Name: _____ is Capable! 😊
Date: _____

Math 115 Spring 2026
Mr. Sahney

Standard 10 Practice

Directions: Please answer all questions on a separate piece of paper. Show all your work!

1. Find the domain of the function: $f(x) = \frac{17x}{x-4}$ Express your answer interval notation.

2. Find the domain of the function: $g(x) = \frac{x-9}{x^2+4x-12}$ Express your answer in interval notation.

3. Find the domain of the function: $g(x) = \frac{x+5}{2x^2-9x-18}$ Express your answer in interval notation.

4. Given the function $h(x) = \frac{-2x^2+7}{x+8}$, evaluate $f(-4)$

5. Simplify the following rational expressions:

a) $\frac{x^2+3x-10}{x^2+6x+5}$

b) $\frac{x^2-x-6}{x^2-9}$

c) $\frac{4x^2-11x-3}{4x^2+13x+3}$

d) $\frac{x^2-4x-5}{25-x^2}$

6. Multiply and Simplify:

a) $\frac{3w^{11}y^2}{11w^4} \cdot \frac{6y^2}{7w^4y^2}$

b) $\frac{x^2-36}{x^2-3x-18} \cdot \frac{x+3}{9x}$

c) $\frac{2x^2+7x+3}{3x^2-3x} \cdot \frac{x+1}{x^2+4x+3}$

7. Divide and Simplify:

a) $\frac{5x^{13}y^6}{11x^2} \div \frac{5x^3y^4}{4y^2}$

b) $\frac{x^2+5x+4}{x^2+3x+2} \div \frac{x^2+9x+20}{x^2+x-2}$

c) $\frac{6x^2-7x+2}{4x-8} \div \frac{2x^2-7x+3}{x^2-5x+6}$