

MasterMath

Mathematical Operations with Rational Expressions

Name _____

Date _____

1. Determine the product, in simplest form.

$$\frac{-3m}{m^2 - 7m + 10} * \frac{m - 5}{3}$$

$$\frac{-m}{m - 2}$$

2. Find the quotient, in simplest form.

$$\frac{z^2 + 3z - 10}{z^2 + 6z - 7} \div \frac{9z^3 - 18z^2}{3z^2 + 18z - 21}$$

$$\frac{z + 5}{3z^2}$$

3. Find the sum, in simplest form.

$$\frac{2c}{c^2 - 1} + \frac{c - 1}{c^2 - 7c + 6}$$

$$\frac{3c^2 - 12c - 1}{(c + 1)(c - 1)(c - 6)}$$

4. Find the difference, in simplest form.

$$\frac{v + 3}{7v} - \frac{3v}{v + 4}$$

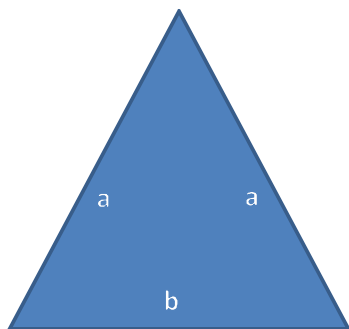
$$\frac{-20v^2 + 7v + 12}{7v(v + 4)}$$

5. Write this expression as a single rational expression.

$$5 \left(\frac{3x}{x - 2} + \frac{4}{x^2 + 6x - 16} \right)$$

$$\frac{15x^2 + 120x + 20}{(x + 8)(x - 2)}$$

6. What is the perimeter of this triangle?



$$a = \frac{12}{3x + 3}$$

$$b = \frac{2x}{x + 1}$$

$$\frac{2(x + 4)}{x + 1}$$