

Week 1

Practice Problems

Expand and Simplify

- $(x + 3)(x + 1)x^2$
- $x^2(x + 3)^3(x - 4)$
- $(x + 2)^3 - 8$

Perform the indicated operations and simplify

- $\frac{1 + \frac{1}{y+3}}{1 - \frac{1}{y+3}}$
- $\frac{1 + \frac{1}{zy}}{zy^2 + y}$
- $\frac{a^2 - b^2}{a + 2b} \cdot \frac{a + b}{a - b}$

Factor the expression

- $x^3 + 2x^2 + x$
- $5ab - 8abc$