Example 4:

This is like: $\frac{3}{5}\cdot\frac{12}{20}\cdot\frac{2\cdot1}{3}=\frac{36}{180}=\frac{1}{5}$

Simplify.

a. $\dfrac{(y-5)}{(3y^2-3y)}\cdot\dfrac{2y^2}{(y^2-6y+5)}$

$3y(y-1)\cdot(y-5)(y-1)$

$=\dfrac{2\cdot y\cdot y\cdot(y-5)}{3\cdot y\cdot(y-1)\cdot(y-5)\cdot(y-1)}=\boxed{\dfrac{2y}{3(y-1)^2}}$

b. $\dfrac{(2x+1)}{(2x^2-x-3)}\cdot\dfrac{(2x-3)}{1}$

$(2x-3)(x+1)$

$=\dfrac{(2x+1)\cdot(2x-3)}{(2x-3)\cdot(x+1)}=\boxed{\dfrac{2x+1}{x+1}}$

Example 5:

This is like: $\frac{12}{5}\div\frac{3}{10}=\frac{12}{5}\cdot\frac{10}{3}=\frac{120}{15}=8$

Simplify.

a. $\dfrac{(n-2)}{2n}\div\dfrac{(n-2)}{(n+5)}$

$=\dfrac{(n-2)}{2n}\cdot\dfrac{(n+5)}{(n-2)}=\dfrac{(n-2)\cdot(n+5)}{2\cdot n\cdot(n-2)}$

$=\boxed{\dfrac{n+5}{2n}}$

b. $\dfrac{(5x^2-20x)}{(x+5)}\div\dfrac{(x-4)}{1}$

$=\dfrac{(5x^2-20x)}{(x+5)}\cdot\dfrac{1}{(x-4)}$

$=\dfrac{5x\cdot(x-4)}{(x+5)\cdot(x-4)}=\boxed{\dfrac{5x}{(x+5)}}$