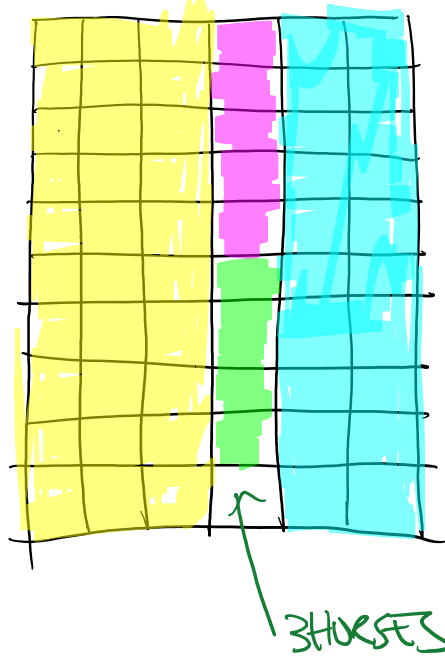


HW 2.1

March 8, 2015 2:51 PM

- $\frac{1}{2}$ of horses → KNIGHTS (30)
- $\frac{1}{3}$ of " → NOBLES (20)
- $\frac{1}{12}$ " → PEASANTS (5)
- $\frac{1}{15}$ → WIVES (4)
- 2 → MERLIN (WIZARD)
- 1 → HIMSELF



• 60 BOXES
 • EACH BOX = 3 HORSES
 ALTOGETHER = 60×3
 = 180 HORSES

#(K)
$$\underline{\underline{3}} \frac{5}{6} - \underline{\underline{3}} \frac{2}{12} + \underline{\underline{2}} \frac{2}{3}$$

$$\frac{23}{6} - \frac{38}{12} + \frac{8}{3}$$

$$\frac{46}{12} - \frac{38}{12} + \frac{32}{12}$$

$$= \frac{40}{12} = \frac{4 \times 10}{4 \times 3}$$

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

$$\frac{23}{6} - \frac{19}{6} + \frac{8}{3}$$

$$\frac{23}{6} - \frac{19}{6} + \frac{16}{6}$$

$$\frac{20}{6}$$

4h)
$$\frac{10}{1} \times \frac{8}{8} \times \frac{4}{9}$$

$$= (2) (\cancel{8}) (4)$$

$$= 64$$

$$\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d}$$

$$= \frac{2}{1} + \frac{8}{1} + \frac{4}{9} = \frac{64}{9}$$

$$\frac{3}{7} + \frac{5}{7} = \frac{8}{7}$$

8)

	20	100	$N = \frac{15}{49}$
Amy: $\frac{9}{20}$	9	45	$\frac{9}{20} \cdot N$
Betty: $\frac{2}{5} = \frac{8}{20}$	8	40	$\frac{8}{20}(N)$
Graham: $\frac{3}{20}$	3	15	$\frac{3}{20}(N)$

Betty:

$$\frac{8}{20}(N) + 20 = \frac{9}{20}N + 1$$

-1

-1

HW 2.2

April 1, 2015 8:59 PM

2a) $\frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$

b) $\frac{4}{6} \times \frac{3}{4} = \frac{1}{2}$
 $= \frac{12}{24} = \frac{1}{2}$

ie: $\frac{2}{18} \times \frac{3}{15} \times \frac{2}{16} = \frac{4}{3}$

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

(COMMON FACTOR)

$\frac{5}{7} \times \frac{8}{15} = \frac{40}{21}$

$\frac{5}{25} \times \frac{1}{54} \times \frac{4}{28} \times \frac{2}{22} = \frac{40}{3}$

$\frac{1}{12} \times \frac{5}{15} \times \frac{200}{900} = \frac{5}{28}$

By Jerry Ge

1. a) $\frac{8}{12} = \frac{2}{3}$

b) $\frac{15}{25} = \frac{3}{5}$

c) $\frac{24}{36} = \frac{2}{3}$

d) $\frac{26}{63} = \frac{4}{7}$

e) $\frac{56}{49} = \frac{8}{7}$

f) $\frac{48}{84} = \frac{4}{7}$

$\frac{65}{117} = \frac{5}{9}$

h) $\frac{150}{105} = \frac{30}{21}$

i) $\frac{224}{36} = \frac{56}{9}$

j) $\frac{24}{96} = \frac{1}{4}$

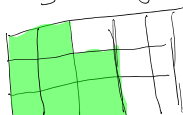
k) $\frac{81}{135} = \frac{9}{15}$

l) $\frac{720}{1080} = \frac{2}{3}$

2. a) $\frac{1}{2} \times \frac{1}{3}$

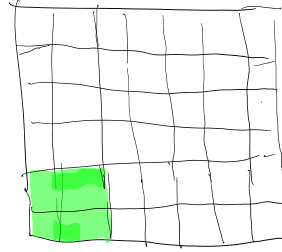
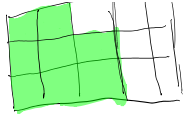
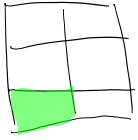


