

# M3.L10 - Adding Fractions & Mixed Numbers

AP

The recipe makes  $3\frac{1}{2}$  cups of punch.

1-	?	-
$\frac{1}{3}$	$\frac{3}{4}$	$\frac{2}{3}$
OJ	AJ	Soda

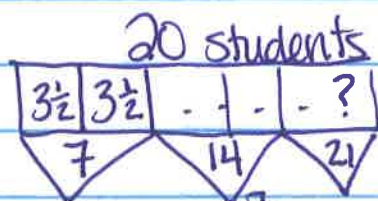
$$\frac{1}{3} + \frac{3}{4} + \frac{2}{3} + \frac{3}{4}$$

$$\left( \frac{1}{3} + \frac{2}{3} \right) + \left( \frac{3}{4} + \frac{3}{4} \right)$$

$$1 + \frac{3}{3} + \frac{6}{4}$$

$$2 + 1\frac{3}{4}$$

$$3\frac{3}{4} = \boxed{3\frac{1}{2}}$$



$$3\frac{1}{2} = \frac{7}{2}$$

$$1 \text{ unit} = \frac{7}{2}$$

$$2 \text{ units} = \frac{14}{2} = 7 \text{ cups}$$

### M3·L10 - Adding Fractions and Mixed Numbers

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

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

$$2\frac{4}{5} + 1\frac{1}{2}$$

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

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

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

$$3 + \left(\frac{1 \times 2}{5 \times 2}\right) + \left(\frac{1 \times 5}{2 \times 5}\right)$$

$$3 + \frac{2}{10} + \frac{5}{10}$$

$$3\frac{7}{10}$$

Commutative  
Property of  
Addition -  
add numbers  
in any order  
= sum

$$2\frac{4}{5} + 1\frac{1}{2}$$

$$3 + \frac{4}{5} + \frac{1}{2}$$

$$3 + \left(\frac{4 \times 2}{5 \times 2}\right) + \left(\frac{1 \times 5}{2 \times 5}\right)$$

$$3 + \frac{8}{10} + \frac{5}{10}$$

$$3 + \frac{13}{10} = 3 + \boxed{\frac{10}{10}} + \frac{3}{10}$$

$$= 4\frac{3}{10}$$

$$3\frac{5}{7} + 6\frac{2}{3}$$

$$3: 3, 6, 9, 12, 15, 18, \textcircled{21}$$

$$7: 7, 14, \textcircled{21}$$

$$9 + \frac{5}{7} + \frac{2}{3}$$

$$9 + \left(\frac{5 \times 3}{7 \times 3}\right) + \left(\frac{2 \times 7}{3 \times 7}\right)$$

$$9 + \frac{15}{21} + \frac{14}{21}$$

$$9 + \frac{29}{21}$$

$$9 + \boxed{\frac{21}{21}} + \frac{8}{21}$$

$$10\frac{8}{21}$$

$$15\frac{5}{6} + 7\frac{9}{10}$$

6 6, 12, 18, 24, 30

10: 10, 20, 30, 40, 50, 60

$$22 + \frac{5}{6} + \frac{9}{10}$$

$$22 + \left(\frac{5 \times 5}{6 \times 5}\right) + \left(\frac{9 \times 3}{10 \times 3}\right)$$

$$22 + \frac{25}{30} + \frac{27}{30}$$

$$22 + \frac{52}{30} = 22 + \frac{30}{30} + \frac{22}{30}$$

$$23 \frac{22}{30} \div 2 = 23 \frac{11}{15}$$