

Only to be used for arranged hours

Math 31

Activity # 15

"Rational Expressions"

Your Name: _____

Directions: Complete this activity.

Look at the errors of each of the following two problems present on page 2. Find the right way to approach the problem and present the solution step-by-step in an organized fashion.

1) $\frac{x^2 - 3x}{x^2 + 2x - 3} - \frac{5}{x - 3}$

2) $\frac{4z - 9}{4z} - \frac{3z - 8}{3z}$

Now try the following problems:

3) Multiply: $\frac{m^2 + m - 6}{2m - 4} \cdot \frac{2m^2 + 5m + 3}{m + 3}$

4) Subtract: $\frac{x}{x^2 + 5x + 6} - \frac{2}{x^2 + 3x + 2}$

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Mixed Review: Perform the indicated operation and, if possible, simplify.

$$5) \frac{8}{9t^3} + \frac{5}{6t^2}$$

$$6) \frac{8}{9t^3} \cdot \frac{5}{6t^2}$$

$$7) \frac{a+3}{15a} \div \frac{a+3}{3a^2}$$

$$8) \frac{a+3}{15a} - \frac{a+3}{3a^2}$$

$$9) \frac{3}{x-4} - \frac{2}{4-x}$$

$$10) \frac{x^2-16}{x^2-x} \cdot \frac{x^2}{x^2-5x+4}$$

$$11) \frac{3u^2-3}{4} \div \frac{4u+4}{3}$$

$$12) \frac{3u^2-3}{4} - \frac{4u+4}{3}$$

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Answers:

1) $\frac{x^3 - 11x^2 - x + 15}{(x+3)(x-1)(x-3)}$	2) $\frac{5}{12z}$	3) $\frac{(2m+3)(m+1)}{2}$
4) $\frac{(x-3)}{(x+3)(x+1)}$	5) $\frac{16+15t}{18t^3}$	6) $\frac{20}{27t^5}$
7) $\frac{a}{5}$	8) $\frac{(a-5)(a+3)}{15a^2}$	9) $\frac{5}{x-4}$
10) $\frac{x(x+4)}{(x-1)(x-1)}$	11) $\frac{9(u-1)}{16}$	12) $\frac{9u^2 - 16u - 25}{12}$