Bellwork Hon Alg 2 Thursday, March 2, 201

Solve each rational equation.

1. $\frac{2x}{x^2-1} = \frac{4}{x^2+2x-3}$

2. $\frac{1}{9x^2} + \frac{5}{36x} = \frac{7}{12} + \frac{3}{2x} + \frac{1}{18}$

Bellwork Hon Alg 2 Thursday, March 2, 201 ANSWERS

Solve each rational equation.

1. $\frac{2x}{x^2-1} = \frac{4}{x^2+2x-3}$

$\frac{x+3}{x+3} \cdot \frac{2x}{(x+1)(x-1)} = \frac{4}{(x+3)(x-1)} \cdot \frac{x+1}{x+1}$

$\frac{2x^2+6x}{(x+3)(x+1)(x-1)} = \frac{4x+4}{(x+3)(x-1)(x+1)}$

$2x^2+6x = 4x+4$

$\frac{2x^2+2x-4}{2} = \frac{0}{2}$

$x^2+x-2=0$

$(x+2)(x-1)=0$

$x=-2$ $\quad x=-2, 1$

2. $36x^2\left(\frac{1}{9x^2} + \frac{5}{36x}\right) = \left(\frac{7}{12} + \frac{3}{2x} + \frac{1}{18}\right)36x^2$

$4+5x = 21x^2+54x+2x^2$

$0 = 23x^2+49x-4$

$b^2-4ac = 2769$

$x = \frac{-49 \pm \sqrt{2769}}{46}$

$x = 0.08, -2.21$