Honors Math II
Unit 8 Day 2 Homework:
Adding and Subtracting Rational Expressions

Name:_____
Date:_____Period:_____

1. Explain ***how*** to add rational expressions with unlike denominators.

Perform the indicated operation and then simplify.

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

3. $\frac{5x}{x+3}+\frac{15}{x+3}$

4. What is the Least Common Multiple of the polynomials $3x^2-9x$ and $6x^2$?

A. $3x(x-3)$ B. $6x^2$ C. $6x(x-3)$ D. $6x^2(x-3)$

Perform the indicated operation and then simplify.

5. $\frac{12}{5x}+\frac{7}{6x}$

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

7. $\frac{3}{x+4}-\frac{1}{x+6}$

8. $\frac{-15x}{x^2-8x+16}+\frac{12}{x-4}$

9. Which expression is equivalent to $\frac{2x}{x+4}-\frac{x^2+4}{x^2-16}$?

A. $\frac{1}{x+4}$ B. $\frac{(x+2)(x-2)}{(x+4)(x-4)}$ C. $\frac{x^2-8x-4}{(x+4)(x-4)}$ D. $\frac{3x^2-8x+4}{(x+4)(x-4)}$

Perform the indicated operation and then simplify.

10. $\frac{x}{x^2-9}+\frac{x+1}{x^2+6x+9}$

11. $\frac{x+2}{x-4}+\frac{2}{x}-\frac{5x}{3x-1}$

12. $\frac{x+3}{x^2-2x-8}-\frac{x-5}{x^2-12x+32}$

13. $\frac{x+3}{x^2-25}-\frac{x-1}{x-5}+\frac{3}{x+3}$

Solve.

14. $4(x-2)^2 = 144$

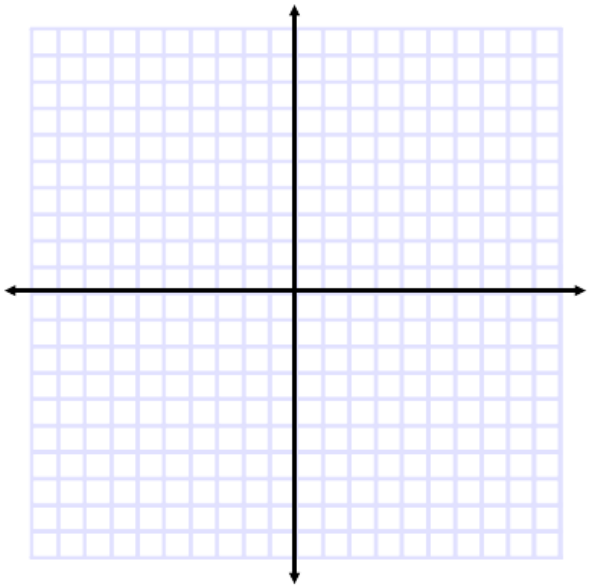
15. $6x^2 - 25 = x^2$

16. $3(x+5)^2 - 10 = 182$

17. $3x^2 + x = 14$

Graph the function:

18. $y = 4^x$



19. $y = -3\left(\frac{1}{4}\right)^x$