SOLUTIONS

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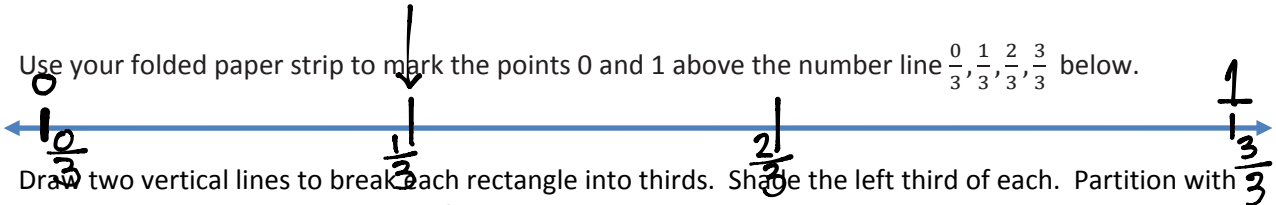
GRADE 5 • MODULE 3

Addition and Subtraction of Fractions

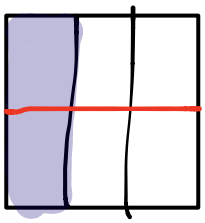
SOLUTIONS

Name _____ Date _____

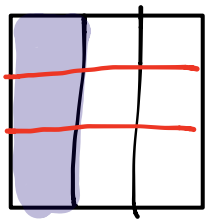
1. Use your folded paper strip to mark the points 0 and 1 above the number line $\frac{0}{3}, \frac{1}{3}, \frac{2}{3}, \frac{3}{3}$ below.



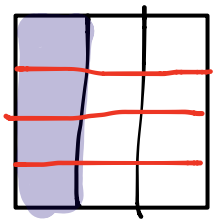
Draw two vertical lines to break each rectangle into thirds. Shade the left third of each. Partition with horizontal lines to show equivalent fractions. Use multiplication to show the change in the units.



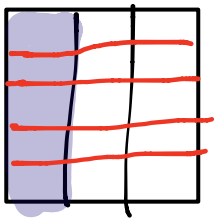
$\frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$



$\frac{1}{3} = \frac{1 \times 3}{3 \times 3} = \frac{3}{9}$

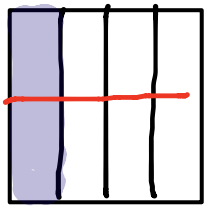


$\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$

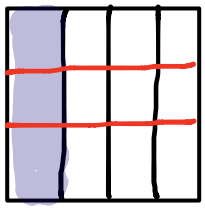


$\frac{1}{3} = \frac{1 \times 5}{3 \times 5} = \frac{5}{15}$

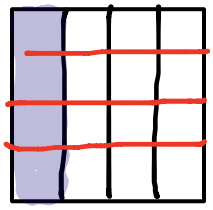
2. Use your folded paper strip to mark the points 0 and 1 above the number line $\frac{0}{4}, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}$ below. Follow the same pattern as Problem 1 but with fourths.



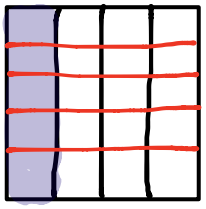
$\frac{1}{4} = \frac{1 \times 2}{4 \times 2} = \frac{2}{8}$



$\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$

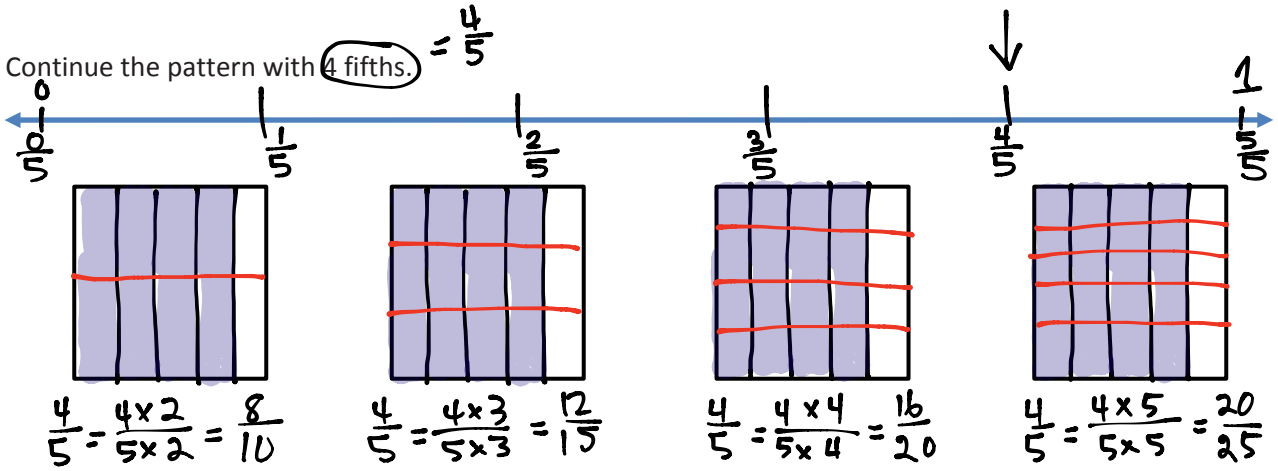


$\frac{1}{4} = \frac{1 \times 4}{4 \times 4} = \frac{4}{16}$

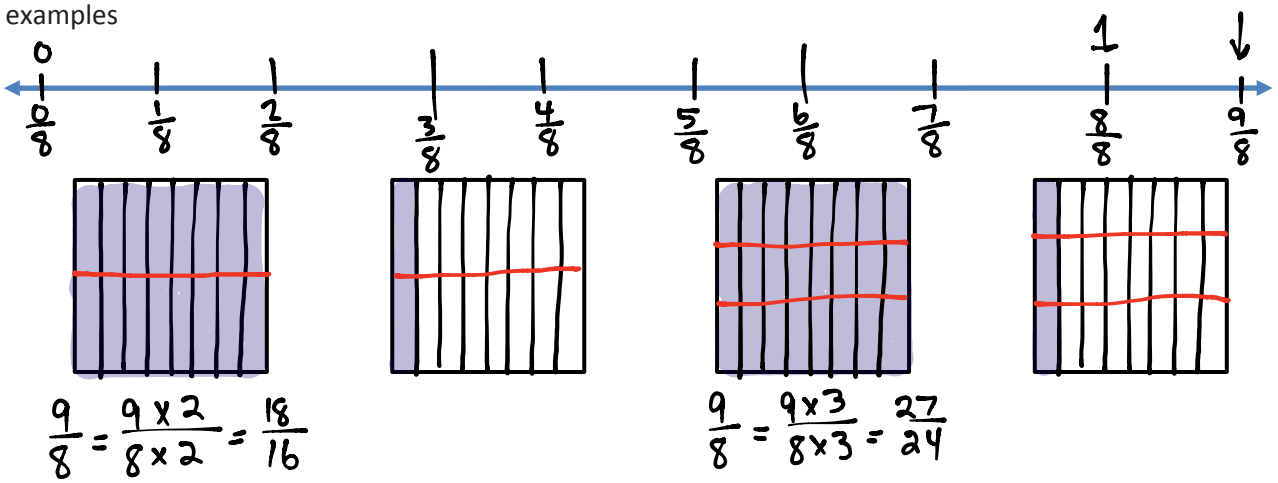


$\frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20}$

3. Continue the pattern with 4 fifths. $= \frac{4}{5}$



4. Continue the process with 9 eighths. Estimate to make the points on the number line. Do just 2 examples



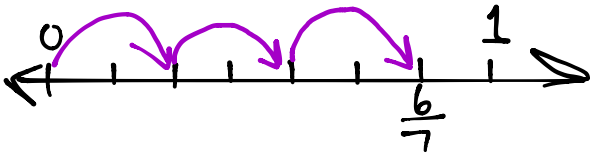
Name _____ Date _____

1) Show each expression on a number line. Solve.

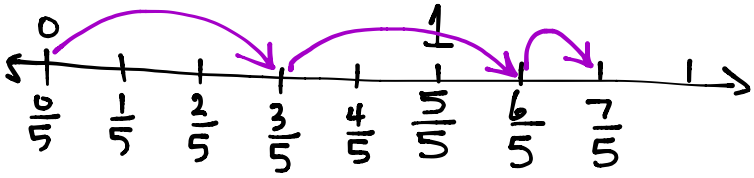
a) $\frac{4}{9}+\frac{1}{9}$

b) $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4} = \frac{4}{4} = 1$

c) $\frac{2}{7}+\frac{2}{7}+\frac{2}{7} = \frac{6}{7}$

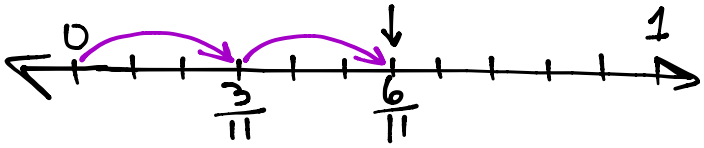


d) $2 \times \frac{3}{5}+\frac{1}{5} = \frac{7}{5} = \frac{5}{5}+\frac{2}{5} = 1\frac{2}{5}$

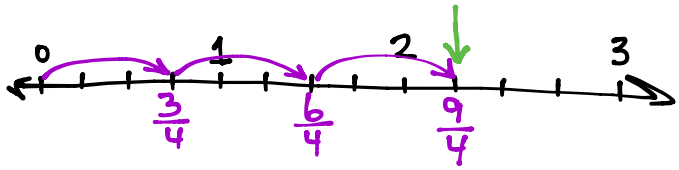


2) Express each fraction as the sum of two or three equal fractional parts. Rewrite each as a multiplication equation. Show letter a on a number line.

