

MODULE 3 - RATIONAL EXPRESSIONS

LEARNING OBJECTIVES

In this section, you will:

- Simplify rational expressions.
- Multiply rational expressions.
- Divide rational expressions.
- Add and subtract rational expressions.
- Simplify complex rational expressions.

SIMPLIFY RATIONAL EXPRESSIONS

How To... Given a rational expression, simplify it.



MULTIPLY RATIONAL EXPRESSIONS

How To... Given two rational expressions, multiply them.



DIVIDING RATIONAL EXPRESSIONS

How To... Given two rational expressions, divide them.



ADD OR SUBTRACT RATIONAL EXPRESSIONS

How To... Given two rational expressions, add or subtract them.



SIMPLIFYING COMPLEX RATIONAL EXPRESSIONS

How To... Given a complex rational expression, simplify it.



MODULE 3 - CLASS NOTES

$$1. \frac{y^2+10y+25}{y^2+11y+30}$$

$$2. \frac{12n^2-29n-8}{28n^2-5n-3}$$

$$3. \frac{x^2-x-6}{2x^2+x-6} \cdot \frac{2x^2+7x-15}{x^2-9}$$

$$4. \frac{2d^2+9d-35}{d^2+10d+21} \cdot \frac{3d^2+2d-21}{3d^2+14d-49}$$

$$5. \frac{q^2-9}{q^2+6q+9} \div \frac{q^2-2q-3}{q^2+2q-3}$$

$$6. \frac{18d^2+77d-18}{27d^2-15d+2} \div \frac{3d^2+29d-44}{9d^2-15d+4}$$

$$7. \frac{y+3}{y-2} + \frac{y-3}{y+1}$$

$$8. \frac{x-1}{x+1} - \frac{2x+3}{2x+1}$$

$$9. \frac{\frac{2}{a} + \frac{7}{b}}{b}$$

$$10. \frac{\frac{x}{y} - \frac{y}{x}}{\frac{x}{y} + \frac{y}{x}}$$