

**Unit 4- Part 1 Review**  
**Do all work on notebook Paper**

**Multiply/Divide**

6.  $\frac{5y-20}{3y+15} \cdot \frac{7y+35}{10y+40}$

7.  $\frac{x^2+10x+16}{x^2-6x-16} \div \frac{x+8}{x^2-64}$

8.  $\frac{3x+3}{6x+12} \div \frac{18}{5x+5}$

9.  $\frac{x^2-3x-10}{2x^2-11x+5} \div \frac{x^2-5x+6}{2x^2-7x+3}$

10.  $\frac{x^2+6x}{3x^2+6x-24} \cdot \frac{x^2+2x-8}{x+6}$

11.  $\frac{(y+6)^2}{y^2-36} \cdot \frac{3y-18}{2y+12}$

**Add/Subtract.**

12.  $\frac{3}{x^2+3x-10} + \frac{1}{x^2+6x+5}$

13.  $\frac{x+2}{x^2+4x+4} + \frac{2}{x+2}$

14.  $\frac{3x-2}{x-2} + \frac{5}{x+2}$

15.  $\frac{6}{5x^2} + \frac{7}{10x}$

16.  $\frac{9}{x^2-1} - \frac{x-2}{x+1}$

17.  $\frac{x}{x^2+5x+6} - \frac{2}{x^2+3x+2}$

**Simplify.**

18.  $\frac{\frac{x}{2}-5}{6+\frac{3}{x}}$

19.  $\frac{\frac{20}{x+1}}{\frac{1}{4}-\frac{7}{x+1}}$

20.  $\frac{\frac{4}{x^2-9} + \frac{2}{x-3}}{\frac{1}{x+3} + \frac{1}{x-3}}$

**Solving each equation and check your answers**

21.  $\frac{3}{2x-4} = \frac{5}{3x+7}$

22.  $\frac{3x}{4} = \frac{x^2-4x}{4x}$

23.  $\frac{7}{x^2-5x} + \frac{2}{x} = \frac{3}{2x-10}$

24.  $\frac{x+2}{x-1} + \frac{4}{x-5} = \frac{6}{x^2-6x+5}$

25.  $\frac{5}{x+2} + \frac{x}{x-2} = \frac{8}{x^2-4}$

26.  $\frac{4x}{x+3} + x = \frac{8}{x+3}$

**REVIEW**

<p>27. Solve and graph solution set: <math>2 x-5  - 1 &lt; 11</math></p>	<p>28. Find the inverse of <math>f(x) = \frac{-3}{2}x - 4</math></p>	<p>29. Write a poly. Function in factored form with solutions at <math>4, \frac{2}{3}</math> and double roots at <math>-3</math></p>
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6.  $\frac{7(y-4)}{6(y+4)}$

7.  $x+8$

8.  $\frac{5(x+1)^2}{36(x+2)}$

9.  $\frac{x+2}{x-2}$

10.  $\frac{x}{3}$

11.  $\frac{3}{2}$

12.  $\frac{4x+1}{(x+5)(x-2)(x+1)}$

13.  $\frac{3}{x+2}$

14.  $\frac{3x^2+9x-14}{(x-2)(x+2)}$

15.  $\frac{7x+12}{10x^2}$

16.  $\frac{-x^2+3x+7}{(x+1)(x-1)}$

17.  $\frac{x-3}{(x+3)(x+1)}$

18.  $\frac{x(x-10)}{6(2x+1)}$

19.  $\frac{80}{x-27}$

20.  $\frac{x+5}{x}$

21. 41

22. -2

23. 6

24. -5, 4

25. -9

26. -8, 1

27.  $-1 < x < 11$

28.  $-\frac{2}{3}x - \frac{8}{3}$

29.  $y = (x-4)(3x-2)(x+3)^2$