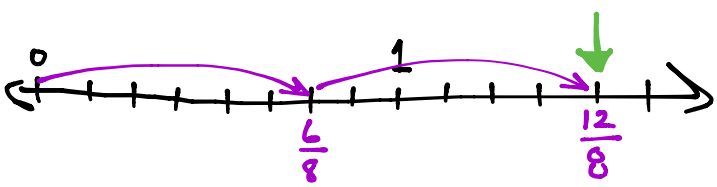
a) $\frac{6}{11} = \frac{3}{11}+\frac{3}{11} = 2 \times \frac{3}{11}$



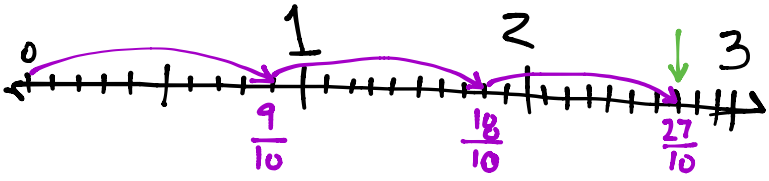
b) $\frac{9}{4} = \frac{3}{4}+\frac{3}{4}+\frac{3}{4} = 3 \times \frac{3}{4}$



c) $\frac{12}{8} = \frac{6}{8}+\frac{6}{8} = 2 \times \frac{6}{8}$



d) $\frac{27}{10} = \frac{9}{10}+\frac{9}{10}+\frac{9}{10} = 3 \times \frac{9}{10}$



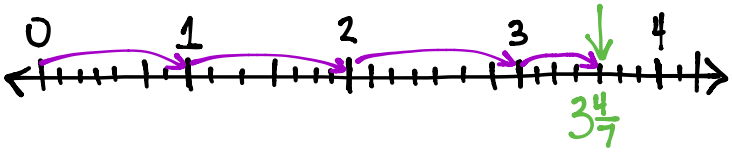
3) Express each of the following as the sum of a whole number and a fraction. Show c) and d) on number lines.

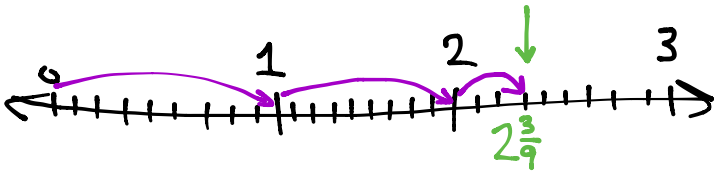
a) $\frac{9}{5} = \frac{5}{5} + \frac{4}{5} = 1 + \frac{4}{5}$

b) $\frac{7}{2} = \frac{2}{2} + \frac{2}{2} + \frac{2}{2} + \frac{1}{2}$
$= 1 + 1 + 1 + \frac{1}{2}$
$= 3 + \frac{1}{2}$

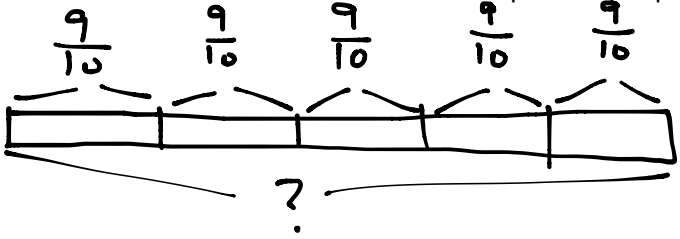
c) $\frac{25}{7} = \frac{7}{7} + \frac{7}{7} + \frac{7}{7} + \frac{4}{7}$
$= 3 + \frac{4}{7}$

d) $\frac{21}{9} = \frac{9}{9} + \frac{9}{9} + \frac{3}{9} = 2 + \frac{3}{9}$





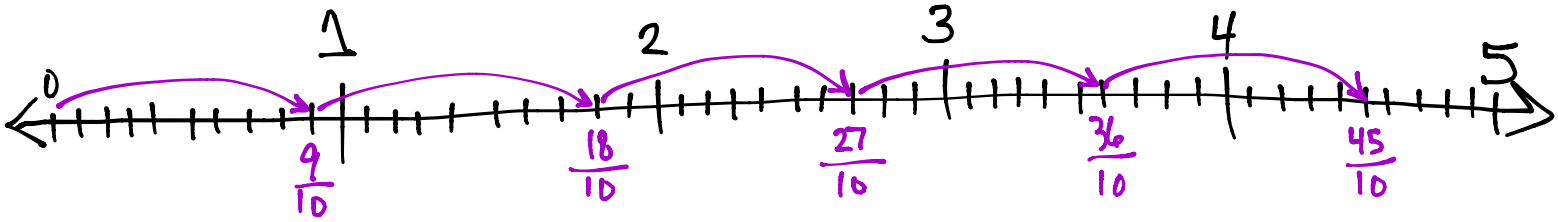
4) Natalie sawed five boards of equal length to make a stool. Each was 9 tenths of a meter long. How many meters of board did she saw? Express your answer as the sum of a whole number and the remaining fractional units. Draw a number line to represent the problem.



$\frac{9}{10} + \frac{9}{10} + \frac{9}{10} + \frac{9}{10} + \frac{9}{10} = \frac{45}{10}$

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

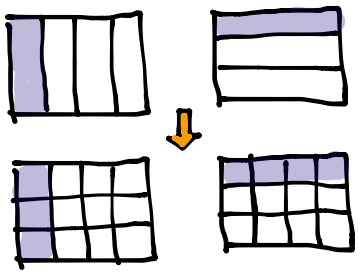
$= 4 + \frac{5}{10}$



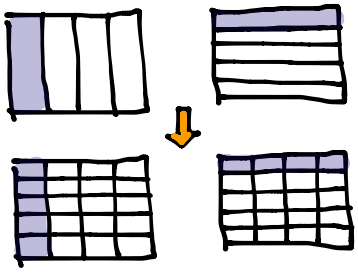
Name _____ Date _____

1. For the following problems, draw a picture using the rectangular fraction model and write the answer. Simplify your answer.

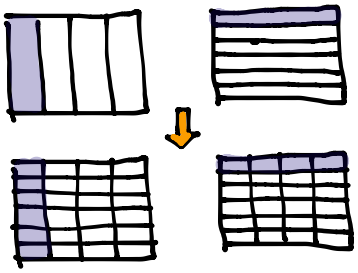
a) $\frac{1}{4}+\frac{1}{3}=\frac{3}{12}+\frac{4}{12}=\frac{7}{12}$



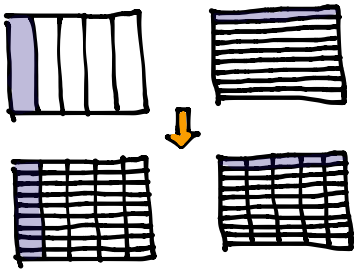
b) $\frac{1}{4}+\frac{1}{5}=\frac{5}{20}+\frac{4}{20}=\frac{9}{20}$



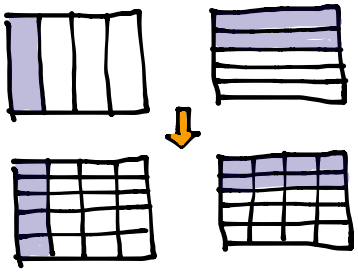
c) $\frac{1}{4}+\frac{1}{6}=\frac{6}{24}+\frac{4}{24}=\frac{10}{24}$



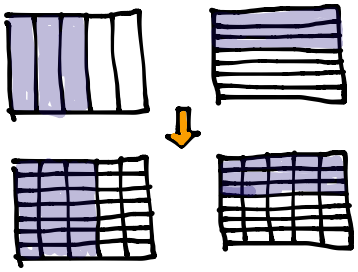
d) $\frac{1}{5}+\frac{1}{9}=\frac{9}{45}+\frac{5}{45}=\frac{14}{45}$



e) $\frac{1}{4}+\frac{2}{5}=\frac{5}{20}+\frac{8}{20}=\frac{13}{20}$

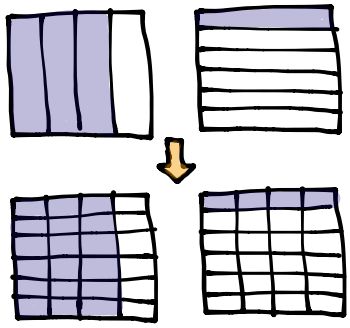


f) $\frac{3}{5}+\frac{3}{7}=\frac{21}{35}+\frac{15}{35}=\frac{36}{35}$



Solve the following problems. Draw a picture and/or write the number sentence that proves the answer.

2. Rajesh jogged 3/4 mile, and then walked 1/6 mile to cool down. How far did he travel?

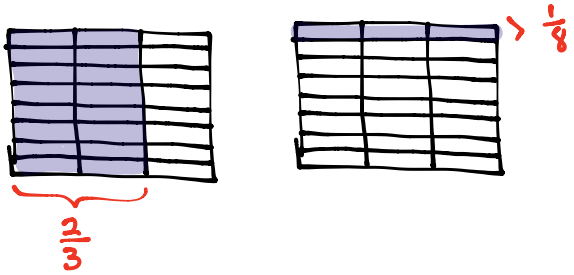


$\frac{3}{4} + \frac{1}{6} = \frac{18}{24} + \frac{4}{24} = \frac{22}{24}$

3. Cynthia completed 2/3 of the items on her to-do list in the morning, and finished 1/8 of the items during her lunch break. How much of her to-do list is finished by the end of her lunch break? (Bonus: How much of her to-do list does she still have to do after lunch?)

$\frac{2}{3} + \frac{1}{8} = \frac{16}{24} + \frac{3}{24} = \frac{19}{24}$

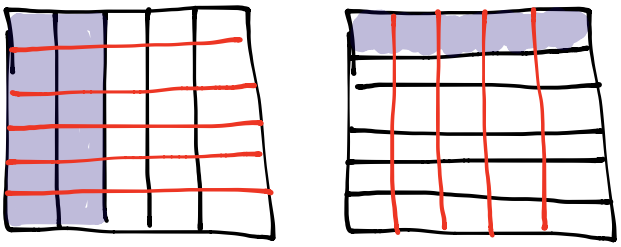
Bonus: She still has $\frac{5}{24}$ of her list to do after lunch.



4. Sam read 2/5 of her book over the weekend, and 1/6 of it on Monday. What fraction of the book has she read? What fraction of the book is left?

