

### Module 7 Group Challenge Problems

The challenge is for you to work the problem out both individually and as a group. Locate your groups question, individually work the solution, as a group decide on the best solution to present to the class, post it to the Module Challenge Problem Solutions Corner, and be ready to answer any questions that your fellow students may have about your group's challenge problem.

#### Group 1 Challenge Problem:

Combine the following three terms into one fraction and then reduce to lowest form:

$$\frac{2xy}{4yx^2} + \frac{3x-3}{2x^2-4x+2} + 2$$

#### Group 2 Challenge Problem:

Combine and fully reduce the following terms:

$$\frac{2a+5}{a^2+5a+4} + \frac{9}{(a+4)(a^2+4a+3)} - \frac{ab}{a^2+7ab+12b}$$

#### Group 3 Challenge Problem:

Solve for  $t$  (note that the following equation contains three fractions):

$$\frac{3}{t+3} - \frac{1}{t} = \frac{5}{2t+6}$$

**STRONG HINT:** Factoring is essential to almost all math problems, and becomes particularly important in solving polynomial fractions (desiring the LCD to be as small as possible). We learned a little about that in the last module.

#### Group 4 Challenge Problem:

Solve for  $x$  (note that the equation contains three fractions):

$$\frac{9}{12x-18} + \frac{4xy}{8xy} = \frac{30x^2-5x}{x(2x-3)(6x-1)}$$