

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 credit.

Final due date: the last day of class.

(1) Simplify $\sqrt[15]{x^{12}}$

(2) Simplify $\sqrt[3]{a^6b^9c^{15}}$

(3) Evaluate $125^{2/3}$

(4) Evaluate $\left(\frac{64}{81}\right)^{1/2}$

(5) Evaluate $\left(\frac{1}{125}\right)^{1/3}$

(6) Evaluate $49^{-3/2}$

(7) Evaluate $\left(\frac{81}{256}\right)^{-1/4}$

(8) Solve $\sqrt[3]{5x+7} = -2$

(9) Solve $\sqrt[3]{3x+1} = 4$

(10) Solve $\sqrt[4]{x+21} = 2$

(11) Solve $\sqrt{y+2} - 4 = 2$

(12) Solve $3 = 7 + \sqrt{9x+7}$

(13) Solve $\sqrt{4x+13} - x = 4$

(14) Solve $\sqrt{x} + 6x = 2$