$\frac{2}{5} + \frac{1}{6} = \frac{12}{30} + \frac{5}{30} = \frac{17}{30}$

$\begin{array}{r} 30 \\ -\,17 \\ \hline 13 \end{array}$

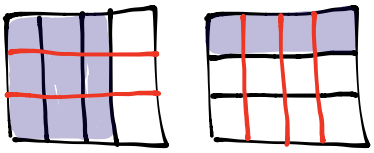


Sam read $\frac{17}{30}$ of the book. He still has $\frac{13}{30}$ of the book left over.

Name _____ Date _____

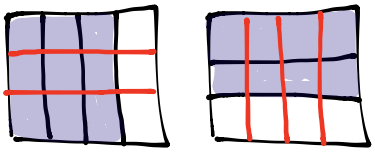
1. Directions: For the following problems, draw a picture using the rectangular fraction model and write the answer. When possible, write your answer as a mixed number.

a) $\frac{3}{4}+\frac{1}{3}=\frac{9}{12}+\frac{4}{12}=\frac{13}{12}=1\frac{1}{12}$



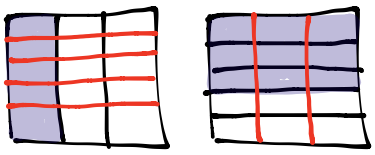
$\frac{12}{12}$ $\frac{1}{12}$

b) $\frac{3}{4}+\frac{2}{3}=\frac{9}{12}+\frac{8}{12}=\frac{17}{12}=1\frac{5}{12}$

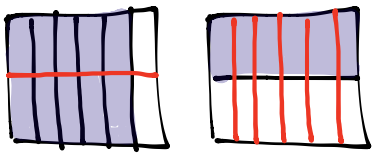


$\frac{12}{12}$ $\frac{5}{12}$

c) $\frac{1}{3}+\frac{3}{5}=\frac{5}{15}+\frac{9}{15}=\frac{14}{15}$

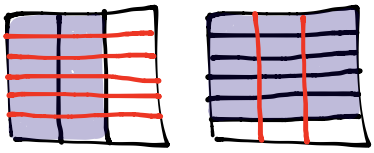


d) $\frac{5}{6}+\frac{1}{2}=\frac{10}{12}+\frac{6}{12}=\frac{16}{12}=1\frac{4}{12}$ or $1\frac{1}{3}$



$\frac{12}{12}$ $\frac{4}{12}$

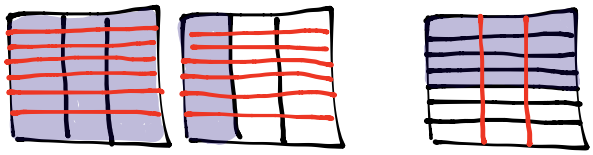
e) $\frac{2}{3}+\frac{5}{6}=\frac{12}{18}+\frac{15}{18}=\frac{27}{18}=1\frac{9}{18}$



$\frac{18}{18}$ $\frac{9}{18}$

$1\frac{9}{18}=1\frac{1}{2}$

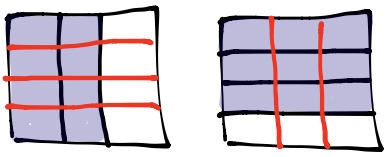
f) $\frac{4}{3}+\frac{4}{7}=\frac{28}{21}+\frac{12}{21}=\frac{40}{21}=\frac{21}{21}+\frac{19}{21}=1\frac{19}{21}$



Solve the following problems. Draw a picture and/or write the number sentence that proves the answer. Simplify your answer.

2. Sam made 2/3 liter of punch and 3/4 liter of tea to take to a party. How many liters of beverages did Sam bring to the party?

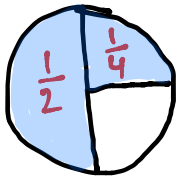
$$\frac{2}{3} + \frac{3}{4} = \frac{8}{12} + \frac{9}{12} = \frac{17}{12} = \frac{12}{12} + \frac{5}{12} = 1\frac{5}{12}$$



Sam brought $1\frac{5}{12}$ liters of beverages to the party.

3) Mr. Sinofsky used 5/8 of a tank of gas on a trip to visit relatives for the weekend and another half of a tank commuting to work the next week. He then took another weekend trip and used 1/4 tank of gas. How many tanks of gas did Mr. Sinofsky use altogether?

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



$$\frac{5}{8} + \frac{3}{4} = \frac{20}{32} + \frac{24}{32} = \frac{44}{32} = \frac{32}{32} + \frac{12}{32} = 1\frac{12}{32}$$

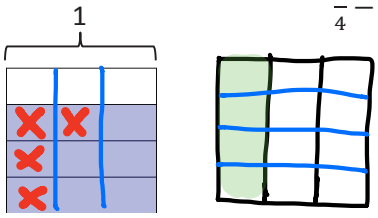
$$1\frac{12}{32} = 1\frac{6}{16} = 1\frac{3}{8}$$

Mr. Sinofsky used $1\frac{3}{8}$ tanks of gas.

Name _____ Date _____

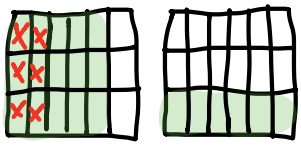
1. The picture below shows $\frac{3}{4}$ of the rectangle shaded. Use the picture to show how to create an equivalent fraction for $\frac{3}{4}$, and then subtract $\frac{1}{3}$.

$\frac{3}{4} - \frac{1}{3} = \frac{9}{12} - \frac{4}{12} = \frac{5}{12}$

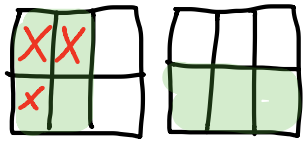


2. Find the difference. Use a rectangular fraction model to find common denominators. Simplify your answer, if possible.

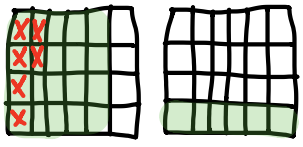
a. $\frac{5}{6} - \frac{1}{3} = \frac{15}{18} - \frac{6}{18} = \frac{9}{18} = \frac{1}{2}$



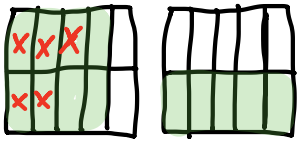
b. $\frac{2}{3} - \frac{1}{2} = \frac{4}{6} - \frac{3}{6} = \frac{1}{6}$



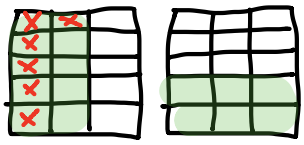
c. $\frac{5}{6} - \frac{1}{4} = \frac{20}{24} - \frac{6}{24} = \frac{14}{24} = \frac{7}{12}$



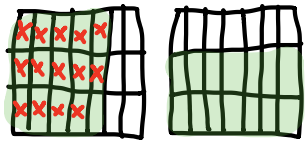
d. $\frac{4}{5} - \frac{1}{2} = \frac{8}{10} - \frac{5}{10} = \frac{3}{10}$



e. $\frac{2}{3} - \frac{2}{5} = \frac{10}{15} - \frac{6}{15} = \frac{4}{15}$



f. $\frac{5}{7} - \frac{2}{3} = \frac{15}{21} - \frac{14}{21} = \frac{1}{21}$



3. Robin used $\frac{1}{4}$ of a pound of butter to make a cake. Before she started, she had $\frac{7}{8}$ of a pound of butter. How much butter did Robin have when she was done baking? Give your answer as a fraction of a pound.

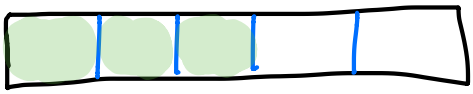
$\frac{7}{8} - \frac{1}{4} = \frac{28}{32} - \frac{8}{32} = \frac{20}{32} = \frac{10}{16} = \frac{5}{8}$

Robin had $\frac{5}{8}$ of a pound of butter left over.

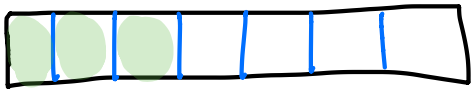
4. Katrina needs $\frac{3}{5}$ kilogram of flour for a recipe. Her mother has $\frac{3}{7}$ kilogram of flour in her pantry. Is this enough flour for the recipe? If not, how much more will she need?

We know $\frac{3}{5}$ is larger than $\frac{3}{7}$ because tape diagrams "prove" it.

$\frac{3}{5}$

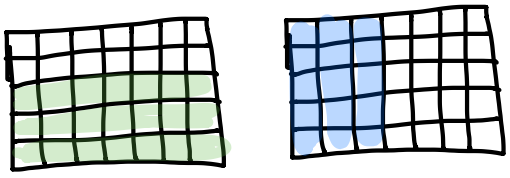


$\frac{3}{7}$



$\frac{3}{5} - \frac{3}{7} = \frac{21}{35} - \frac{15}{35} = \frac{6}{35}$

Katrina will need $\frac{6}{35}$ kilogram more.

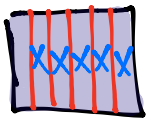


NOTE: Since there are a variety of methods to solve these problems, we will demonstrate that variety in the answer key.

