

Review of Rational Expressions

Date _____ Period _____

Simplify each expression.

1) $\frac{7a^2 + 8a + 1}{7a + 1} \cdot \frac{1}{a - 4}$

2) $\frac{8}{v + 2} \cdot \frac{12v^3 + 60v^2}{2v + 10}$

3) $\frac{n^2 + 2n - 3}{4n^2 - 9} \cdot \frac{4n^2 - 9}{n + 2}$

4) $\frac{6x^2}{3} \cdot \frac{6x + 6}{2x^2 + 6x + 4}$

5) $\frac{2x^2 - 4x + 2}{3x + 9} \div \frac{2x^2 - 4x + 2}{3}$

6) $\frac{2n^2 - 2n}{4n^2 - 6n} \div \frac{1}{2n^2 - n - 3}$

7) $\frac{n - 2}{6n^2 - 24n} - \frac{5n - 5}{6n^2 - 24n}$

8) $\frac{4p + 3}{6p^3 + 6p^2} - \frac{p + 5}{6p^3 + 6p^2}$

9) $\frac{4}{3} - \frac{n - 5}{3n - 6}$

10) $\frac{5x}{6} - \frac{x - 1}{x - 3}$

11) $\frac{x + 2}{x + 5} - \frac{5}{6}$

12) $\frac{5}{a + 2} - \frac{2}{a - 6}$

13) $\frac{\frac{m}{16}}{\frac{3}{m}}$

14) $\frac{\frac{16}{u}}{\frac{1}{u}}$

15) $\frac{2}{\frac{2}{x^2} - \frac{4}{x^2}}$

16) $\frac{\frac{4}{u^2}}{\frac{1}{u} + \frac{u^2}{2}}$

17) $\frac{\frac{x}{x - 3} + \frac{x - 3}{9}}{\frac{3x - 9}{2} - \frac{x^2}{x - 3}}$

18) $\frac{\frac{9}{u + 1} + \frac{u + 1}{4}}{\frac{1}{2} - \frac{9}{2}}$

Answers to Review of Rational Expressions (ID: 1)

1) $\frac{a+1}{a-4}$

5) $\frac{1}{x+3}$

9) $\frac{n-1}{n-2}$

13) $\frac{m^2}{48}$

17) $\frac{6x+2x^2+18}{9x^2-162x+243}$

2) $\frac{48v^2}{v+2}$

6) $(n-1)(n+1)$

10) $\frac{5x^2-21x+6}{6(x-3)}$

14) 16

18) $\frac{37+u^2+2u}{-16u-16}$

3) $\frac{(n-1)(n+3)}{n+2}$

7) $\frac{-4n+3}{6n^2-24n}$

11) $\frac{x-13}{6(x+5)}$

15) $-x^2$

4) $\frac{6x^2}{x+2}$

8) $\frac{3p-2}{6p^3+6p^2}$

12) $\frac{3a-34}{(a-6)(a+2)}$

16) $\frac{8}{2u+u^4}$