

NAME _____

Module 15 Simplifying Rational Expressions
Lesson 3 Multiplying and Dividing Rational Expressions



**additional
practice**

Find each product or quotient. Write answer in simplest form.

- $\left(\frac{4m}{5}\right)\left(\frac{15}{2n}\right) \frac{6m}{n}$
- $\frac{6rs}{7s^2} \cdot \frac{14s}{2r} \frac{6}{1}$
- $\frac{a^2b}{3} \cdot \frac{12}{b^2c} \cdot \frac{b}{ac} \frac{4a}{c^2}$
- $\frac{2x^2z}{yz^2} \cdot \frac{y^2}{6x} \cdot 4 \frac{4xy}{3z}$
- $\frac{2y+6}{y^2-9} \cdot \frac{y-3}{4y} \frac{1}{2y}$
- $\frac{4x-8}{4x} \cdot \frac{2x+6}{x^2+x-6} \frac{2}{x}$
- $\frac{s^2+7s+10}{s^2-s-6} \cdot \frac{s^2-3s}{s^2+9s+20} \frac{s}{s+4}$
- $\frac{3r^2+2r}{r^2-2r-3} \cdot \frac{r^2-9}{9r^2-4} \frac{r^2+3r}{3r^2+r-2}$
- $\frac{6}{5t} \div \frac{2v}{25t^3} \frac{15t^2}{v}$
- $\frac{21u^2v}{10v^4} \div \frac{14u}{5uv^2} \frac{3u^2}{4v}$
- $\frac{20a^4b^3}{9ab} \div \frac{10b^5}{12a^2b} \frac{8a^5}{3b^2}$
- $\frac{x^3y^4}{z^8} \div \frac{xy^3}{xz^4} \frac{x^3y}{z^4}$
- $\frac{3w-3}{w^2-4w+3} \div \frac{6w-6}{w-3} \frac{1}{2w-2}$
- $\frac{h^2+7h+10}{h^2+4h-5} \div \frac{h^2+8h+15}{h^2-7h+6} \frac{h^2-4h-12}{h^2+8h+15}$
- $\frac{x^2+9x}{x^2+7x-18} \div \frac{x+3}{x^2-8x+12} \frac{x^2-6x}{x+3}$
- $\frac{c^2-4}{c^2-6c-16} \div \frac{c^2-5c-24}{c^2+3c} \frac{c^2-2c}{c^2-16c+64}$
- $\frac{a^2-ab-6b^2}{4a+8b} \div \frac{a^2-4ab+3b^2}{3a-3b} \frac{3}{4}$
- $\frac{2d}{3} \cdot \frac{d^2}{4d} \div \frac{5}{d^2} \frac{d^4}{30}$
- $\frac{3z^2+8z+5}{9z^2-25} \div \frac{z^2+7z+6}{4z^2-2z-12} \frac{4z^2-2z-12}{3z^2+13z-30}$
- $\frac{x+1}{4x} \cdot \frac{4x+20}{x^2+6x+5} \div \frac{8x^2}{2x+6} \frac{x+3}{4x^3}$

