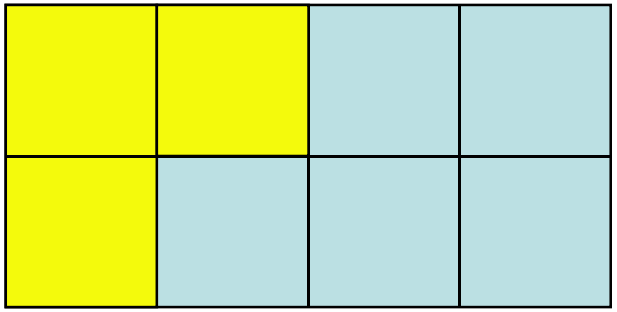
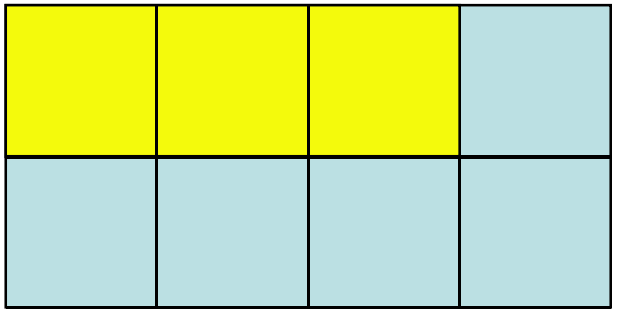


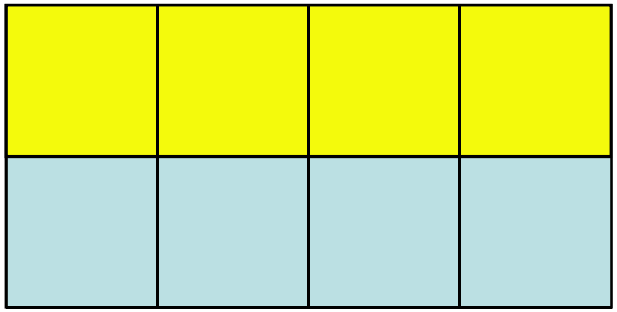
$\frac{3}{8}$

Adding and Subtracting Fractions

Adding Fractions with common denominators

$$\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$$





Adding Fractions with different denominators

Problem:

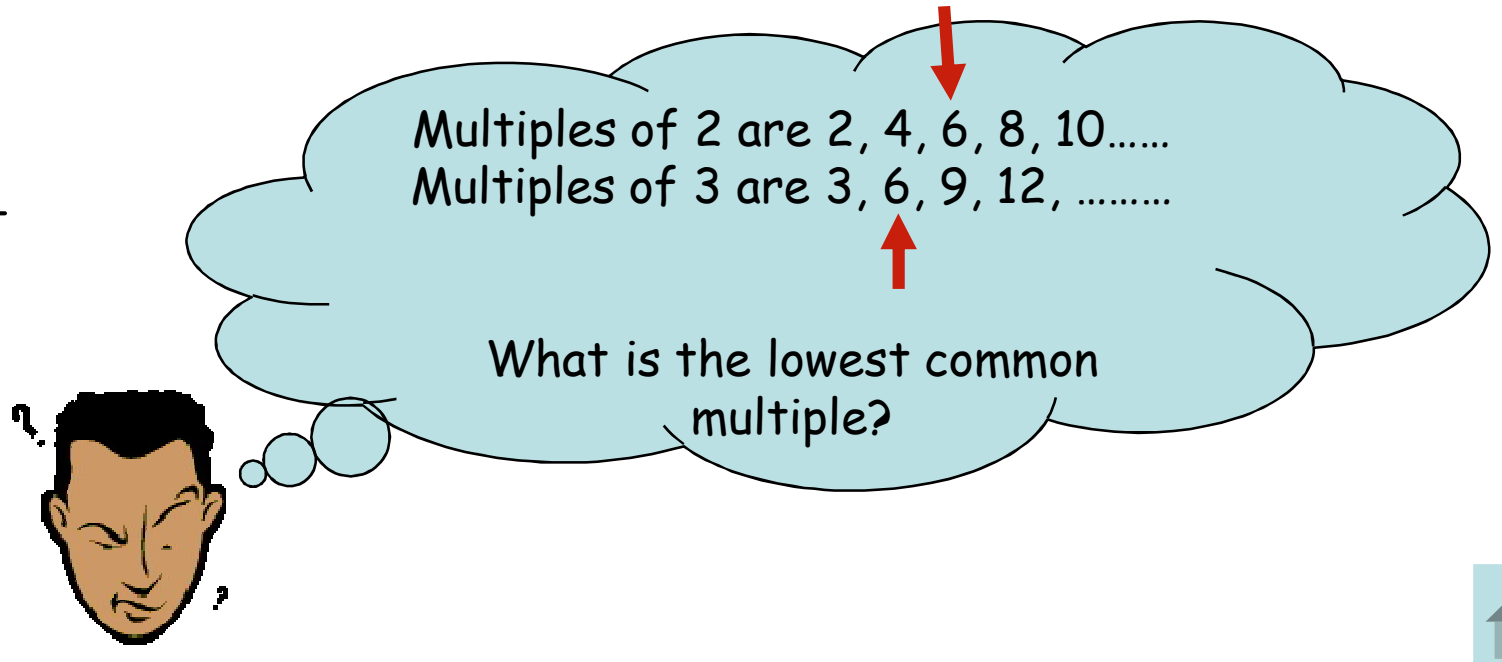
You can't add fractions with different denominators without getting them ready first. They will be ready to add when they have common denominators

