# Math 3 **Warm-Up**

5. Which polynomial function has zeros of -4, -1, and 3?

6. What is the remainder when  $(x^3 + 6x^2 + 6x - 14)$  is divided by (x + 2)?

A Rational Expression is an expression that can be written as a ratio of two polynomials.

An excluded value is a number that makes a rational expression undefined.

## A rational expression is in simplest form when the numerator and denominator have no factors in common other than 1.

#### EXCLUDED VOLUES

Find the excluded values, if any, of the expression.

$$\frac{x+2}{6x}$$

$$\frac{7}{3x+12}$$

**3** 
$$\frac{3x}{x^2-4}$$

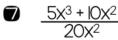
$$\frac{6x-7}{x^2-3x-10}$$

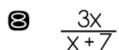
### Dividing out a monomial

Simplify the rational expression, if possible. State the excluded values.



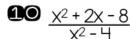






### Dividing out a binomial

Simplify the rational expression, if possible. State the excluded values.



## Recognizing opposites

Simplify the rational expression, if possible. State the excluded values.