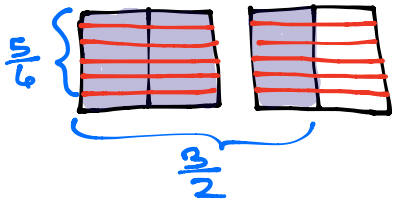
Name _____ Date _____

1. Find the difference. Use a rectangular fraction model to show how to convert to fractions with common denominators.

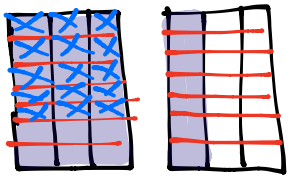
a) $1 - \frac{5}{6} = \frac{6}{6} - \frac{5}{6} = \frac{1}{6}$



b) $\frac{3}{2} - \frac{5}{6} = \frac{18}{12} - \frac{10}{12} = \frac{8}{12} = \frac{2}{3}$



c) $\frac{4}{3} - \frac{5}{7} = \frac{28}{21} - \frac{15}{21} = \frac{13}{21}$



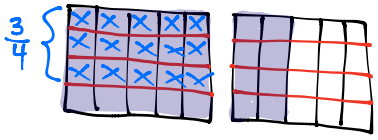
d) $1\frac{1}{8} - \frac{3}{5} =$

$\frac{5}{5} + \frac{1}{8} - \frac{3}{5}$

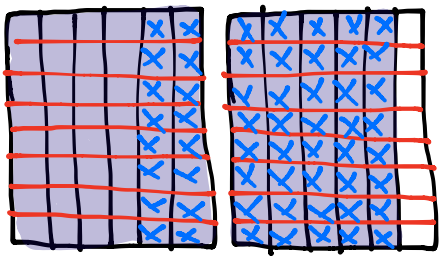
$\frac{2}{5} + \frac{1}{8} = \frac{16}{40} - \frac{5}{40} = \frac{11}{40}$

e) $1\frac{2}{5} - \frac{3}{4} = \frac{5}{20} + \frac{8}{20} = \frac{13}{20}$

$\frac{20}{20}$ $\frac{8}{20}$



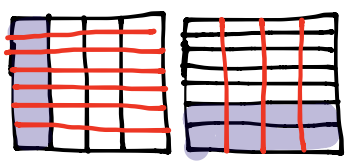
f) $1\frac{5}{6} - \frac{7}{8} = \frac{88}{48} - \frac{56}{48} = \frac{32}{48} = \frac{4}{6} = \frac{2}{3}$



g) $1\frac{2}{7} - \frac{3}{4} = \frac{1}{4} + \frac{2}{7}$

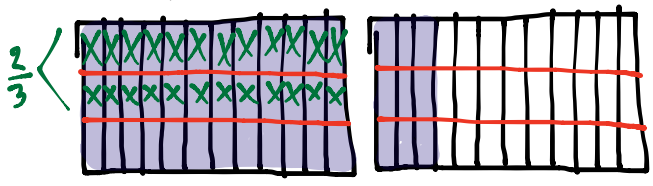
$\frac{4}{4}$ $\frac{2}{7}$

$= \frac{7}{28} + \frac{8}{28} = \frac{15}{28}$

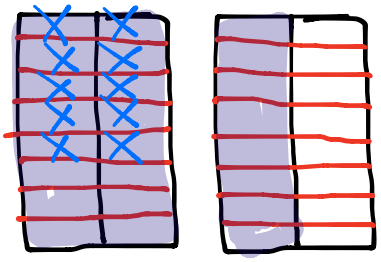


h) $1\frac{3}{12} - \frac{2}{3} = \frac{12}{36} + \frac{9}{36} = \frac{21}{36} = \frac{7}{12}$

$\frac{12}{36}$ $\frac{9}{36}$ $\frac{24}{36}$



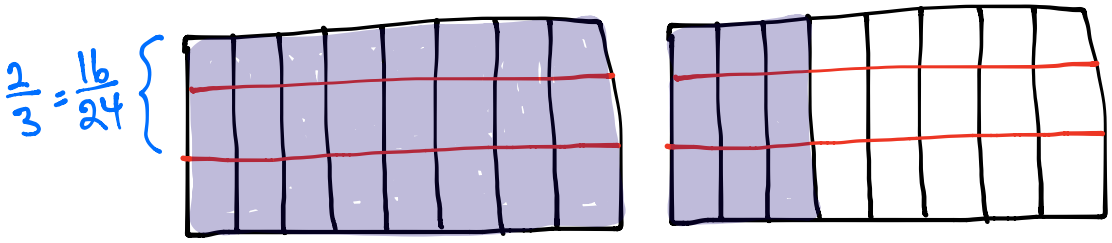
2. Sam had 1 1/2 m of rope. He cut off 5/8 m and used it for a project. How much rope does Sam have left?



$1\frac{1}{2} - \frac{5}{8} = \frac{24}{16} - \frac{10}{16} = \frac{14}{16} = \frac{7}{8}$

Sam has $\frac{7}{8}$ m left over.

3. Jackson had 1 3/8 kg of fertilizer. He used some to fertilize a flower bed andhe only had 2/3 kg left. How much fertilizer was used in the flower bed



$1\frac{3}{8} - \frac{2}{3} = \frac{8}{24} + \frac{9}{24} = \frac{17}{24}$

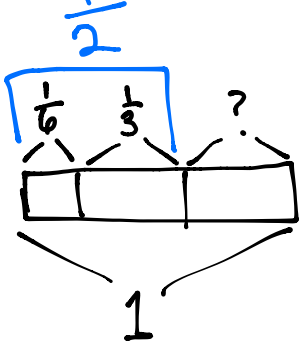
$\frac{24}{24} + \frac{9}{24} - \frac{16}{24}$

Jackson used $\frac{17}{24}$ kg of fertilizer in the flower bed.

Name _____ Date _____

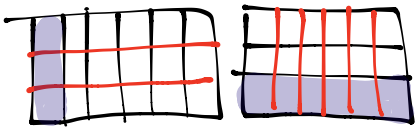
Solve the word problem using the RDW strategy. Show all your work.

1. Christine baked a pumpkin pie. She ate 1/6 of the pie. Her brother ate 1/3 of it, and gave the left overs to his friends. What fraction of the pie did he give to his friends?



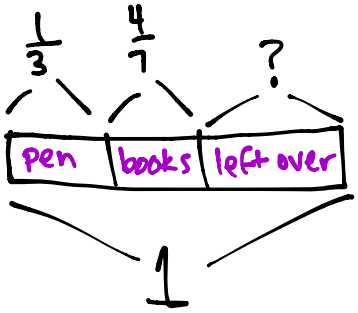
$\frac{1}{6} + \frac{1}{3} = \frac{3}{18} + \frac{6}{18} = \frac{9}{18} = \frac{1}{2}$

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



He gave $\frac{1}{2}$ of the pie to his friends.

2. Liang went to the bookstore. He spent 1/3 of his money on a pen and 4/7 of it on books. What fraction of his money did he have left?

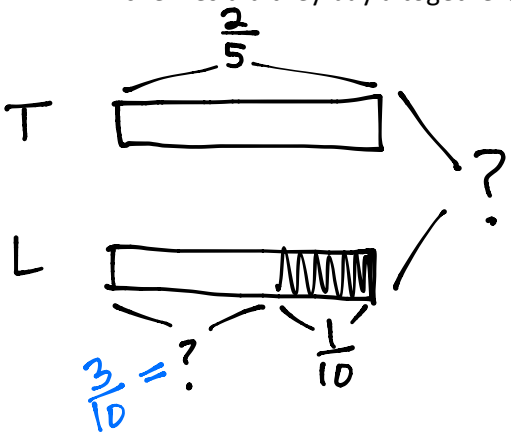


$\frac{1}{3} + \frac{4}{7} = \frac{7}{21} + \frac{12}{21} = \frac{19}{21}$

$1 - \frac{19}{21} = \frac{21}{21} - \frac{19}{21} = \frac{2}{21}$

Liang has $\frac{2}{21}$ of his money left over.

3. Tiffany bought 2/5 kg of cherries. Linda bought 1/10 kg of cherries less than Tiffany. How many kg of cherries did they buy altogether?



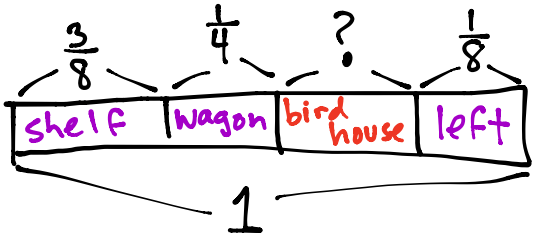
$\frac{2}{5} - \frac{1}{10} = \frac{4}{10} - \frac{1}{10} = \frac{3}{10}$

Linda bought $\frac{3}{10}$ kg of cherries.

$\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10}$

Altogether, they bought $\frac{7}{10}$ kg of cherries.

4. Mr. Rivas bought a can of paint. He used 3/8 of it to paint a book shelf. He used 1/4 of it to paint a wagon. He used some of it to paint a bird house, and have 1/8 of paint left. How much paint did he use for the bird house?

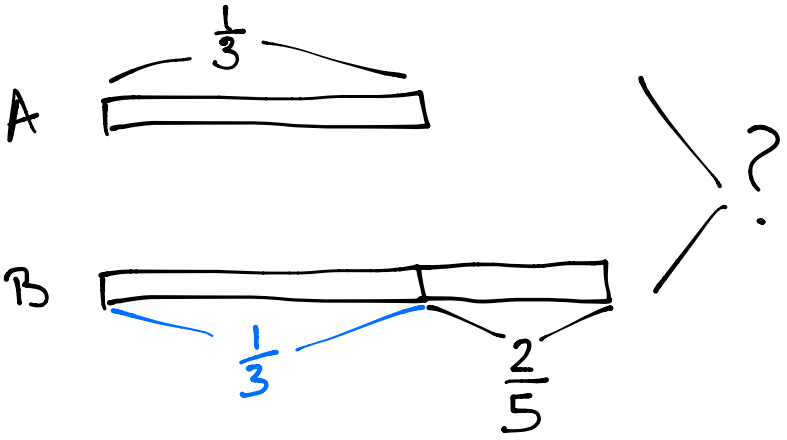


$\frac{3}{8} + \frac{1}{8} + \frac{1}{4} = \frac{4}{8} + \frac{1}{4} = \frac{3}{4}$

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

Mr. Rivas used $\frac{1}{4}$ of the paint for the bird house.

5. Ribbon A is 1/3 m long. It is 2/5 m shorter than ribbon B. What's the total length of two ribbons?



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

$= \frac{10}{15} + \frac{6}{15}$

$= \frac{16}{15}$

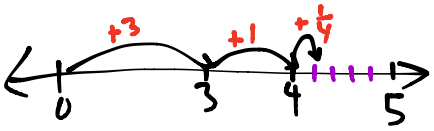
$= 1\frac{1}{15}$

The total length of the two ribbons is $1\frac{1}{15}$ meters.

