

LESSON
9-2**Multiplying and Dividing Rational Expressions****Practice and Problem Solving: A/B****Multiply. State any excluded values.**

1. $\frac{6x}{10} \cdot \frac{6x}{3x^3}$

2. $\frac{4x}{3} \cdot \frac{8x}{2}$

3. $\frac{1}{x+9} \cdot \frac{7x^3 + 49x^2}{x+7}$

4. $\frac{6x^2 - 54x}{x-9} \cdot \frac{7x}{6x}$

5. $\frac{18x - 36}{4x - 8} \cdot \frac{2}{9x + 18}$

6. $(56 + 11x - 15x^2) \cdot \frac{10}{15x^2 - 11x - 56}$

Divide. State any excluded values.

7. $\frac{4x}{5x} \div \frac{4x}{6}$

8. $\frac{6(x-2)}{(x-1)(x-10)} \div \frac{x-2}{x-10}$

9. $(2x+6) \div \frac{14x^2 + 42x}{10}$

10. $\frac{27x+9}{10} \div \frac{3x^2 - 8x - 3}{10}$

11. $\frac{24x+56}{10x^3 - 90x^2} \div \frac{15x+35}{5}$

12. $\frac{2x+20}{12x^3 - 30x^2} \div \frac{2}{14x-35}$

Solve.

13. The distance, d , traveled by a car undergoing constant acceleration, a , for a time, t , is given by $d = v_0t + \frac{1}{2}at^2$, where v_0 is the initial velocity of the car. Two cars are side by side with the same initial velocity. One car accelerates, $a = A$, and the other car does not accelerate, $a = 0$. Write an expression for the ratio of the distance traveled by the accelerating car to the distance traveled by the nonaccelerating car as a function of time.
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