11.11.1 Simplify. State any restrictions on the

$$\frac{-27x^3y}{9x^4y}$$

$$\frac{(9)(-3)(x)(x)(x)(y)}{(9)(x)(x)(x)(x)(y)}$$

Step 1: Factor

Step 2: Find discontinuities

$x=0 \quad y=0$

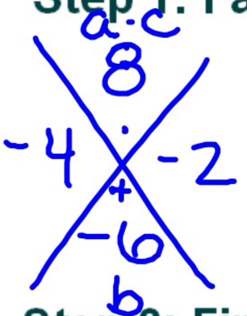
Step 3: Simplify

$$\frac{-3}{x} \quad x\neq 0 \quad y\neq 0$$

11.12.1 **Simplify. State any restrictions on the**

$$\frac{-6-3x}{x^2-6x+8}$$

Step 1: Factor



	x	-4
x	x^2	$-4x$
-2	$-2x$	8

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

Step 2: Find discontinuities

$x-4=0$ $\quad$ $x-2=0$

$x=4$ $\quad$ $x=2$

Step 3: Simplify

$$\frac{-3(2+x)}{(x-4)(x-2)} \quad x\neq 4,\ x\neq 2$$

11.13.1

Simplify. State any restrictions on the

$$\frac{2x^2 - 3x - 2}{x^2 - 5x + 6}$$

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

Step 1: Factor

-4, 1, -4, -3

	$2x$	1
x	$2x^2$	$1x$
-2	$-4x$	-2

6, -2, -3, -5

	x	-2
x	x^2	$-2x$
-3	$-3x$	6

Step 2: Find discontinuities *Denominator*

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

$(x-3)=0$ $x=3$

Step 3: Simplify

$$\frac{2x+1}{x-3} \quad x \neq 2, x \neq 3$$