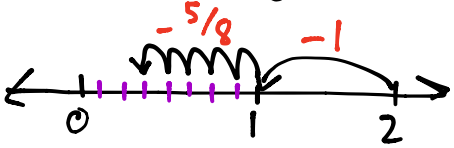
Name _____ Date _____

1. Add or subtract.

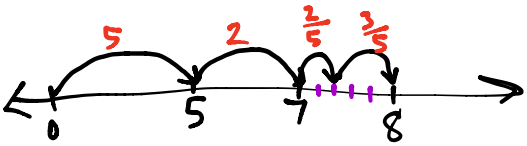
a) $3 + 1\frac{1}{4} =$ $4\frac{1}{4}$



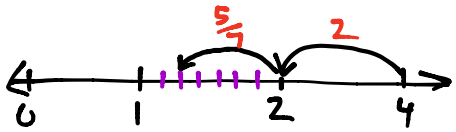
b) $2 - 1\frac{5}{8} =$ $\frac{3}{8}$



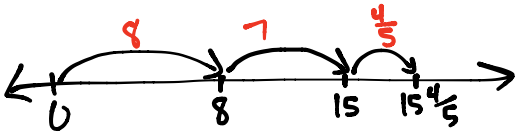
c) $5\frac{2}{5} + 2\frac{3}{5} =$ 8



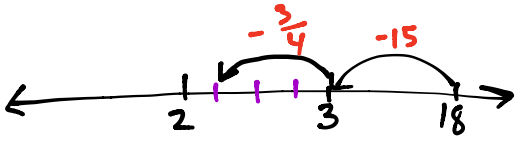
d) $4 - 2\frac{5}{7} =$ $1\frac{2}{7}$



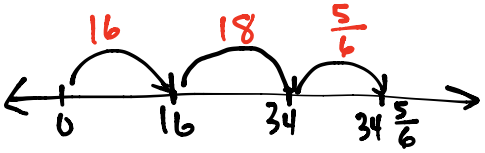
e) $8\frac{4}{5} + 7 =$ $15\frac{4}{5}$



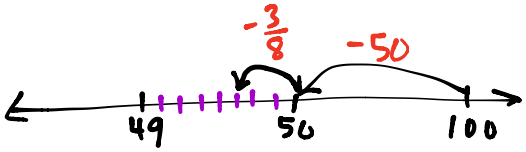
f) $18 - 15\frac{3}{4} =$ $2\frac{1}{4}$



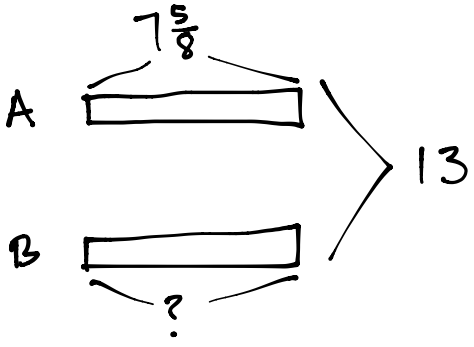
g) $16 + 18\frac{5}{6} =$ $34\frac{5}{6}$



h) $100 - 50\frac{3}{8} =$ $49\frac{5}{8}$



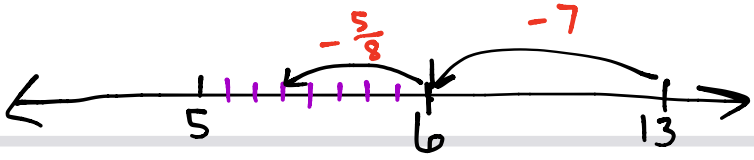
2. The total length of two ribbons is 13 meters. If one ribbon is $7\frac{5}{8}$ meters long, what is the length of the other ribbon?



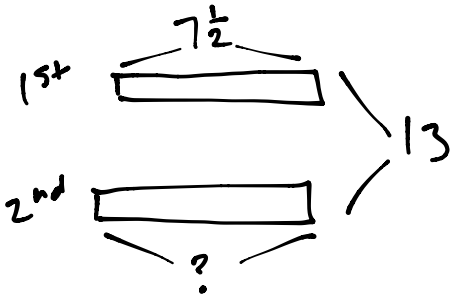
$13 - 7\frac{5}{8} = 13 - 7 - \frac{5}{8}$

$= 6 - \frac{5}{8}$

$= 5\frac{3}{8}$



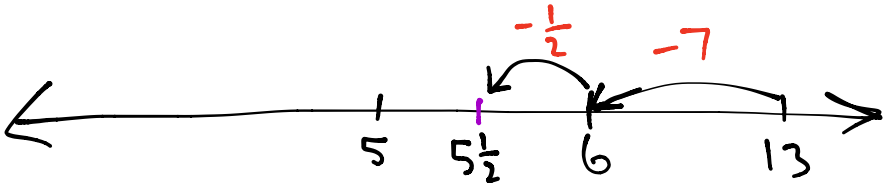
3. It took Sandy two hours to jog 13 miles. She ran 7 1/2 miles in the first hour. How far did she run during the second hour?



$13 - 7\frac{1}{2} = 13 - 7 - \frac{1}{2}$

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

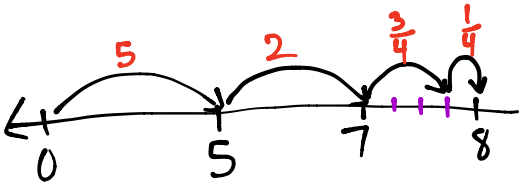
$= 5\frac{1}{2}$



4. Andre says that $5\frac{3}{4} + 2\frac{1}{4} = 7\frac{1}{2}$ because $7\frac{4}{8} = 7\frac{1}{2}$. Identify his mistake. Draw a picture to prove that he is wrong.

Andre is wrong because he added the denominators when he should only add the numerators.

$5\frac{3}{4} + 2\frac{1}{4} = 8$



Name _____ Date _____

1. Make like units, then add. Use an equation to show your thinking.

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

$=\frac{9}{15}+\frac{5}{15}$

$=\frac{14}{15}$

b) $\frac{3}{5}+\frac{1}{11}=\left(\frac{3}{5}\times\frac{11}{11}\right)+\left(\frac{1}{11}\times\frac{5}{5}\right)$

$=\frac{33}{55}+\frac{5}{55}$

$=\frac{38}{55}$

c) $\frac{2}{9}+\frac{5}{6}=\left(\frac{2}{9}\times\frac{2}{2}\right)+\left(\frac{5}{6}\times\frac{3}{3}\right)$

$=\frac{4}{18}+\frac{15}{18}$

$=\frac{19}{18}=1\frac{1}{18}$

d) $\frac{2}{5}+\frac{1}{4}+\frac{1}{10}=\left(\frac{2}{5}\times\frac{4}{4}\right)+\left(\frac{1}{4}\times\frac{5}{5}\right)+\left(\frac{1}{10}\times\frac{2}{2}\right)$

$=\frac{8}{20}+\frac{5}{20}+\frac{2}{20}$

$=\frac{15}{20}=\frac{3\times5}{4\times5}=\frac{3}{4}$

e) $\frac{1}{3}+\frac{7}{5}=\left(\frac{1}{3}\times\frac{5}{5}\right)+\left(\frac{7}{5}\times\frac{3}{3}\right)$

$=\frac{5}{15}+\frac{21}{15}$

$=\frac{26}{15}=1\frac{11}{15}$

f) $\frac{5}{8}+\frac{7}{12}=\left(\frac{5}{8}\times\frac{3}{3}\right)+\left(\frac{7}{12}\times\frac{2}{2}\right)$

$=\frac{15}{24}+\frac{14}{24}$

$=\frac{29}{24}=1\frac{5}{24}$

g) $1\frac{1}{3}+\frac{3}{4}=1+\left(\frac{1}{3}\times\frac{4}{4}\right)+\left(\frac{3}{4}\times\frac{3}{3}\right)$

$=1+\frac{4}{12}+\frac{9}{12}$

$=1+\frac{13}{12}$

$=1+1\frac{1}{12}=2\frac{1}{12}$

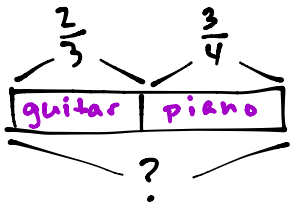
h) $\frac{5}{6}+1\frac{1}{4}=\left(\frac{5}{6}\times\frac{2}{2}\right)+1+\left(\frac{1}{4}\times\frac{3}{3}\right)$

$=\frac{10}{12}+1+\frac{3}{12}$

$=1+\frac{13}{12}$

$=1+1\frac{1}{12}=2\frac{1}{12}$

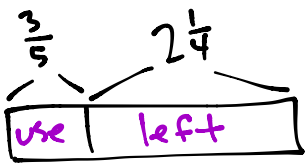
2. On Monday, Ka practices guitar for $\frac{2}{3}$ of one hour. When she's finished, she practices piano for $\frac{3}{4}$ of one hour. How much time did Ka spend practicing instruments on Monday?



$$\frac{2}{3} + \frac{3}{4} = \left(\frac{2}{3} \times \frac{4}{4}\right) + \left(\frac{3}{4} \times \frac{3}{3}\right)$$
$$= \frac{8}{12} + \frac{9}{12}$$
$$= \frac{17}{12}$$
$$= 1\frac{5}{12}$$

Ka spent $1\frac{5}{12}$ hours practicing her instruments.

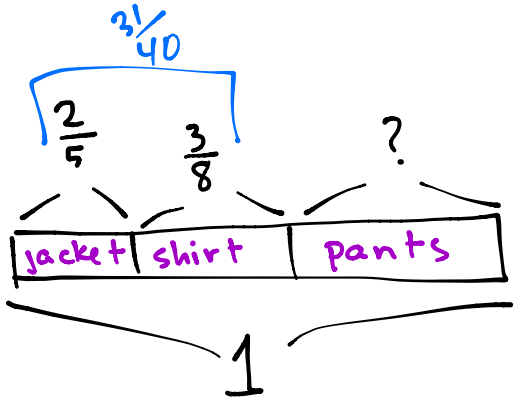
3. Ms. How buys a bag of rice to cook dinner. She used $\frac{3}{5}$ kg of rice and still had $2\frac{1}{4}$ kg left. How heavy was the bag of rice that Ms. How bought?



$$2\frac{1}{4} + \frac{3}{5} = 2 + \frac{1}{4} + \frac{3}{5}$$
$$= 2 + \left(\frac{1}{4} \times \frac{5}{5}\right) + \left(\frac{3}{5} \times \frac{4}{4}\right)$$
$$= 2 + \frac{5}{20} + \frac{12}{20}$$
$$= 2\frac{17}{20}$$

The bag of rice weighed $2\frac{17}{20}$ kg.

