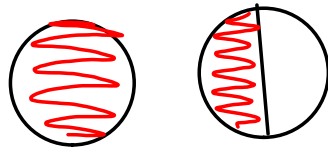


## Section 5.6 - Adding mixed numbers

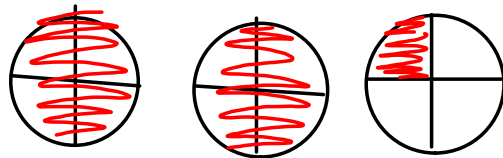
method 1 = fraction circles

\* model a mixed number:

example:  $1\frac{1}{2}$



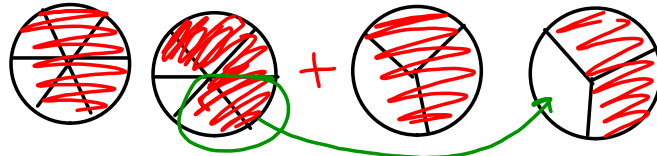
example:  $2\frac{1}{4}$



\* Add mixed numbers using fraction circles:

example ①:  $1\frac{5}{6} + 1\frac{2}{3}$

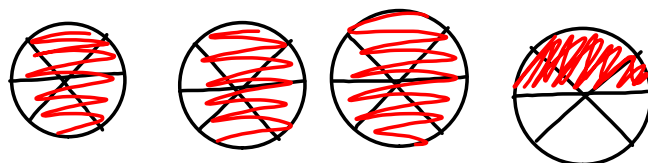
step 1: model both mixed numbers:



Step 2: make as many whole circles as possible

→ 2 pieces of  $\frac{5}{6}$  circle can be moved to our  $\frac{2}{3}$  circle to make a whole

→ break up circles into 6 pieces



$$= 3\frac{3}{6} = 3\frac{1}{2}$$

method 2 - Adding mixed numbers algebraically  
 ↳ 2 ways to do this!

Ⓐ change both mixed numbers to improper fractions

example ①:  $2\frac{3}{4} + 1\frac{2}{7}$

step 1:  $= \frac{11}{4} + \frac{9}{7}$

\* to change from a mixed # to an improper fraction you: multiply denominator by the whole # (side #) then add the numerator, all over the original denominator.

So  $\frac{11}{4} + \frac{9}{7}$

step 2: get a common denominator

4: 4, 8, 12, 16, 20, 24, 28, 32, 36...

7: 7, 14, 21, 28

$= \frac{77}{28} + \frac{36}{28}$

$= \frac{113}{28}$

step 3: change back to a mixed number and reduce if possible

$= 4\frac{1}{28}$

Ⓑ Add by not changing to improper numbers

example:  $2\frac{3}{4} + 1\frac{2}{7}$

step 1: add whole #'s  
 add fractions

whole #'s:  $2 + 1 = 3$

fractions:  $\frac{3}{4} + \frac{2}{7}$  CD = 28

$= \frac{21}{28} + \frac{8}{28}$

$= \frac{29}{28}$

$= 1\frac{1}{28}$

step 2: combine your answers

3 and  $1\frac{1}{28}$

$= 4\frac{1}{28}$