

NAME _____

DATE _____

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

additional practice

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

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| 1. $\left(\frac{4m}{5}\right)\left(\frac{15}{2n}\right)$ _____ | 2. $\frac{6rs}{7s^2} \cdot \frac{14s}{2r}$ _____ |
| 3. $\frac{a^2b}{3} \cdot \frac{12}{b^2c} \cdot \frac{b}{ac}$ _____ | 4. $\frac{2x^2z}{yz^2} \cdot \frac{y^2}{6x} \cdot 4$ _____ |
| 5. $\frac{2y+6}{y^2-9} \cdot \frac{y-3}{4y}$ _____ | 6. $\frac{4x-8}{4x} \cdot \frac{2x+6}{x^2+x-6}$ _____ |
| 7. $\frac{s^2+7s+10}{s^2-s-6} \cdot \frac{s^2-3s}{s^2+9s+20}$ _____ | 8. $\frac{3r^2+2r}{r^2-2r-3} \cdot \frac{r^2-9}{9r^2-4}$ _____ |
| 9. $\frac{6}{5t} \div \frac{2v}{25t^3}$ _____ | 10. $\frac{21u^2v}{10v^4} \div \frac{14u}{5uv^2}$ _____ |
| 11. $\frac{20a^4b^3}{9ab} \div \frac{10b^5}{12a^2b}$ _____ | 12. $\frac{x^3y^4}{z^8} \div \frac{xy^3}{xz^4}$ _____ |
| 13. $\frac{3w-3}{w^2-4w+3} \div \frac{6w-6}{w-3}$ _____ | 14. $\frac{h^2+7h+10}{h^2+4h-5} \div \frac{h^2+8h+15}{h^2-7h+6}$ _____ |
| 15. $\frac{x^2+9x}{x^2+7x-18} \div \frac{x+3}{x^2-8x+12}$ _____ | 16. $\frac{c^2-4}{c^2-6c-16} \div \frac{c^2-5c-24}{c^2+3c}$ _____ |
| 17. $\frac{a^2-ab-6b^2}{4a+8b} \div \frac{a^2-4ab+3b^2}{3a-3b}$ _____ | 18. $\frac{2d}{3} \cdot \frac{d^2}{4d} \div \frac{5}{d^2}$ _____ |
| 19. $\frac{3z^2+8z+5}{9z^2-25} \div \frac{z^2+7z+6}{4z^2-2z-12}$ _____ | 20. $\frac{x+1}{4x} \cdot \frac{4x+20}{x^2+6x+5} \div \frac{8x^2}{2x+6}$ _____ |



