Name _____ Date _____

1. Subtract.

a) $3\frac{1}{4} - 2\frac{1}{3} =$

$= 1\frac{1}{4} - \frac{1}{3}$

$= \frac{12}{12} + \frac{3}{12} - \frac{4}{12} = \frac{11}{12}$

b) $3\frac{2}{3} - 2\frac{3}{4} =$

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

$= \frac{12}{12} + \frac{8}{12} - \frac{9}{12} = \frac{11}{12}$

c) $6\frac{1}{5} - 4\frac{1}{4} =$

$= 2\frac{1}{5} - \frac{1}{4}$

$= 1 + \frac{3}{4} + \frac{1}{5} = 1 + \frac{15}{20} + \frac{4}{20} = 1\frac{19}{20}$

d) $6\frac{3}{5} - 4\frac{3}{4} =$

$= 2\frac{3}{5} - \frac{3}{4}$

$= 1\frac{8}{5} - \frac{3}{4} = 1\frac{32}{20} - \frac{15}{20} = 1\frac{17}{20}$

e) $5\frac{2}{7} - 4\frac{1}{3} =$

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

$\frac{3}{3} + \frac{2}{7} - \frac{1}{3} = \frac{2}{3} + \frac{2}{7} = \frac{14}{21} + \frac{6}{21} = \frac{20}{21}$

f) $8\frac{2}{3} - 3\frac{5}{7} =$

$= 5\frac{2}{3} - \frac{5}{7}$

$= 4\frac{5}{3} - \frac{5}{7} = 4\frac{35}{21} - \frac{15}{21} = 4\frac{20}{21}$

g) $18\frac{3}{4} - 5\frac{7}{8} =$

$= 13\frac{3}{4} - \frac{7}{8}$

$= 12\frac{7}{4} - \frac{7}{8} = 12\frac{14}{8} - \frac{7}{8} = 12\frac{7}{8}$

h) $17\frac{1}{5} - 2\frac{5}{8} =$

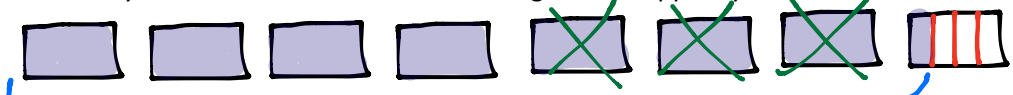
$= 15\frac{1}{5} - \frac{5}{8}$

$= 14\frac{6}{5} - \frac{5}{8} = 14\frac{48}{40} - \frac{25}{40} = 14\frac{23}{40}$

2. Tony wrote the following:

$$7\frac{1}{4} - 3\frac{3}{4} = 4\frac{1}{4} - \frac{3}{4}$$

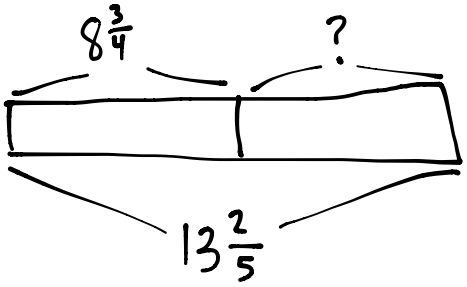
Is Tony's statement correct? Draw a diagram to support your answer.



$7\frac{1}{4} - 3\frac{3}{4} = 4\frac{1}{4} - \frac{3}{4}$

Tony is correct because the drawing shows that we are allowed to subtract the whole numbers before subtracting 3/4.

3. Ms. Sanger blended $8\frac{3}{4}$ gallons of iced tea with some lemonade for a picnic. If there were $13\frac{2}{5}$ gallons in the mixture, how many gallons of lemonade did she use?



$13\frac{2}{5} - 8\frac{3}{4}$

$5\frac{2}{5} - \frac{3}{4}$

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

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

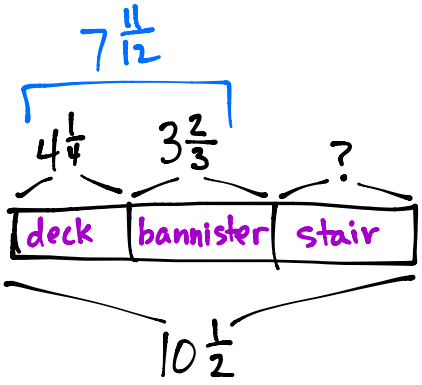
$4 + \frac{5}{20} + \frac{8}{20}$

$4\frac{13}{20}$

She used $4\frac{13}{20}$ gallons of lemonade.

4. A carpenter has a $10\frac{1}{2}$ foot wood plank. He cuts off $4\frac{1}{4}$ feet to replace the slat of a deck and $3\frac{2}{3}$ feet to repair a bannister. He uses the rest of the plank to fix a stair. How many feet of wood does the carpenter use to fix the stair?

$4\frac{1}{4} + 3\frac{2}{3} = 7\frac{1}{4} + \frac{2}{3} = 7\frac{3}{12} + \frac{8}{12} = 7\frac{11}{12}$



$10\frac{1}{2} - 7\frac{11}{12} = 3\frac{1}{2} - \frac{11}{12}$

$= 2 + \frac{12}{12} + \frac{6}{12} - \frac{11}{12}$

$= 2\frac{7}{12}$

The carpenter has $2\frac{7}{12}$ feet of wood to fix the stairs.