

## Handout 2: The Roots-Answers

*Jimmy Fallon digs them.*

1. Simplify  $\sqrt[3]{64}$ .

4

2. Simplify  $\left(\sqrt{\frac{1}{4}}\right)\sqrt[3]{8}$ .

1

3. Simplify  $\sqrt{242}$ .

$11\sqrt{2}$

4. Simplify  $\sqrt{1000}$ .

$10\sqrt{10}$

5. Simplify  $\sqrt{12} + \sqrt{300}$ .

$12\sqrt{3}$

6. Simplify  $(x^{1/3})(\sqrt{x})(x^3)$ .

$x^{\frac{23}{6}}$

7. Simplify  $\frac{\sqrt[3]{x}\sqrt{81x^2}}{3x}$ .

$3x^{1/3}$

8. Simplify  $\frac{\sqrt[3]{a^5}\sqrt{b}}{a}$ .

$a^{2/3}b^{1/2}$

9. Simplify  $3\sqrt{9} + \sqrt{3^4}$ .

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10. Simplify  $\frac{x^2x}{\sqrt[3]{x}}$ .

$x^{8/3}$