# 11.1.2 Multiplying and Dividing Rational Expressions

I will know how to multiply and divide rational expressions

**#11-14** Simplify

$$\frac{3x^2+11x-4}{2x^2+11x+12} = \frac{(3x-1)(x+4)}{(2x+3)(x+4)} = \frac{3x-1}{2x+3} \quad x \neq -4 \text{ or } -3/2$$

How can you use technology to check results?

expressions are equivalent except @ $x = -4$

Core

#11-15, 16 (a-d)
17 c/d

**#11-15** Calculate answer to each (#11-8)

a) $\frac{2}{3} \cdot \frac{9}{14_7} = \boxed{\frac{3}{7}}$

b) $\frac{3}{5} \div \frac{12}{25}$

$\frac{3}{5} \cdot \frac{25}{12} = \boxed{\frac{5}{4}}$

HW

#11-19 to 25

**#11-16**

a) $\frac{4x+3}{x-5} \cdot \frac{x-5}{x+3} = \boxed{\frac{4x+3}{x+3} \quad x \neq 5 \text{ or } -3}$

b) $\frac{x+2}{9x-1} \div \frac{2x+1}{9x-1} = \frac{x+2}{9x-1} \cdot \frac{9x-1}{2x+1} = \boxed{\frac{x+2}{2x+1} \quad x \neq \frac{1}{9} \text{ or } -\frac{1}{2}}$

c) $\frac{2m+3}{3m-2} \cdot \frac{7+4m}{3+2m} = \boxed{\frac{7+4m}{3m-2} \quad x \neq \frac{2}{3} \text{ or } -\frac{3}{2}}$