

Name: _____

Date: _____

Learning Goal 0.2

Expectations for algebra from previous years.

Example Factor the following expressions.

a. $x^2 + 5x - 24$

b. $x^4 - 16$

c. $x^3 - 7x^2 + 12x$

d. $12x^5 - 19x^3 - 18x$

e. $y^2 - x^2 + 6x - 9$

f. $x^4 + 4$

g. $x^6 - 8y^3$

h. $\frac{128}{\sqrt[3]{x}} - 2x^{17/3}$

i. $x^4 + 4$

Example Simplify the following rational expressions using factoring.

a.
$$\frac{a + \frac{a}{b}}{1 + \frac{1}{b}}$$

b.
$$\frac{x^2 - \frac{1}{x}}{x^3 - \frac{1}{x^3}}$$

c.
$$\frac{x + 7 - \frac{8}{x}}{x + 10 + \frac{16}{x}}$$