Solution:
Turn fractions into equivalent fractions with a common denominator that is find the Lowest Common Multiple (LCM) of the two denominators

Finding the Lowest Common Denominator

- The lowest common multiple of two numbers is the lowest number in BOTH lists of multiples

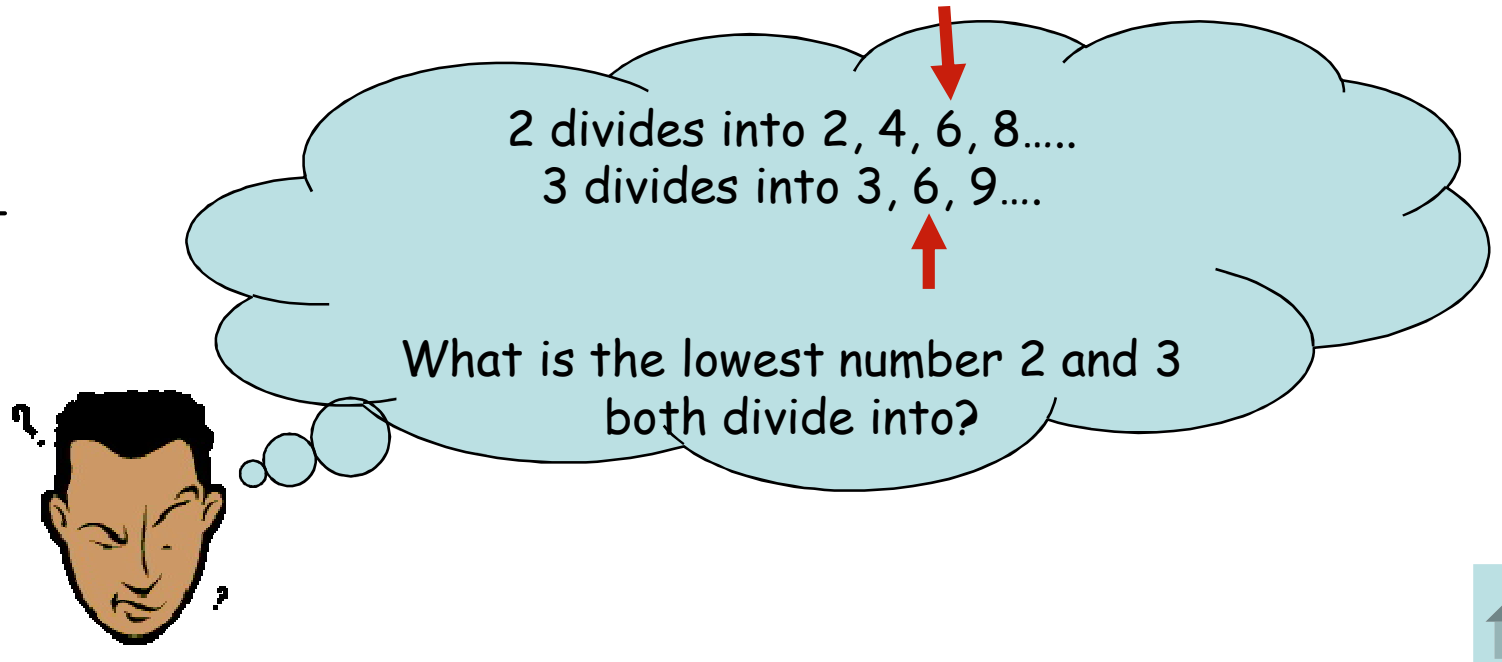
$$\frac{1}{2}+\frac{1}{3}$$



Finding the Lowest Common Denominator

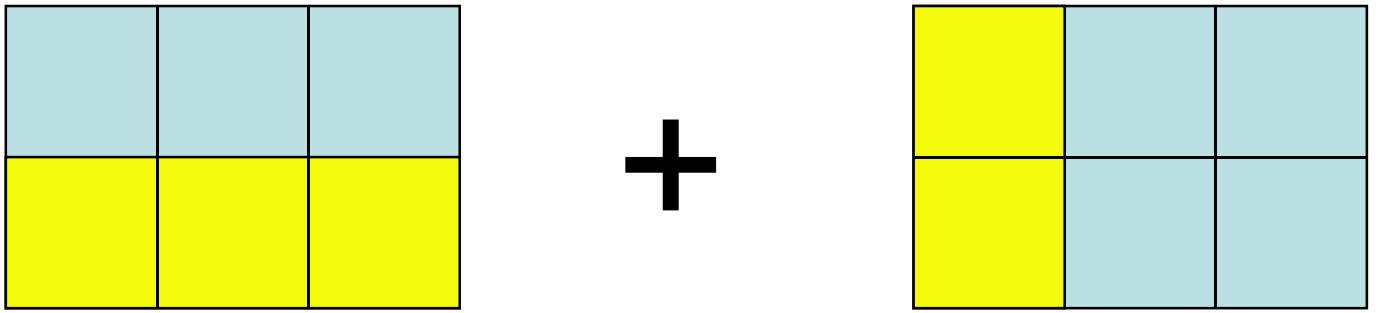