4. Joe spends $\frac{2}{5}$ of his money on a jacket and $\frac{3}{8}$ of his money on a shirt. He spends the rest on a pair of pants. What fraction of his money does he use to buy the pants?



$$\frac{2}{5} + \frac{3}{8} = \left(\frac{2}{5} \times \frac{8}{8}\right) + \left(\frac{3}{8} \times \frac{5}{5}\right)$$
$$= \frac{16}{40} + \frac{15}{40}$$
$$= \frac{31}{40}$$
$$1 - \frac{31}{40} = \frac{40}{40} - \frac{31}{40} = \frac{9}{40}$$

Joe spent $\frac{9}{40}$ of his money on pants.

Name _____ Date _____

1. Add.

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

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

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

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

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

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

$=3+\frac{5}{10}+\frac{6}{10}$

$=3+\frac{11}{10}=3+1\frac{1}{10}=4\frac{1}{10}$

c) $1\frac{1}{5}+3\frac{1}{3}=4+\frac{1}{5}+\frac{1}{3}$

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

$=4+\frac{3}{15}+\frac{5}{15}$

$=4\frac{8}{15}$

d) $3\frac{2}{3}+1\frac{3}{5}=4+\frac{2}{3}+\frac{3}{5}$

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

$=4+\frac{10}{15}+\frac{9}{15}$

$=4+\frac{19}{15}=5\frac{4}{15}$

e) $2\frac{1}{3}+4\frac{4}{7}=6+\frac{1}{3}+\frac{4}{7}$

$=6+\left(\frac{1}{3}\times\frac{7}{7}\right)+\left(\frac{4}{7}\times\frac{3}{3}\right)$

$=6+\frac{7}{21}+\frac{12}{21}$

$=6\frac{19}{21}$

f) $3\frac{5}{7}+4\frac{2}{3}=7+\frac{5}{7}+\frac{2}{3}$

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

$=7+\frac{15}{21}+\frac{14}{21}$

$=7+\frac{29}{21}=8\frac{8}{21}$

g) $15\frac{1}{5}+4\frac{3}{8}=19+\frac{1}{5}+\frac{3}{8}$

$=19+\left(\frac{1}{5}\times\frac{8}{8}\right)+\left(\frac{3}{8}\times\frac{5}{5}\right)$

$=19+\frac{8}{40}+\frac{15}{40}$

$=19+\frac{23}{40}$

$=19\frac{23}{40}$

h) $18\frac{3}{8}+2\frac{2}{5}=20+\frac{3}{8}+\frac{2}{5}$

$=20+\left(\frac{3}{8}\times\frac{5}{5}\right)+\left(\frac{2}{5}\times\frac{8}{8}\right)$

$=20+\frac{15}{40}+\frac{16}{40}$

$=20+\frac{31}{40}$

$=20\frac{31}{40}$

2. Angela practiced piano for $2\frac{1}{2}$ hours on Friday, $2\frac{1}{3}$ hours on Saturday, and $3\frac{2}{3}$ hours on Sunday. How much time did Angela practice piano during the weekend?

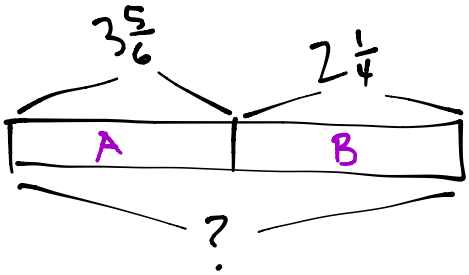
$2\frac{1}{2} + 2\frac{1}{3} + 3\frac{2}{3} = 7 + \frac{1}{2} + \frac{1}{3} + \frac{2}{3}$

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

$= 8\frac{1}{2}$

Angela practiced $8\frac{1}{2}$ hours during the weekend.

3. String A is $3\frac{5}{6}$ meters long. String B is $2\frac{1}{4}$ long. What's the total length of both strings?



$3\frac{5}{6} + 2\frac{1}{4} = 5 + \frac{5}{6} + \frac{1}{4}$

$= 5 + \left(\frac{5}{6} \times \frac{2}{2}\right) + \left(\frac{1}{4} \times \frac{3}{3}\right)$

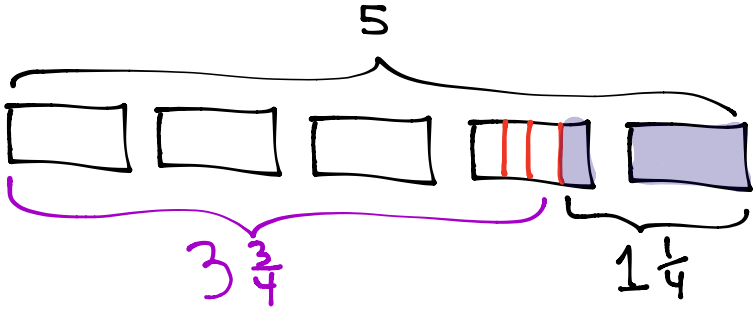
$= 5 + \frac{10}{12} + \frac{3}{12}$

$= 5 + \frac{13}{12}$

$= 6\frac{1}{12}$

The total length of both strings is $6\frac{1}{12}$ meters.

4. Matt says that $5 - 1\frac{1}{4}$ will be more than 4, since 5 – 1 is 4. Draw a picture to prove that Matt is wrong.



Matt is wrong because the picture shows the answer should be $3\frac{3}{4}$.

Name _____ Date _____

1. First find a common unit, then subtract.

a. $\frac{1}{2}-\frac{1}{5}=\left(\frac{1}{2}\times\frac{5}{5}\right)-\left(\frac{1}{5}\times\frac{2}{2}\right)$

$=\frac{5}{10}-\frac{2}{10}$

$=\frac{3}{10}$

b. $\frac{7}{8}-\frac{1}{3}=\left(\frac{7}{8}\times\frac{3}{3}\right)-\left(\frac{1}{3}\times\frac{8}{8}\right)$

$=\frac{21}{24}-\frac{8}{24}$

$=\frac{13}{24}$

c. $\frac{7}{10}-\frac{3}{5}=\frac{7}{10}-\left(\frac{3}{5}\times\frac{2}{2}\right)$

$=\frac{7}{10}-\frac{6}{10}$

$=\frac{1}{10}$

d. $1\frac{5}{6}-\frac{2}{3}=1+\frac{5}{6}-\frac{2}{3}$

$=\frac{6}{6}+\frac{5}{6}-\left(\frac{2}{3}\times\frac{2}{2}\right)$

$=\frac{6}{6}+\frac{5}{6}-\frac{4}{6}$

$=\frac{7}{6}=1\frac{1}{6}$

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

$=1+\left(\frac{1}{4}\times\frac{5}{5}\right)-\left(\frac{1}{5}\times\frac{4}{4}\right)$

$=1+\frac{5}{20}-\frac{4}{20}$

$=1\frac{1}{20}$

f. $5\frac{6}{7}-3\frac{2}{3}=2\frac{6}{7}-\frac{2}{3}$

$=2+\left(\frac{6}{7}\times\frac{3}{3}\right)-\left(\frac{2}{3}\times\frac{7}{7}\right)$

$=2+\frac{18}{21}-\frac{14}{21}$

$=2\frac{4}{21}$

g. $15\frac{7}{8}-5\frac{3}{4}=10\frac{7}{8}-\frac{3}{4}$

$=10+\frac{7}{8}-\left(\frac{3}{4}\times\frac{2}{2}\right)$

$=10+\frac{7}{8}-\frac{6}{8}$

$=10\frac{1}{8}$

h. $15\frac{5}{8}-3\frac{1}{3}=12\frac{5}{8}-\frac{1}{3}$

$=12+\left(\frac{5}{8}\times\frac{3}{3}\right)-\left(\frac{1}{3}\times\frac{8}{8}\right)$

$=12+\frac{15}{24}-\frac{8}{24}$

$=12\frac{7}{24}$

2. Sandy ate $\frac{1}{6}$ of a candy bar. John ate $\frac{3}{4}$ of it. How much more of the candy bar did John eat than Sandy?

$\frac{3}{4} - \frac{1}{6} = \left(\frac{3}{4} \times \frac{3}{3}\right) - \left(\frac{1}{6} \times \frac{2}{2}\right)$

$= \frac{9}{12} - \frac{2}{12} = \frac{7}{12}$

John ate $\frac{7}{12}$ of the candy bar more than Sandy.

3. $4\frac{1}{2}$ yards of cloth are needed to make a woman's dress. $2\frac{2}{7}$ yards of cloth are needed to make a girl's dress. How much more cloth is needed to make a woman's dress than a girl's dress?

$4\frac{1}{2} - 2\frac{2}{7} = 2\frac{1}{2} - \frac{2}{7}$

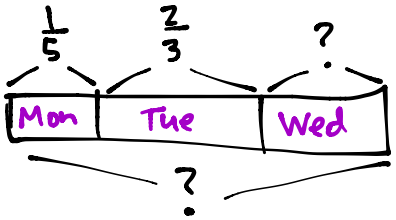
$= 2 + \left(\frac{1}{2} \times \frac{7}{7}\right) - \left(\frac{2}{7} \times \frac{2}{2}\right)$

$= 2 + \frac{7}{14} - \frac{4}{14}$

$= 2\frac{3}{14}$

To make a woman's dress, $2\frac{3}{14}$ yards more cloth is needed than a girl's dress.

4. Bill reads $\frac{1}{5}$ of a book on Monday. He reads $\frac{2}{3}$ of the book on Tuesday. If he finishes reading the book on Wednesday, what fraction of the book did he read on Wednesday?



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

$= \frac{3}{15} + \frac{10}{15}$

$= \frac{13}{15}$

$1 - \frac{13}{15} = \frac{2}{15}$

He read $\frac{2}{15}$ of the book on Wednesday.

