt{4} = 2^?$

2.  $\sqrt{0.001} = 10^?$

3.  $\sqrt[5]{\sqrt[3]{7^2}} = 7^?$

4.  $\sqrt{5^{-1}} \cdot \sqrt[3]{25} = 5^?$

Simplify. Express answers in radical form.

5.  $\frac{\sqrt[4]{x^3} \cdot \sqrt[6]{x^5}}{\sqrt[3]{x^2}}$

6.  $\left(\left(x^{1/2}\right)^{-2/3}\right)^{-3/4}$

Simplify:

7.  $x^{1/2}\left(x^{3/2} - 2x^{1/2}\right)$

8.  $\frac{x^{3/2} - 2x^{5/2}}{x^{1/2}}$