- The lowest common multiple of two numbers is the lowest number they will BOTH divide into

$$\frac{1}{2}+\frac{1}{3}$$



$$\frac{1}{2}+\frac{1}{3}$$

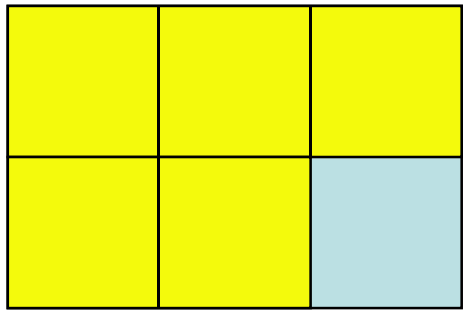
You can't add fractions with different denominators



The Lowest Common Multiple of 2 and 3 is 6 so turn all fractions into sixths

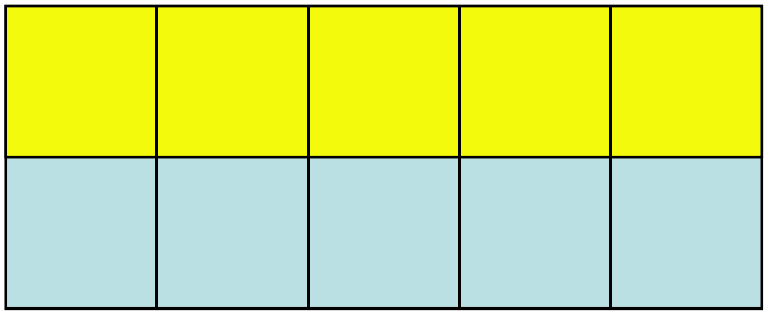
$$\frac{1}{2}\times\frac{3}{3}+\frac{1}{3}\times\frac{2}{2}=\frac{3}{6}+\frac{2}{6}=\frac{5}{6}$$

