

MATH 2A/5A Prep: Fractions and Linear Equations

Facts to Know:

Suppose a, b, c, d are nonzero real numbers,

1. Fractions:

- Never divide by 0

- $\frac{a+b}{c} = \frac{a}{c} + \frac{b}{c}$

- $\frac{1}{a} + \frac{1}{b} \neq \frac{1}{a+b}$

- Common denominator: $\frac{a}{b} + \frac{c}{d} =$

- $\frac{a}{b} = \frac{c}{d}$ is same as:

2. Linear equations:

- Solving linear equations:

- Equation of a line through the point (x_0, y_0) with slope m is:

Examples:

1. Simplify the expression $\frac{4x}{(x+2)^2 + \frac{x^3+x^2}{x+1}}$.

2. Find the intersection of the line $y = 2x + 3$ with the line $y = -x + 4$.