Lesson 8: Multiplying and Dividing Rational Expressions

Multiply and simplify.

1) $\dfrac{x^2}{5} \cdot \dfrac{10x}{x^3}$

2) $\dfrac{y^3}{15} \cdot \dfrac{10x}{y^6}$

3) $\dfrac{5x^2y}{12x^3} \cdot \dfrac{8xy}{15x^3y}$

Multiply and simplify.

4) $\dfrac{5x+5}{4x} \cdot \dfrac{8x^3}{3x+3}$

5) $\dfrac{x^2+4x}{15x} \cdot \dfrac{20x}{2x+8}$

6) $\dfrac{x^2+4x+3}{12x^3} \cdot \dfrac{8x}{3x+9}$

Divide and simplify.

7) $\dfrac{4x}{5x+5} \div \dfrac{8x^3}{3x+3}$

8) $\dfrac{15x}{x^2+4x} \div \dfrac{20x}{2x+8}$

9) $\dfrac{x^2+4x+3}{12x^3} \div \dfrac{3x+9}{8x}$

Divide and simplify.

10) $\dfrac{5x+5}{4x} \div \dfrac{3x+3}{8x^3}$

11) $\dfrac{x^2+4x}{15x} \div \dfrac{2x+8}{20x}$

12) $\dfrac{x^2+4x+3}{12x^3} \div \dfrac{3x+9}{8x}$