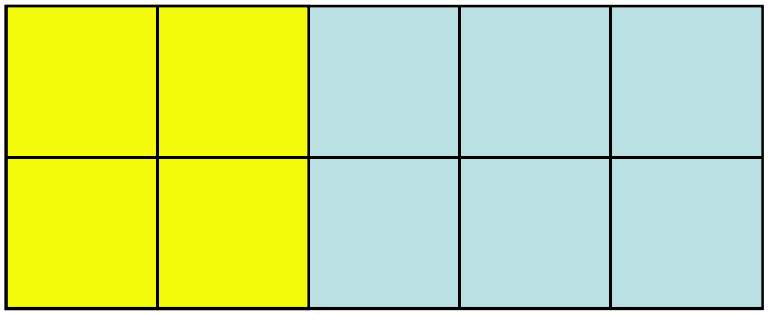
Special form of 1



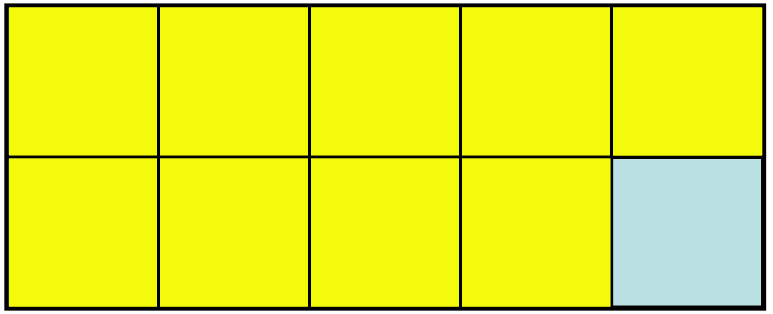
$$\frac{1}{2} + \frac{2}{5}$$

Lowest common denominator is 10 so make all fractions tenths

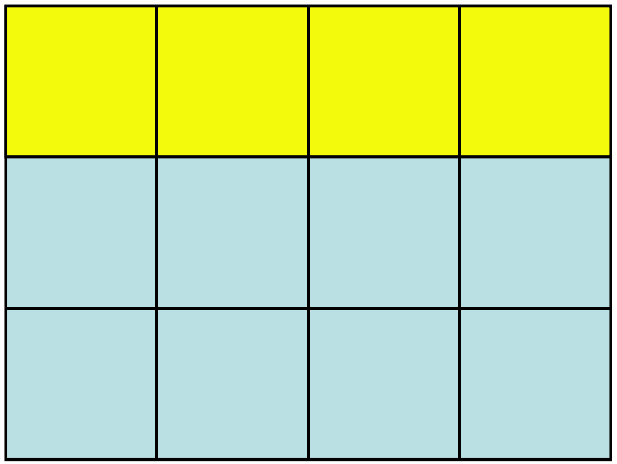


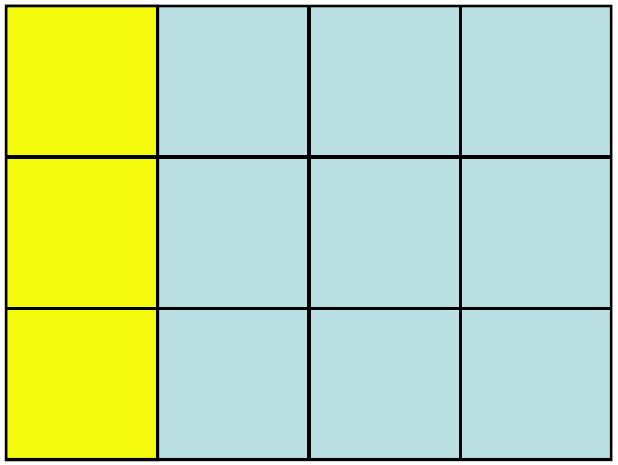


$$\frac{5}{10} + \frac{4}{10} = \frac{9}{10}$$



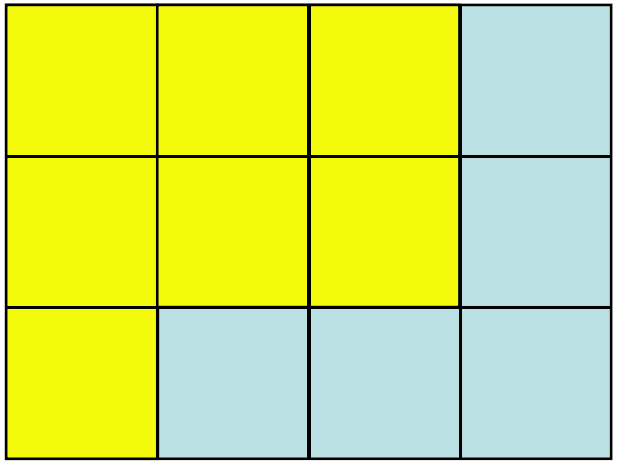
$$\frac{1}{3} + \frac{1}{4}$$



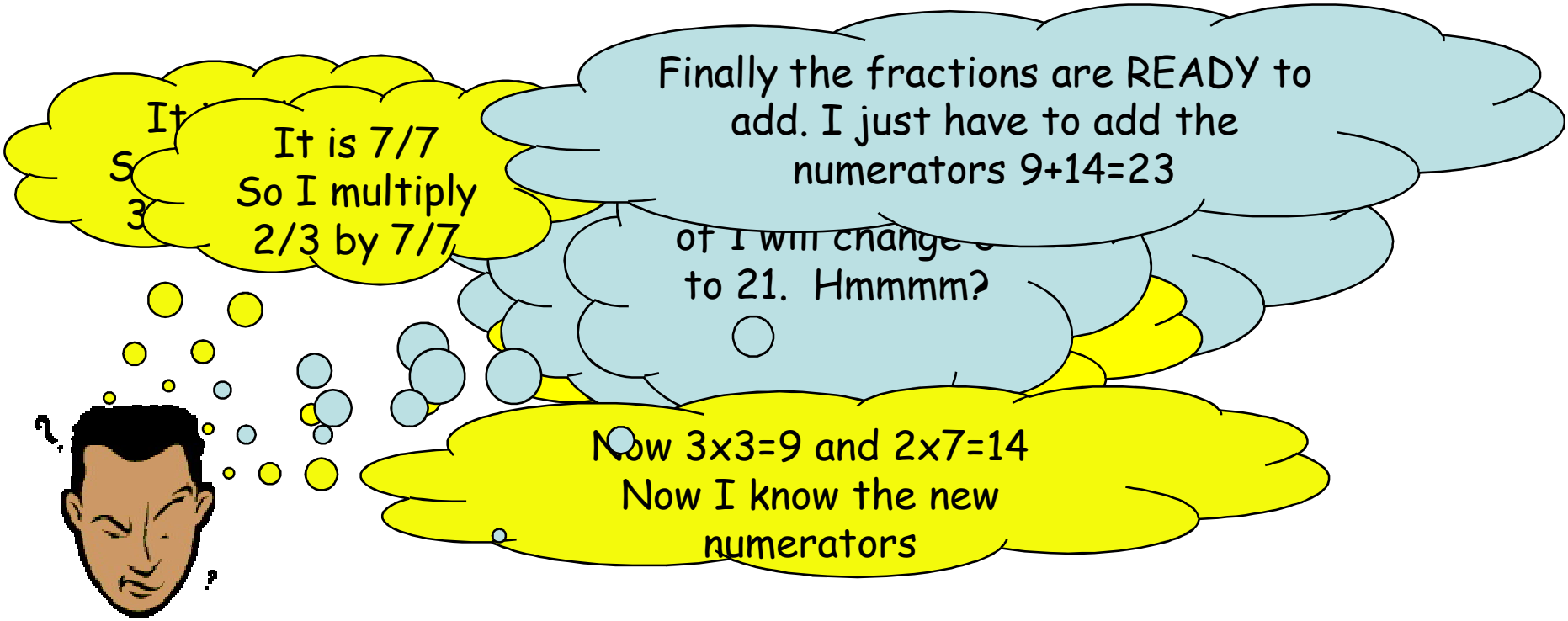


Turn both fractions into twelfths

$$\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$$



$$\frac{3}{3}\times\frac{3}{7}+\frac{2}{3}\times\frac{7}{7}=\frac{?}{21}+\frac{?}{21}=\frac{9}{21}+\frac{14}{21}=\frac{23}{21}=1\frac{2}{21}$$



Adding Mixed Numbers

- Separate the fraction and the whole number sections, add them separately and recombine at the end

$$2\frac{1}{2} + 5\frac{1}{3} = \quad + \quad + \quad +$$

$$= 7 + \frac{5}{6}$$

$$= 7\frac{5}{6}$$