

$$= \frac{(12/51)(13/52)}{(12/51)(13/52) + (13/51)(39/52)}$$

swap numbers use \rightarrow

$$\left(\frac{a}{b} \right) \left(\frac{c}{d} \right) = \left(\frac{c}{b} \right) \left(\frac{a}{d} \right)$$

\leftarrow something from high school

$$= \frac{(13/51)(12/52)}{(13/51)(12/52) + (13/51)(39/52)}$$

\nwarrow factor this out \nearrow

$$= \frac{(13/51)(12/52)}{(13/51) \left(12/52 + \frac{39}{52} \right)}$$

$$= \frac{\cancel{(13/51)}(12/52)}{\cancel{(13/51)}(51/52)} = \frac{(12/\cancel{52})}{(51/\cancel{52})}$$

$$= {}^{12}/_{51} \quad \text{once again!}$$