ACMAT117 Fall 2024
Professor Manguba-Glover
Sections 4.8 Classwork (CW 18) Name: _____

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

Note: This classwork is optional

(1) Simplify $\sqrt{2}^{1/2} \cdot \sqrt{2}^{3/2}$

(2) Simplify $64^{2/3}$

(3) Simplify $4(2x^{2/3})(7x^{5/4})$

(4) Simplify $7^{2/3} \cdot 7^{3/2}$

(5) Simplify $\left(4^{-3/5}\right)^{2/3}$

(6) Simplify $(64x^3)^{1/2}$

(7) Simplify $(-32x^5y^{10})^{1/5}$

(8) Solve $x^{3/4} = 8$

(9) Solve $x^{5/4} + 36 = 4$

(10) Solve $x - 2\sqrt{x} - 9 = 0$

(11) Solve $x^{2/3} - 3x^{1/3} - 10 = 0$

(12) Solve $3x^{-2} + 7x^{-1} - 6 = 0$

(13) Solve $\sqrt{3x+1} = 4$

(14) Solve $\sqrt{x-3} = x - 5$

(15) Solve $2\sqrt{2x+5} - x = 4$

(16) Solve $\sqrt[3]{4x^2+7} - 2 = 0$

(17) Solve $\sqrt{x+2} - \sqrt{x} = 1$

Key:

(1) 2
(2) 16
(3) $x^{23/12}$
(4) $7^{13/6}$
(5) $4^{-2/5}$
(6) $4x$
(7) $-2xy^2$
(8) 16
(9) 16
(10) 16
(11) $-8, 125$
(12) $-\frac{1}{3}, \frac{3}{2}$
(13) 5
(14) 7
(15) $-2, 2$
(16) $-\frac{1}{2}, \frac{1}{2}$
(17) $\frac{1}{4}$