

Name: _____

Solving Rational Equations

Exercise 1: Solve each equation. Check your solution.

1) $\frac{x}{6} + \frac{2x}{3} = -\frac{5}{2}$

2) $\frac{1}{4} + \frac{5x}{16} = -\frac{x}{4}$

3) $\frac{m+1}{m} + \frac{m+3}{m} = 5$

4) $\frac{2x-3}{x-1} + \frac{x-4}{x+1} = -5$

5) $\frac{n-3}{n} = \frac{n-3}{n-6}$

6) $\frac{3}{r+4} - \frac{1}{r} = \frac{1}{r}$

7) $\frac{4r-5}{r+3} + \frac{7-3r}{r+7} = \frac{5-r}{r}$

8) $\frac{x-3}{x^2-1} + \frac{-4}{x^2} = 0$

9) $\frac{2x-7}{2x+3} + \frac{3x-2}{2x-1} = 5$

10) $\frac{12}{x^2} + \frac{1}{x} = 1$

11) $1 - \frac{1}{x} = \frac{6}{x^2}$

12) $\frac{4}{x^2} + \frac{11}{x} = 3$

13) $2 + \frac{7}{x} = \frac{4}{x^2}$

14) $\frac{6}{x+4} + \frac{1}{x} = 1$

15) $\frac{7}{x} - \frac{4}{x+5} = 1$

16) $\frac{4}{x+4} + \frac{1}{x+1} = 1$

17) $\frac{5}{x-4} + \frac{2}{x+2} = 1$

18) $\frac{7}{x+5} - \frac{8}{x+8} = 1$

19) $\frac{5}{x+7} - \frac{6}{x+9} = 1$

20) $\frac{x-4}{x+5} - \frac{2}{x+10} = -1$

21) $\frac{1}{2x-5} + \frac{4}{3x} = -\frac{x}{2x-5}$

22) $\frac{x-2}{x+7} - \frac{1}{x+3} = -1$

23) $\frac{2}{3x+1} = \frac{1}{x} - \frac{6x}{3x+1}$

24) $\frac{4}{3x+2} + \frac{3}{x-1} = \frac{3x}{x-1}$

Exercise 2: Three times the reciprocal of a number equals 9 times the reciprocal of 6. Find the number.