

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

ID: A

**Practice - Rational Expressions**

1.  $\frac{x+5}{x^2+5x+4} - \frac{x+4}{x^2+13x+36}$

2.  $\frac{x+3}{x^2+3x-28} + \frac{x-6}{x^2+x-20}$

3.  $\frac{x+5}{x^2-11x+30} + \frac{x+6}{x^2-12x+35}$

4.  $\frac{x+3}{x^2-2x-35} - \frac{x-4}{x^2-14x+49}$

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

6.  $\frac{x-7}{x^2-4} - \frac{x-9}{x^2-5x-14}$

7.  $\frac{x+2}{x^2-16x+63} + \frac{x+7}{x^2-7x-18}$

8.  $\frac{x-8}{x^2-3x-28} - \frac{x-8}{x^2-49}$

9.  $\frac{x+5}{x^2-x-56} + \frac{x-6}{x^2-4x-32}$

10.  $\frac{x-5}{x^2-3x-54} + \frac{x-1}{x^2+8x+12}$

11.  $\frac{x+7}{x^2+6x+5} - \frac{x+5}{x^2-3x-4}$

12.  $\frac{x-5}{x^2+x-42} - \frac{x-8}{x^2-x-56}$

13.  $\frac{x+8}{x^2-8x+16} - \frac{x-2}{x^2-3x-4}$

14.  $\frac{x-3}{x^2+x-12} - \frac{x+7}{x^2-16}$

15.  $\frac{x-9}{x^2+7x+12} + \frac{x-6}{x^2+6x+8}$

16.  $\frac{x-2}{x^2-13x+36} - \frac{x+5}{x^2-x-72}$

17.  $\frac{x^2+x-20}{x^2+2x-35} \div \frac{x^2-3x-4}{x^2-14x+45}$

18.  $\frac{x^2+2x-48}{x^2+8x-9} \div \frac{x^2+2x-48}{x^2+7x-18}$

19.  $\frac{x^2+15x+54}{x^2-x-12} \times \frac{x^2+3x-28}{x^2+15x+54}$

20.  $\frac{x^2-x-56}{x^2+2x-3} \times \frac{x^2-4x+3}{x^2+6x-7}$

21.  $\frac{x^2-7x+12}{x^2+8x+15} \div \frac{x^2-11x+24}{x^2+x-6}$

22.  $\frac{6x^2-2x-48}{3x^2+5x-28} \times \frac{x^2+6x+8}{4x^2-18x+18}$

23.  $\frac{5x^2+34x-7}{4x^2-24x} \times \frac{12x^2+24x}{3x^2+15x-42}$

24.  $\frac{x^2+6x+8}{x^2+8x+15} \div \frac{4x^2+13x+10}{2x^2+2x-40}$

25.  $\frac{x^2-36}{9x^2+3x} \times \frac{3x^2+25x+8}{4x^2-26x+12}$

26.  $\frac{x^2+7x-8}{8x^2-16x+6} \div \frac{x^2-64}{20x^2+10x-10}$

27.  $\frac{4x^2-24x-64}{3x^2+21x+30} \div \frac{4x^2+16x+16}{9x^2+30x+24}$

28.  $\frac{8x^2+36x}{15x^2-4x-4} \times \frac{25x^2+35x+10}{12x^2+28x}$

29.  $\frac{2x^2-8x-24}{6x^2-5x-56} \div \frac{x^2-5x-6}{2x^2+11x-63}$

30.  $\frac{12x^2+53x+56}{x^2+4x-45} \div \frac{3x^2+17x+24}{x^2-5x}$

31.  $\frac{x^2+x-42}{x^2-2x-35} \times \frac{4x^2+24x+20}{5x^2+34x-7}$

**Practice - Rational Expressions**  
**Answer Section**

1. ANS:

$$\frac{0x^2 + 9x + 41}{(x+4)(x+1)(x+9)}$$

PTS: 1

2. ANS:

$$\frac{2x^2 + 9x - 27}{(x-4)(x+7)(x+5)}$$

PTS: 1

3. ANS:

