Multiplication and Division of Rational Expressions

1. $\dfrac{a}{x} \cdot \dfrac{x}{b}$

2. $\dfrac{3}{x^2} \cdot \dfrac{x}{6}$

3. $\dfrac{a}{b} \cdot \dfrac{b}{c} \cdot \dfrac{c}{d}$

4. $\dfrac{3x}{5y} \cdot \dfrac{10y}{9x}$

5. $\dfrac{2x^2 y}{7z^3} \cdot \dfrac{49z^2}{8x^3 y}$

6. $\dfrac{3}{x} \div \dfrac{2}{y}$

7. $\dfrac{9x}{12y} \div \dfrac{21x}{16y}$

8. $\dfrac{5x}{3y} \div \dfrac{30y}{9x}$

9. $\dfrac{18a^2 b}{33ac^2} \div \left(-\dfrac{6b^2 c}{11ab} \right)$

10. $\dfrac{60x^2 y}{63xz} \div \dfrac{20x^2 z}{21yz^2}$

11. $(x-2) \cdot \dfrac{x+2}{5x-10}$

12. $\dfrac{2x-8}{x+4} \cdot \dfrac{1}{x-4}$

13. $\dfrac{2x-5}{15x^4} \cdot \dfrac{40x^2}{2x-5}$

14. $\dfrac{2x+6}{6x-18} \cdot \dfrac{3x-9}{7x+21}$

15. $\dfrac{x^2-9}{8y} \cdot \dfrac{4y^2}{x+3}$

16. $\dfrac{x-2y}{3x} \cdot \dfrac{2x^2}{x^2-4y^2}$

17. $\dfrac{x^2+7x+12}{x^2-9} \cdot \dfrac{x-3}{x+3}$

18. $\dfrac{x^2+x-6}{3x-6} \cdot \dfrac{x^2-2x}{2x+6}$

19. $\dfrac{x^2+5x+5}{x^2-9} \cdot \dfrac{x^2-7x+12}{2x+4}$

20. $\dfrac{x^2-9x+14}{x^2+7x+12} \cdot \dfrac{4x^3+16x^2}{3x^2-21x}$

21. $\dfrac{2x^2-3x-9}{2x^2-18} \cdot \dfrac{x^2+x-6}{2x^2-x-6}$

22. $\dfrac{2x^2+3x-20}{6x^2-18x} \cdot \dfrac{2x^2-6x}{2x^2+x-15}$

23. $\dfrac{18x^2+3x-36}{9x^2-16} \cdot \dfrac{6x^2-x-12}{8x^2+20x-48}$

24. $\dfrac{x^2-x-20}{x^2-9} \div \dfrac{x^2-16}{x^2-x-12}$

25. $\dfrac{x^2+2x-3}{x^2+x-2} \div \dfrac{x^2+6x+9}{x^2+5x+6}$

26. $\dfrac{3x^2+8x+4}{9x^2-4} \div \dfrac{2x^2+5x+2}{3x^2-5x+2}$