Pre-Calculus/Trig
UNIT 1: Algebra II Review – SECTION 3 WORKSHEET

Name: _____
Date: _____

FINDING DOMAIN ALGEBRAICALLY

CASE 1: FRACTIONS

Directions: State the domain in interval notation.

1.) $y = \frac{1}{x}$

2.) $y = \frac{1}{x-2}$

3.) $f(x) = \frac{8}{3x+9}$

4.) $f(x) = \frac{x^3}{x^2-4x-96}$

5.) $y = \frac{6x}{x^2+7x+12}$

6.) $y = \frac{3x^2-8x}{2x^2-5x-3}$

CASE 2: RADICALS

Directions: State the domain in interval notation.

7.) $y = \sqrt{x-3}$

8.) $y = \sqrt{2x+8}$

9.) $y = \sqrt{x^2-9}$

10.) $y = \sqrt[3]{1-x^2}$

11.) $f(x) = \sqrt{4-x^2}$

12.) $f(x) = \sqrt{x^2+x-12}$

CASE 3: FRACTION & RADICAL COMBINATION

Directions: State the domain in interval notation.

13.) $f(x) = \frac{5}{\sqrt{2x-10}}$

14.) $f(x) = \frac{9}{\sqrt{x^2-144}}$

15.) $f(x) = \frac{11}{\sqrt{x^2-100}}$

16.) $y = \frac{\sqrt{x^2-36}}{2x-8}$

17.) $y = \frac{\sqrt{x^2-25}}{3x-24}$

18.) $y = \frac{\sqrt{9-x^2}}{x^2+7x+10}$

MIXED PRACTICE: State the domain in interval notation.

19.) $y = \frac{5x^3-9}{x^3+13x^2+42x}$

20.) $f(x) = \frac{\sqrt{x^2-9x+8}}{x^2-16+63}$

21.) $f(x) = \frac{\sqrt{x^2-7x-18}}{x^2-5x-14}$

22.) $f(x) = \sqrt{25-5x}$

23.) $f(x) = 8x^3 - 13x^2 + 9x - 4$

24.) $f(x) = \frac{x+9}{\sqrt{x^2+x-72}}$

25.) $f(x) = \frac{\sqrt{7x^2-31x-20}}{7x^2+9x}$

26.) $f(x) = \sqrt{8x^2-48x}$