

Math III	Multiplying and Dividing Rational Expressions	
1. $\frac{2x^3y}{3z^4} \cdot \frac{6xz^5}{10y^5}$	2. $\frac{4x^2y}{2z^2} \cdot \frac{6xz^3}{20y^4}$	3. $\frac{3y^2}{5} \cdot \frac{10x}{15y}$
4. $\frac{3x-6}{5x} \cdot \frac{x^3}{5x-10}$	5. $\frac{5t^3}{4t-8} \cdot \frac{6t-12}{10t}$	6. $\frac{y^2-16}{2y+6} \cdot \frac{y+3}{y-4}$
7. $\frac{x^2-16}{x^2} \cdot \frac{x^2-4x}{x^2-x-12}$	8. $\frac{y^2+10y+25}{y^2-9} \cdot \frac{y^2+3y}{y+5}$	9. $\frac{x^2-6x+9}{12-4x} \cdot \frac{x^6-9x^4}{x^3-3x^2}$
10. $\frac{r^3s}{t} \div \frac{rs^3}{t^3}$	11. $\frac{m^5n}{p} \div \frac{mn^3}{p^4}$	12. $\frac{30}{y^2+4y-12} \div \frac{6y}{y-2}$
13. $\frac{15}{y^2+2y-8} \div \frac{5y}{y-2}$	14. $\frac{x^2+3x-28}{x^2+4x+4} \div \frac{x^2-49}{x^2-5x-14}$	15. $\frac{y^2-36}{y^2-8y+16} \div \frac{3y-18}{y^2-y-12}$
16. $\frac{y^2-9}{y^2} \div \frac{y^5+3y^4}{y+2}$	17. $\frac{25x^2-4}{x^2-9} \div \frac{5x-2}{x+3}$	18. $\frac{x^2-16}{x^2-10x+25} \div \frac{3x-12}{x^2-3x-10}$


1. $\frac{2x^3y}{3z^4} \cdot \frac{6xz^5}{10y^5}$ $\frac{12x^4yz^5}{30y^5z^4} \rightarrow \frac{2x^4z}{5y^4}$	2. $\frac{4x^2y}{2z^2} \cdot \frac{6xz^3}{20y^4}$ $\frac{24x^3yz^3}{40y^4z^2} \rightarrow \frac{3x^3z}{5y^5}$	3. $\frac{3y^2}{5} \cdot \frac{10x}{15y}$ $\frac{30xy^2}{75y} \rightarrow \frac{2xy}{5}$
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<p>4 $\frac{3x-6}{5x} \cdot \frac{x^3}{5x-10}$</p> <p>$\frac{3(x-2) \cdot x^3}{5x \cdot 5(x-2)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> $\frac{3x^3}{25}$ </div>	<p>5 $\frac{5t^3}{4t-8} \cdot \frac{6t-12}{10t}$</p> <p>$\frac{5t^3}{4(t-2)} \cdot \frac{6(t-2)}{10t}$</p> <p>$\frac{30t^3}{40t} \rightarrow \frac{3t^2}{4}$</p>	<p>6 $\frac{y^2-16}{2y+6} \cdot \frac{y+3}{y-4}$</p> <p>$\frac{(y+4)(y-4)}{2(y+3)} \cdot \frac{y+3}{y-4}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> $\frac{y+4}{2}$ </div>
<p>7 $\frac{x^2-16}{x^2} \cdot \frac{x^2-4x}{x^2-x-12}$</p> <p>$\frac{(x+4)(x-4)}{x^2} \cdot \frac{x(x-4)}{(x-4)(x+3)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> $\frac{x^2-16}{x^2+3x}$ </div>	<p>8 $\frac{y^2+10y+25}{y^2-9} \cdot \frac{y^2+3y}{y+5}$</p> <p>$\frac{(y+5)(y+5)}{(y+3)(y-3)} \cdot \frac{y(y+3)}{y+5}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> $\frac{y^2+3y}{y-3}$ </div>	<p>9 $\frac{x^2-6x+9}{12-4x} \cdot \frac{x^6-9x^4}{x^3-3x^2}$</p> <p>$\frac{(x-3)(x-3)}{-4(x-3)} \cdot \frac{x^4(x+3)(x-3)}{x^2(x-3)}$</p> <p>$\frac{x^2(x^2-9)}{-4} \rightarrow \frac{x^4-9x^2}{-4}$</p>

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<p>10 $\frac{r^3s}{t} \div \frac{rs^3}{t^3}$ ↻</p> <p>$\frac{r^3s}{t} \cdot \frac{t^3}{rs^3}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{r^2t^2}{s^2}$ </div>	<p>11 $\frac{m^5n}{p} \div \frac{mn^3}{p^4}$ ↻</p> <p>$\frac{m^5n}{p} \cdot \frac{p^4}{mn^3}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{m^4p^3}{n^2}$ </div>	<p>12 $\frac{30}{y^2+4y-12} \div \frac{6y}{y-2}$ ↻</p> <p>$\frac{30}{(y+6)(y-2)} \cdot \frac{y-2}{6y}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{5}{y^2+6y}$ </div>
<p>13 $\frac{15}{y^2+2y-8} \div \frac{5y}{y-2}$ ↻</p> <p>$\frac{15}{(y+4)(y-2)} \cdot \frac{y-2}{5y}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{3}{y^2+4y}$ </div>	<p>14 $\frac{x^2+3x-28}{x^2+4x+4} \div \frac{x^2-49}{x^2-5x-14}$ ↻</p> <p>$\frac{(x+7)(x-4)}{(x+2)(x+2)} \cdot \frac{(x+7)(x-7)}{(x+7)(x-7)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{x-4}{x+2}$ </div>	<p>15 $\frac{y^2-36}{y^2-8y+16} \div \frac{3y-18}{y^2-y-12}$ ↻</p> <p>$\frac{(y+6)(y-6)}{(y-4)(y-4)} \cdot \frac{(y-4)(y+3)}{3(y-6)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{y^2+9y+18}{3y-12}$ </div>

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<p>16 $\frac{y^2-9}{y^2} \div \frac{y^5+3y^4}{y+2}$</p> <p>$\frac{(y+3)(y-3)}{y^2} \cdot \frac{y+2}{y^4(y+3)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{y^2 - y - 6}{y^6}$ </div>	<p>17 $\frac{25x^2-4}{x^2-9} \div \frac{5x-2}{x+3}$</p> <p>$\frac{(5x+2)(5x-2)}{(x+3)(x-3)} \cdot \frac{x+3}{5x-2}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{5x+2}{x-3}$ </div>	<p>18 $\frac{x^2-16}{x^2-10x+25} \div \frac{3x-12}{x^2-3x-10}$</p> <p>$\frac{(x+4)(x-4)}{(x-5)(x-5)} \cdot \frac{(x-5)(x+2)}{3(x-4)}$</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $\frac{x^2 + 6x + 8}{3x - 15}$ </div>
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