Multiplying Fractions--The Cancellation Method

You already learned about multiplying fractions, but this is a short cut to save time. Remember, this only works when multiplying (not for adding and subtracting).

eg. $\dfrac{\cancel{5}}{\cancel{18}} \times \dfrac{\cancel{9}}{\cancel{20}} \times \dfrac{\cancel{10}}{\cancel{3}} \times \dfrac{\cancel{15}}{\cancel{6}}$

Now, reduce the denominators with the numerators. It does not matter if they are across from each other or above each other.

$\dfrac{1}{2} \times \dfrac{1}{4} \times \dfrac{5}{1} \times \dfrac{5}{3}$

$= \dfrac{25}{24}$ Notice that this number is already reduced!

$= \boxed{1\dfrac{1}{24}}$

e.g. $\dfrac{-3}{\cancel{6}_1} \times \dfrac{\cancel{6}^1}{9} \times \dfrac{10}{3} \times \dfrac{20}{7}$

$\dfrac{-\cancel{3}^1}{7} \times \dfrac{1}{9} \times \dfrac{10}{\cancel{3}_1} \times \dfrac{20}{7}$

$-\dfrac{1}{1} \times \dfrac{1}{9} \times \dfrac{10}{1} \times \dfrac{20}{7}$

*No numerator can be reduced with any denominator so now multiply straight across

$= \dfrac{-200}{63}$ ⟵ Notice this fraction is already in lowest terms.

$= \boxed{-3\dfrac{11}{63}}$