b) $\frac{2}{3} \times \frac{4}{5}$



c) $\frac{4}{7} \times \frac{1}{6}$





3. a) $\frac{8}{15}$ b) $\frac{1}{2}$ c) $\frac{8}{3}$ d) $\frac{10}{9}$
 e) $\frac{6}{5}$ f) $\frac{10}{9}$ g) $\frac{22}{21}$ h) $\frac{5}{28}$
 i) $\frac{10}{3}$ j) $\frac{52}{65}$ k) $\frac{40}{3}$ l) $\frac{64}{3}$

4. Johnny used 36L to get to work.
 5. $\frac{2}{15}$ students are getting A's
 6. 5 people are blonde males.
 7. Albert had $\frac{2}{5}$ of his original savings left.
 8. Jenny has pennies.
 9. Shirley bought 36 donuts.

HW 2.3

April 1, 2015 8:59 PM

#3) i)

$$1\frac{2}{3} \times \square = 3\frac{3}{4}$$

$$3\frac{5}{5} \times \left[\frac{3}{5} \times \frac{3}{4} \right] = 3\frac{3}{4}$$

$$3\frac{5}{5} \times \left[\frac{9}{20} \right] = 3\frac{3}{4}$$

① $\frac{5}{3} \times \frac{3}{5}$

② $1 \times ? = 3\frac{3}{4}$

$1 \times ? = 7$

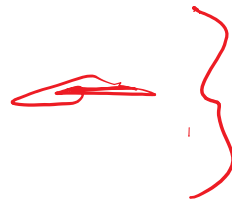
3j) $8\frac{2}{3} \times \square = 39$

$$\frac{26}{3} \times \left[\frac{3}{26} \times \frac{39}{1} \right] = 39$$

$$\left[\frac{117}{26} \right]$$

#2) b)

$$3\frac{2}{3} \times 1\frac{4}{5} =$$



	↓	1	1	1	$\frac{2}{3}$
↓	1	1	1	$\frac{2}{3}$	
$\frac{4}{5}$	$\frac{4}{5}$	$\frac{4}{5}$	$\frac{4}{5}$	$\frac{8}{15}$	



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

$$\textcircled{1} \frac{11}{3} \times \frac{19}{5} = \frac{33}{5}$$

$$1 + 1 + 1 + \frac{4}{5} + \frac{4}{5} + \frac{4}{5} + \frac{2}{3} + \frac{8}{15}$$

$$3 + \frac{12}{5} + \frac{2}{3} + \frac{8}{15}$$

$$3 + \frac{36}{15} + \frac{10}{15} + \frac{8}{15} \leftarrow$$

$$3 + \frac{54}{15} = 3 + \frac{18}{5}$$

5)

1 Hour \Rightarrow $2\frac{1}{3}$ Laps

2 Hours \Rightarrow $4\frac{2}{3}$ Laps

3.75 Hours \Rightarrow $3\frac{3}{4}$ Hours

$\times 2$

$\times 3\frac{3}{4}$

Away

3 Laps \Rightarrow \uparrow Home

$\times 4$

12 Laps = 4 Hours

$$3\frac{3}{4} \times 2\frac{1}{3} = \underline{\hspace{2cm}}$$

$\textcircled{5}$ $\frac{15}{4} \times \frac{7}{3} = \frac{35}{4}$

6) $\$20\frac{3}{4}$ an Hour } works $8\frac{1}{3}$ Home/Day
 $\$20.75$ / Hour }

\$ 20.75/Hours }

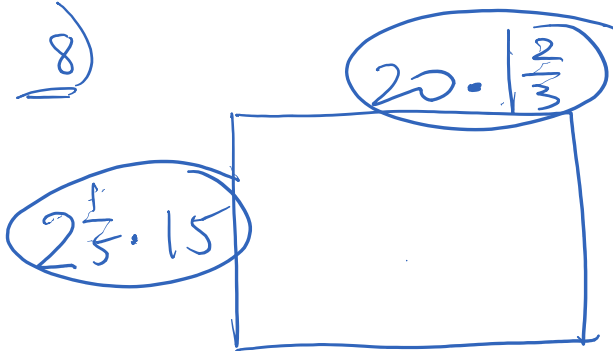
① How much $\frac{\text{save}}{\text{day}}$ = $20\frac{3}{4} \times 8\frac{1}{3} \times \frac{3}{4}$ 2

$$= \frac{83}{4} \times \frac{25}{3} \times \frac{3}{4}$$
$$= \frac{1675}{16} = \$104.68$$