5. Tank A has a capacity of 9.5 gallons. $6\frac{1}{3}$ gallons of the tank's water are poured out. How much water is left in the tank?

$9.5 - 6\frac{1}{3}$

$9\frac{1}{2} - 6\frac{1}{3} = 3\frac{1}{2} - \frac{1}{3}$

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

$= 3 + \frac{3}{6} - \frac{2}{6}$

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

There is $3\frac{1}{6}$ gallons remaining in the tank.

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

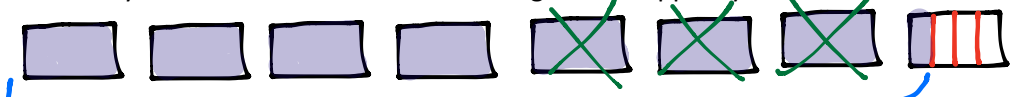
$= 15\frac{1}{5} - \frac{5}{8}$

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

2. Tony wrote the following:

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

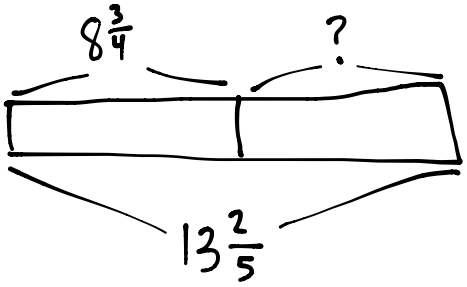
Is Tony's statement correct? Draw a diagram to support your answer.



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

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?



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

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

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

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

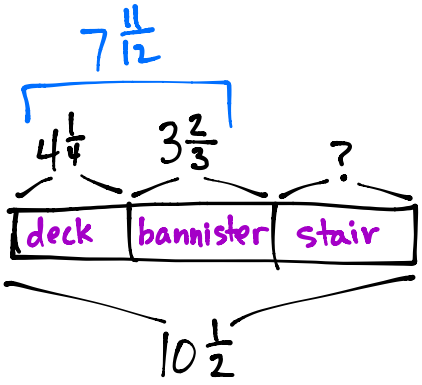
$4 + \frac{5}{20} + \frac{8}{20}$

$4\frac{13}{20}$

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.

Name _____ Date _____

1. Are the following greater than or less than 1? Circle the correct answer.

a)	$\frac{1}{2}+\frac{4}{9}$	greater than 1	less than 1
b)	$\frac{5}{8}+\frac{3}{5}$	greater than 1	less than 1
c)	$1\frac{1}{5}-\frac{1}{3}$	greater than 1	less than 1
d)	$4\frac{3}{5}-3\frac{3}{4}$	greater than 1	less than 1

2. Are the following greater than or less than 1/2? Circle the correct answer.

e)	$\frac{1}{5}+\frac{1}{4}$	greater than $\frac{1}{2}$	less than $\frac{1}{2}$
f)	$\frac{6}{7}-\frac{1}{6}$	greater than $\frac{1}{2}$	less than $\frac{1}{2}$
g)	$1\frac{1}{7}-\frac{5}{6}$	greater than $\frac{1}{2}$	less than $\frac{1}{2}$
h)	$\frac{4}{7}+\frac{1}{8}$	greater than $\frac{1}{2}$	less than $\frac{1}{2}$

3. Use > , < , or = to make the following statements true.

i) $5\frac{4}{5}+2\frac{2}{3}$ ___<___ $8\frac{3}{4}$

j) $3\frac{4}{7}-2\frac{3}{5}$ ___<___ $1\frac{4}{7}+\frac{3}{5}$

k) $4\frac{1}{2}+1\frac{4}{9}$ ___>___ $5+\frac{13}{18}$

l) $10\frac{3}{8}-7\frac{3}{5}$ ___<___ $3\frac{3}{8}+\frac{3}{5}$

NOT EQUAL

4. Is it true that $5\frac{2}{3} - 3\frac{3}{4} = 1 + \frac{2}{3} + \frac{3}{4}$? Prove your answer.

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

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

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

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

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

5. A tree limb hangs $5\frac{1}{4}$ feet from a telephone wire. The city trims back the branch before it grows within $2\frac{1}{2}$ feet of the wire. Will the city allow the tree to grow $2\frac{3}{4}$ more feet?

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

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

Once the tree grows $2\frac{3}{4}$ feet it will be exactly $2\frac{1}{2}$ feet from the wire, so the city would trim it.

6. Mr. Kreider wants to paint two doors and several shutters. It takes $2\frac{1}{8}$ gallons of paint to coat each door and $1\frac{3}{5}$ gallons of paint to coat his shutters. If Mr. Kreider buys three 2-gallon cans of paint, does he have enough to complete the job?

$2\frac{1}{8} + 2\frac{1}{8} + 1\frac{3}{5} = 4\frac{2}{8} + 1\frac{3}{5} = 5\frac{2}{8} + \frac{3}{5} = 5\frac{10}{40} + \frac{24}{40} = 5\frac{34}{40}$

$5\frac{34}{40} < 6$

Mr. Kreider has enough paint to complete the job.

Name _____ Date _____

1. Rearrange the terms so that you can add or subtract mentally, then solve.

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

$2 + 1 = 3$

b) $3\frac{1}{6}-\frac{3}{4}+\frac{5}{6}$

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

d) $5\frac{5}{8}-2\frac{6}{7}-\frac{2}{7}-\frac{5}{8}$

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

$= 1\frac{6}{7}$

d) $\frac{7}{9}+\frac{1}{2}-\frac{3}{2}+\frac{2}{9}$

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

$\frac{3}{2} - \frac{3}{2} = 0$

2. Fill in the blank to make the statement true.

g) $7\frac{3}{4}-1\frac{2}{7}-\frac{3}{2}=$ $4\frac{27}{28}$

$7\frac{21}{28} - 1\frac{8}{28} - 1\frac{1}{2}$

$6\frac{13}{28} - 1\frac{1}{2}$

$5\frac{13}{28} - \frac{1}{2} = 4\frac{41}{28} - \frac{14}{28} = 4\frac{27}{28}$

h) $9\frac{5}{6}+1\frac{1}{4}+$ $2\frac{11}{12}$ $=14$

$10\frac{5}{6} + \frac{1}{4}$

$10\frac{10}{12} + \frac{3}{12} = 10\frac{13}{12} = 11\frac{1}{12}$

i) $\frac{7}{10}-$ 1 $+\frac{3}{2}=\frac{6}{5}$

$\frac{7}{10} - \square + \frac{15}{10} = \frac{12}{10}$

$\frac{22}{10} - \frac{10}{10} = \frac{12}{10}$

j) $37\frac{7}{8}-20-3\frac{1}{4}=14\frac{5}{8}$

$\square - 23\frac{1}{4} = 14\frac{5}{8}$

$23\frac{1}{4} + 14\frac{5}{8}$

$23\frac{2}{8} + 14\frac{5}{8}$

$37\frac{7}{8}$

k) $\frac{17}{3}+2\frac{19}{30}+\frac{5}{2}=10\frac{4}{5}$

$10\frac{4}{5} - 8\frac{1}{6}$

$10\frac{24}{30} - 8\frac{5}{30}$

$2\frac{19}{30}$

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

$8\frac{1}{6} + \square = 10\frac{4}{5}$

l) $23.1+1\frac{7}{10}-$ $18\frac{2}{10}$ $=\frac{66}{10}$

$23\frac{1}{10} + 1\frac{7}{10} - \square = 6\frac{6}{10}$

$24\frac{8}{10} - \square = 6\frac{6}{10}$

3. Laura bought $8\frac{3}{10}$ yd of ribbon. She used $1\frac{2}{5}$ yd to tie a package and $2\frac{1}{3}$ to make a bow. Joe later gave her $4\frac{3}{5}$ yd. How much ribbon does she now have?

$8\frac{3}{10} + 4\frac{3}{5} - 1\frac{2}{5} - 2\frac{1}{3}$

$8\frac{3}{10} + 4\frac{6}{10} - 1\frac{4}{10} - 2\frac{1}{3}$

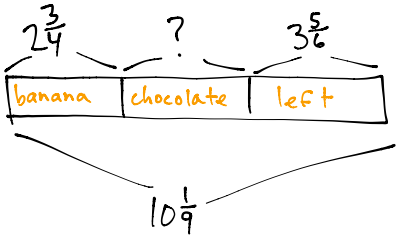
$11\frac{5}{10} - 2\frac{1}{3}$

$11\frac{1}{2} - 2\frac{1}{3}$

$11\frac{3}{6} - 2\frac{2}{6} = 9\frac{1}{6}$

Laura now has $9\frac{1}{6}$ yards of ribbon.

4. Mia bought $10\frac{1}{9}$ lb of flour. She used $2\frac{3}{4}$ lb of flour to bake a banana cake and some to bake a chocolate cake. After baking the two cakes, she had $3\frac{5}{6}$ lb of flour left. How much flour did she use to bake the chocolate cake?



$2\frac{3}{4} + 3\frac{5}{6} = 5\frac{3}{4} + \frac{5}{6}$

$= 5\frac{9}{12} + \frac{10}{12}$

$= 5\frac{19}{12} = 6\frac{7}{12}$

$10\frac{1}{9} - 6\frac{7}{12}$

$4\frac{1}{9} - \frac{7}{12}$

$4\frac{4}{36} - \frac{21}{36}$

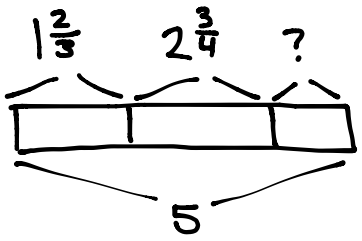
$3\frac{40}{36} - \frac{21}{36} = 3\frac{19}{36}$

Mia used $3\frac{19}{36}$ pound for the chocolate cake.

Name _____ Date _____

Solve the word problems using the RDW strategy. Show all your work.

1. A baker buys a 5 lb bag of sugar. She uses $1\frac{2}{3}$ lb to make some muffins and $2\frac{3}{4}$ lb to make a cake. How much sugar does she have left?



