1. Find the values for which the rational expression is undefined: $\frac{x^2+5x+12}{x^2-9x+18}$

2. Simplify to lowest terms: $\frac{x^2+7x+12}{x^2-5x-36}$

3. Simplify to lowest terms: $\frac{x^2-13x+40}{25-x^2}$

4. Multiply: $\frac{x^2-5x-24}{x^2-7x-18}\cdot\frac{x^2+13x+22}{x^2-64}$

5. Divide: $\frac{x^2+6x-7}{x^2+x-30}\div\frac{x^2-49}{x+6}$

6. Add: $\frac{x^2+6x}{x^2+2x-63}+\frac{7x+36}{x^2+2x-63}$

7. Subtract: $\frac{9x+4}{x^2+15x+50}-\frac{5x-16}{x^2+15x+50}$

8. Add: $\frac{x^2+x+5}{x^2-4}+\frac{4x+15}{4-x^2}$

9. Subtract: $\frac{7}{x^2+8x+15}-\frac{4}{x^2+7x+12}$

10. Add: $\frac{x+6}{x^2+9x+20}+\frac{4}{x^2+6x+8}$

11. Simplify: $\frac{1-\frac{7}{x}+\frac{12}{x^2}}{1+\frac{4}{x}-\frac{32}{x^2}}$

12. Solve: $1-\frac{18}{x^2}=\frac{3}{x}+\frac{10}{x^2}$

13. Solve: $\frac{x+4}{x^2-x-2}=\frac{6}{x^2-4x-5}$

14. The sum of the reciprocal of a number and $\frac{7}{12}$ is $\frac{3}{4}$. Find the number.

15. Jerry can mow a lawn in 40 minutes, while Bill takes 50 minutes to mow the same lawn. If Jerry and Bill work together, using two lawn mowers, how long would it take them to mow the lawn?

16. Earl and John can clean an entire building in 4 hours. Earl can clean the entire building by himself in 6 hours less time than John can. How long would it take Earl to clean the building by himself?