

Name: _____

Complete as many of the following problems as you can. You do not have to go in order.

- (1) Simplify $\sqrt{2}^{1/2} \cdot \sqrt{2}^{3/2}$
- (2) Simplify $64^{2/3}$
- (3) Simplify $(-32x^5y^{10})^{1/5}$
- (4) Solve $x^{3/4} = 8$
- (5) Solve $x^{5/4} + 36 = 4$
- (6) Solve $\sqrt{3x+1} = 4$
- (7) Solve $\sqrt{x-3} = x-5$
- (8) Solve $2\sqrt{2x+5} - x = 4$
- (9) Solve $\sqrt[3]{4x^2+7} - 2 = 0$
- (10) Solve $\sqrt{x+2} - \sqrt{x} = 1$

Key:

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|--------|--------------|--------|-------------|---------------------------------|
| (1) 2 | (3) $-2xy^2$ | (5) 16 | (7) 7 | (9) $-\frac{1}{2}, \frac{1}{2}$ |
| (2) 16 | (4) 16 | (6) 5 | (8) $-2, 2$ | (10) $\frac{1}{4}$ |