$1\frac{2}{3} + 2\frac{3}{4} = 3\frac{2}{3} + \frac{3}{4} = 3 + \frac{8}{12} + \frac{9}{12} = 3\frac{17}{12} = 4\frac{5}{12}$

$5 - 4\frac{5}{12} = 1 - \frac{5}{12} = \frac{12}{12} - \frac{5}{12} = \frac{7}{12}$

The baker has $\frac{7}{12}$ pound of sugar left over.

2. A boxer needs to lose $3\frac{1}{2}$ kg in a month to be able to compete as a flyweight. In three weeks, he lowers his weight from 55.5 kg to 53.8 kg. How many kg must the boxer lose in the final week to be able to compete as a flyweight?

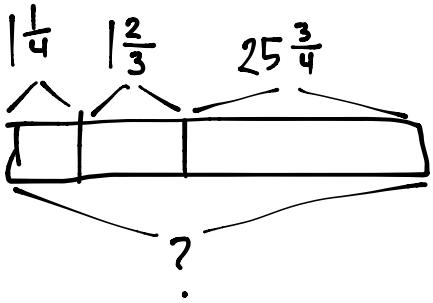
$55\frac{5}{10} - 53\frac{8}{10} = 2\frac{5}{10} - \frac{8}{10} = 1\frac{15}{10} - \frac{8}{10} = 1\frac{7}{10} = 1.7$

$3\frac{1}{2} - 1\frac{7}{10} = 2\frac{1}{2} - \frac{7}{10} = 2\frac{5}{10} - \frac{7}{10} = 1\frac{15}{10} - \frac{7}{10} = 1\frac{8}{10} = 1\frac{4}{5}$

$1\frac{10}{10}$

He needs to lose $1\frac{8}{10}$ kg

3. A construction company builds a new rail line from Town A to Town B. They complete $1\frac{1}{4}$ miles in their first week of work and $1\frac{2}{3}$ miles in the second week. If they still have $25\frac{3}{4}$ left to build, what is the distance from Town A to Town B?

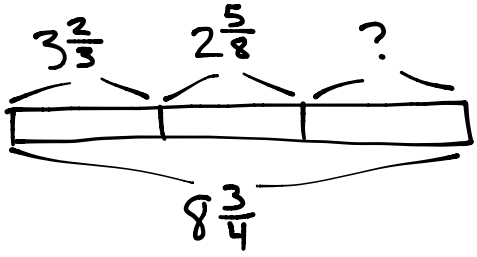


$1\frac{1}{4} + 1\frac{2}{3} + 25\frac{3}{4} =$

$27 + 1 + \frac{2}{3} = 28\frac{2}{3}$

It is $28\frac{2}{3}$ miles from Town A to Town B.

4. A catering company needs 8.75 lb of shrimp for a small party. They buy $3\frac{2}{3}$ lb of jumbo shrimp, $2\frac{5}{8}$ lb of medium-sized shrimp, and some mini-shrimp. How many pounds of mini-shrimp do they buy?



$3\frac{2}{3}+2\frac{5}{8}=5\frac{16}{24}+\frac{15}{24}=5\frac{31}{24}=5+1\frac{7}{24}=6\frac{7}{24}$

$8\frac{3}{4}-6\frac{7}{24}=2\frac{3}{4}-\frac{7}{24}$

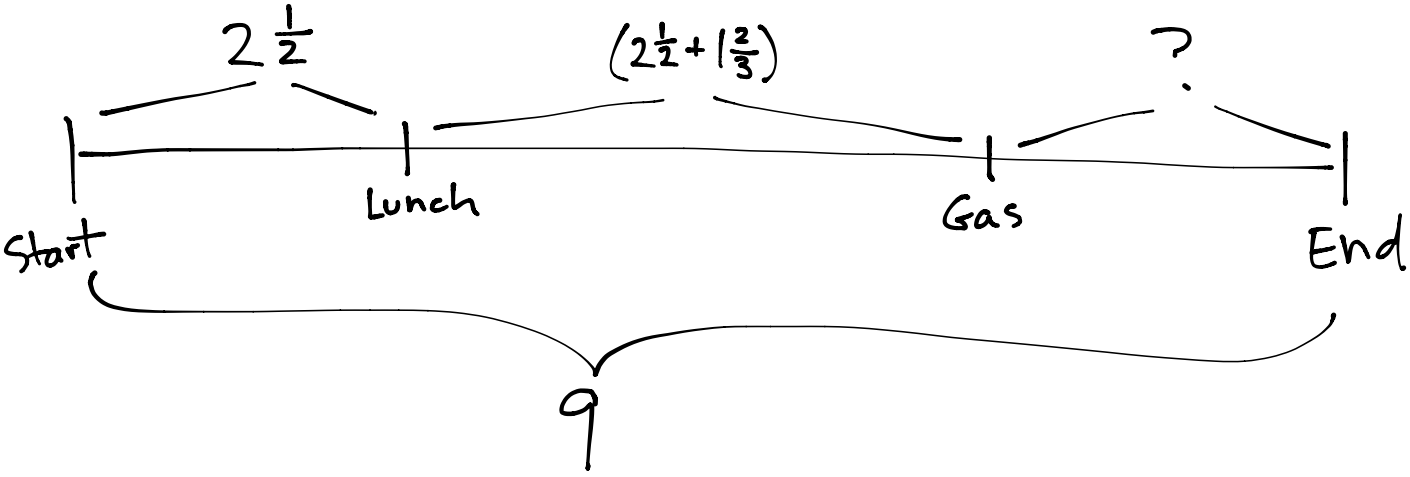
$=2+(\frac{3}{4}\times\frac{6}{6})-\frac{7}{24}$

$=2+\frac{18}{24}-\frac{7}{24}$

$=2\frac{11}{24}$

They buy $2\frac{11}{24}$ lbs of mini-shrimp.

5. Mark breaks up a 9-hour drive into 3 segments. He drives $2\frac{1}{2}$ hours before stopping for lunch. After driving some more, he stops for gas. If the second segment of his drive was $1\frac{2}{3}$ hours longer than the first segment, how long did he drive after stopping for gas?



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

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

$6\frac{2}{3}$

$9-6\frac{2}{3}=3-\frac{2}{3}=2\frac{1}{3}$

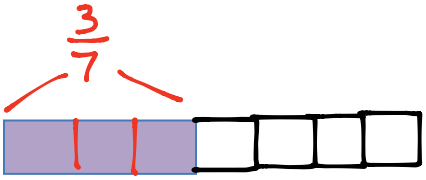
$2\quad\frac{3}{3}$

Mark drove for $2\frac{1}{3}$ hours after stopping for gas.

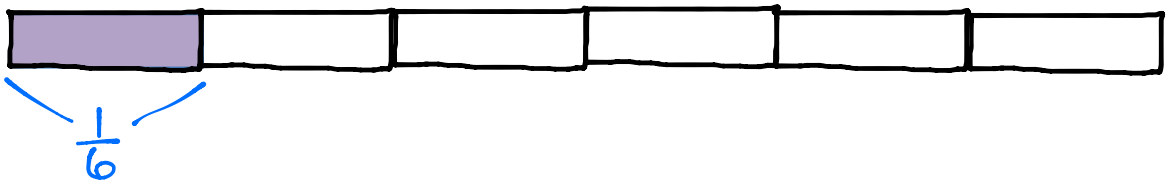
Name _____ Date _____

1. Draw the following ribbons.

a) 1 road. The piece shown below is only 3/7 of the whole. Complete the drawing to show the whole road.



b) 1 road. The piece shown below is 1/6 of the whole. Complete the drawing to show the whole road.



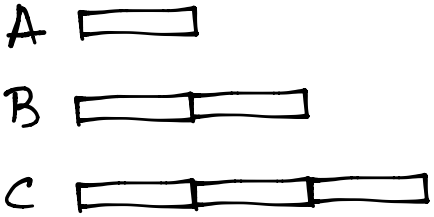
c) 3 roads. B is three times longer than A. C is twice as long as B. Draw the roads. What fraction of the total length of the roads is the length of A? If Road B is 7 miles longer than Road A., what is the length of Road C?

See correction on next page.

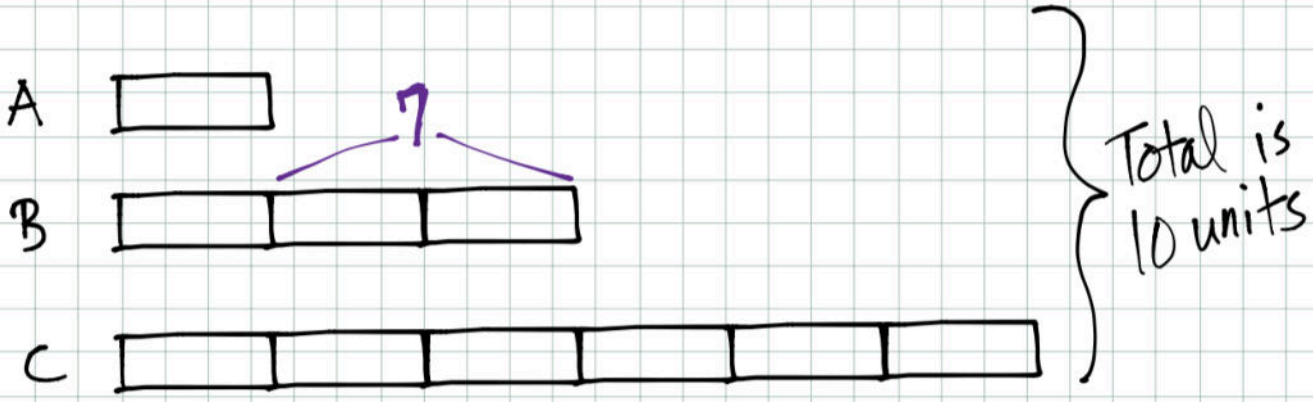
d) Write your own ribbon or road problem with 2 or 3 lengths.

Answers will vary.

3 ribbons. B is twice the length of A. C is three times longer than A. What fraction of the total length is Ribbon B?



B is 2/6 or 1/3 of the total length.



Road A is $\frac{1}{10}$ of the total.

Two units equals 7 miles, so
Road C is 21 miles.