$$\frac{2x^2 - 2x - 71}{(x-5)(x-6)(x-7)}$$

PTS: 1

4. ANS:

$$\frac{0x^2 - 5x - 1}{(x-7)(x+5)(x-7)}$$

PTS: 1

5. ANS:

$$\frac{0x^2 - 4x + 32}{(x-1)(x-6)(x-5)}$$

PTS: 1

6. ANS:

$$\frac{0x^2 - 3x + 31}{(x+2)(x-2)(x-7)}$$

PTS: 1

7. ANS:

$$\frac{2x^2 + 4x - 45}{(x-9)(x-7)(x+2)}$$

PTS: 1

8. ANS:

$$\frac{0x^2 + 3x - 24}{(x-7)(x+4)(x+7)}$$

PTS: 1

9. ANS:

$$\frac{2x^2 + 10x - 22}{(x-8)(x+7)(x+4)}$$

PTS: 1

10. ANS:

$$\frac{2x^2 - 13x - 1}{(x+6)(x-9)(x+2)}$$

PTS: 1

11. ANS:

$$\frac{0x^2 - 7x - 53}{(x+1)(x+5)(x-4)}$$

PTS: 1

12. ANS:

$$\frac{0x^2 + x - 8}{(x+7)(x-6)(x-8)}$$

PTS: 1

13. ANS:

$$\frac{0x^2 + 15x}{(x-4)(x-4)(x+1)}$$

PTS: 1

14. ANS:

$$\frac{0x^2 - 11x + 33}{(x+4)(x-3)(x-4)}$$

PTS: 1

15. ANS:

$$\frac{2x^2 - 10x - 36}{(x+4)(x+3)(x+2)}$$

PTS: 1

16. ANS:

$$\frac{0x^2 + 5x + 4}{(x-9)(x-4)(x+8)}$$

PTS: 1

17. ANS:

$$\frac{(x-4)(x+5)}{(x-5)(x+7)} \times \frac{(x-9)(x-5)}{(x+1)(x-4)}$$

PTS: 1

18. ANS:

$$\frac{(x+8)(x-6)}{(x+9)(x-1)} \times \frac{(x-2)(x+9)}{(x-6)(x+8)}$$

PTS: 1

19. ANS:

$$\frac{(x+9)(x+6)}{(x-4)(x+3)} \times \frac{(x+7)(x-4)}{(x+6)(x+9)}$$

PTS: 1

20. ANS:

$$\frac{(x+7)(x-8)}{(x-1)(x+3)} \times \frac{(x-3)(x-1)}{(x-1)(x+7)}$$

PTS: 1

21. ANS:

$$\frac{(x-3)(x-4)}{(x+3)(x+5)} \times \frac{(x-2)(x+3)}{(x-8)(x-3)}$$

PTS: 1

22. ANS:

$$\frac{(2x-6)(3x+8)}{(x+4)(3x-7)} \times \frac{(x+2)(x+4)}{(2x-3)(2x-6)}$$

PTS: 1

23. ANS:

$$\frac{(x+7)(5x-1)}{(4x)(x-6)} \times \frac{(3x+6)(4x)}{(3x-6)(x+7)}$$

PTS: 1

24. ANS:

$$\frac{(x+2)(x+4)}{(x+5)(x+3)} \times \frac{(2x-8)(x+5)}{(4x+5)(x+2)}$$

PTS: 1

25. ANS:

$$\frac{(x-6)(x+6)}{(3x+1)(3x)} \times \frac{(x+8)(3x+1)}{(4x-2)(x-6)}$$

PTS: 1

26. ANS:

$$\frac{(x+8)(x-1)}{(4x-2)(2x-3)} \times \frac{(5x+5)(4x-2)}{(x-8)(x+8)}$$

PTS: 1

27. ANS:

$$\frac{(4x+8)(x-8)}{(3x+6)(x+5)} \times \frac{(3x+4)(3x+6)}{(x+2)(4x+8)}$$

PTS: 1

28. ANS:

$$\frac{(4x)(2x+9)}{(5x+2)(3x-2)} \times \frac{(5x+5)(5x+2)}{(3x+7)(4x)}$$

PTS: 1

29. ANS:

$$\frac{(x-6)(2x+4)}{(2x-7)(3x+8)} \times \frac{(x+9)(2x-7)}{(x+1)(x-6)}$$

PTS: 1

30. ANS:

$$\frac{(3x+8)(4x+7)}{(x-5)(x+9)} \times \frac{(x)(x-5)}{(x+3)(3x+8)}$$

PTS: 1

31. ANS:

$$\frac{(x+7)(x-6)}{(x+5)(x-7)} \times \frac{(4x+4)(x+5)}{(5x-1)(x+7)}$$

PTS: 1