# Unit 4 EXTRA Test Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Math 3 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_**

1. Simplify $ \frac{x-2}{x-1}∙\frac{x^{2}+8x-9}{x^{2}+7x-18}$

Part II – Simplify. Circle answer

1. $\frac{5x-30}{x-6}$ **5.** $\frac{x^{2}-4x}{x^{2}+4x-12}∙\frac{x^{2}-36}{x^{2}-3x-4}$

**6.** $\frac{x-7}{4x^{3}y^{2}}÷\frac{x-7}{6x^{2}y}$ 7**.** $\frac{x-5}{x^{2}-49}÷\frac{x^{2}-3x-10}{x^{2}-7x}$

**Simplify. Addition/Subtraction.**

8. $\frac{3}{4x}+\frac{5}{2x^{2}}$ 9. $\frac{3}{x^{2}+3x-18}+\frac{2}{x^{2}+5x-6}$

10. $\frac{x^{2}}{x^{2}+6x-7}+\frac{3}{x-1}$

Solve each equation and check your solution.

11. $\frac{2}{7}+\frac{2}{x}=\frac{3}{7}$ 12. $\frac{3}{x-8}=\frac{2}{x+2}$

13. $\frac{3x}{x-4}+\frac{1}{2}=\frac{10}{2x-8}$

Graph Rational Functions

![[image]]()17. Sketch the graph of: $y=\frac{5x-15}{x-6}$. Label any intercepts and asymptotes.

 Vertical Asymptote:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Horizontal Asymptote:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 X – intercepts: \_\_\_\_\_\_\_\_\_\_\_\_

 Y – intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_