

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for full credit.

Due next class. Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

(1) Evaluate the expression by hand:

(a) $8^{2/3}$

(b) $-16^{3/2}$ (remember order of operations)

(2) Evaluate the expression by hand:

(a) $\frac{8^{5/6}}{8^{1/2}}$

(b) $(-32)^{-3/5}$

(3) Rewrite the expression using only positive exponents

(a) $\sqrt[3]{x^5}$

(b) $(\sqrt[5]{z})^{-3}$

(4) Rewrite the expression using only positive exponents

(a) $\sqrt{x \cdot \sqrt{x}}$

(b) $\frac{\sqrt[3]{x}}{\sqrt{x}}$

(5) Solve the equation: $\sqrt[3]{x+1} = -3$

(6) Solve the equation: $\sqrt{x+5} + 1 = x$

(7) Solve the equation: $\sqrt{2x} - \sqrt{x+1} = 1$

(8) Solve the equation: $4x^{3/2} + 5 = 21$

(9) Solve the equation: $6x^{2/3} - 11x^{1/3} + 4 = 0$

(10) Solve the equation: $2x^{-2} - x^{-2} = 3$