Math 3201 **Section 4.1 Worksheet:** Name: _____

Non-Permissible Values and
Equivalent Rational Expressions

1. State the non-permissible value(s)/restrictions for each of the following rational expressions:

a) $\frac{5x+4}{3x}$ b) $\frac{3x-2}{5x^2}$ c) $\frac{10}{x-5}$

d) $\frac{4x^2-81}{2x+7}$ e) $\frac{3x^2-9}{x^2+3x}$ f) $\frac{5x^3+6x^2}{4x^2-8x}$

g) $\frac{3x+5}{x^2-16}$ h) $\frac{3x^2-9}{4x^2-100}$ i) $\frac{5-6x}{2x^3-18x}$

+ p. 223/4, #9a(i, ii, iii), 11a(i,ii,iii), 16abcd for Extra Practice

2. Which is an equivalent rational expression of $\frac{2-x}{3x}$? 2. ____

A) $\frac{2-x}{3x}$ B) $\frac{4-2x}{6x}$

C) $\frac{2-2x}{6x}$ D) $6x-3x^2$

3. Which is an equivalent rational expression of $\frac{4x}{x+5}$? 3. ____

A) $\frac{x}{x+5}$ B) $\frac{4x^2}{x+5x^2}$

C) $\frac{2x}{0.5x+2.5}$ D) $\frac{4x(x+5)}{x+5}$

4. Which is an equivalent rational expression of $\frac{1-x^2}{6x}$? 4. ____

A) $\frac{3-3x^2}{6x}$ B) $\frac{x-x^3}{6x^2}$

C) $\frac{\left(1-x^2\right)(x-1)}{6x(x-1)}$ D) $\frac{x-x^2}{6x^2}$

5. Write **TWO** equivalent rational expressions for each of the following:

a) $\frac{x-2}{3x^2}$ b) $\frac{x+1}{x-2}$

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