ACMAT100 Spring 2025
Professor Manguba-Glover
Section 7.1-7.2 Homework (HW 15) Name: _____

Show all work and circle/box your simplified answers. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for credit. Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

Due at the start of next class (unless otherwise arranged with Professor MG).

(1) Evaluate the expression or state that it is not a real number:

(a) $\sqrt{25}$
(b) $-\sqrt{25}$
(c) $\sqrt{-25}$
(d) $-\sqrt{-25}$

(2) Evaluate the expression or state that it is not a real number:

(a) $\sqrt[3]{8}$
(b) $-\sqrt[3]{8}$
(c) $\sqrt[3]{-8}$
(d) $-\sqrt[3]{-8}$

(3) Evaluate the expression or state that it is not a real number:

(a) $\sqrt{\frac{25}{81}}$
(b) $\sqrt{\frac{49}{100}}$
(c) $\sqrt[3]{-\frac{8}{125}}$
(d) $\sqrt[3]{-\frac{216}{1331}}$

(4) Determine the indicated value or state that the expression is not a real number:

$$f(x) = \sqrt{5x-6}, f(2)$$

(5) Determine the indicated value or state that the expression is not a real number:

$$s(t) = \sqrt[4]{t^3 - t^2 + t + 40}, s(-3)$$

(6) Simplify $\sqrt[3]{p^3q^6r^9}$

(7) Simplify $\left(\frac{22x^{3/7}}{2x^{1/2}}\right)^2$

(8) Simplify $\left(\frac{x^{3/4}y^{-2}}{x^{1/2}y^2}\right)^4$

(9) Evaluate or state that it is not a real number: $(-81)^{3/4}$

(10) Evaluate or state that it is not a real number: $-\left(\frac{25}{49}\right)^{-1/2}$