② # of Days = $\frac{\$2000}{\$104.68} = 19.10 \text{ Days}$

20 Days

8)



$A = \frac{(20 \times 1\frac{2}{3}) \cdot (15 \cdot 2\frac{1}{3})}{2}$

HW 2.4

April 1, 2015 8:59 PM

Set 2a) Adding / Subtracting Fractions..

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

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

$\frac{9}{2} \times \frac{6}{5} = \frac{27}{5} \checkmark$

$6\frac{1}{3} \div \frac{3}{6} = 12\frac{2}{3}$

$\frac{8}{5} - \frac{10}{3}$
 $\frac{24}{15} - \frac{50}{15}$
 $= \frac{-26}{15} //$

$3\frac{1}{3} - \frac{9}{4}$

$3\frac{4}{12}$
 $2\frac{3}{12}$

$3\frac{4}{12} - 2\frac{3}{12}$
 $\frac{40}{12} - \frac{27}{12}$
 $= \frac{13}{12} //$

HW 2.6

November 9, 2015 2:42 PM

SECT 2.6

ex#1) $\frac{5}{6} - \frac{4}{9} \times \frac{27}{32}$

$\frac{5}{6} - \frac{3}{8}$

$\frac{20}{24} - \frac{9}{24}$

$= \frac{11}{24}$

step 1) $\frac{\overset{1}{\cancel{4}}}{\underset{1}{\cancel{9}}} \times \frac{\overset{3}{\cancel{27}}}{\underset{8}{\cancel{32}}}$
 $= \frac{3}{8}$

step 2) $\frac{5}{6} - \frac{3}{8}$

#2) $\left| \frac{3}{7} \div \left(\frac{4}{7} - \frac{1}{4} \right) \right|$

$\left| \frac{3}{7} \div \frac{9}{28} \right|$

$\frac{\cancel{10}}{\cancel{7}} \times \frac{\cancel{28}}{9} \cdot 4$

$= \frac{40}{9}$

step 1) $\frac{4}{7} - \frac{1}{4}$
 $\frac{16}{28} - \frac{7}{28}$
 $= \frac{9}{28}$

step 2) $\left| \frac{3}{7} \div \frac{9}{28} \right|$

3. $\frac{2}{2} + \frac{1}{9}, \frac{6}{9} + \frac{1}{9} = \frac{7}{9} \cdot 1$

$$\frac{3}{4} \times \frac{7}{9} = \frac{21}{36} \text{ Step 2}$$

hello
D:

$$\frac{\cancel{3}^1}{\cancel{4}_2} \times \frac{\cancel{7}_7}{\cancel{9}_3} = \frac{1 \cdot 7}{2 \cdot 3} = \frac{7}{6} \text{ Step 5}$$

$$\begin{aligned} \textcircled{1} -1 + (-6) \times \frac{2}{3} + 2 &= \\ -1 + (-\cancel{6} \times \frac{2}{\cancel{3}}) + 2 &= \\ -1 + (-4) + 2 &= \\ -1 - 4 + 2 &= \\ -5 + 2 &= -3 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \frac{3}{2} \times \frac{5}{3} \div (-2+7) &= \\ \frac{\cancel{3}}{2} \times \frac{\cancel{5}}{\cancel{3}} \times \frac{1}{5} &= \frac{1}{2} \end{aligned}$$

Amy N

$$\textcircled{3} \left(-\frac{11}{4} + \left(-\frac{2}{3}\right)\right) =$$

$$\left(-\frac{\cancel{11}}{\cancel{4}} - \frac{2}{3}\right) = -\frac{41}{12}$$

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

$$2 + \left(\frac{1}{2}\right) = 3\frac{1}{2} + 8 = \frac{23}{2}$$

$$\textcircled{6} \left(\frac{3}{2} + \frac{5}{2}\right) \div \left(-\frac{9}{5}\right) =$$

$$-\frac{8}{2} \times \frac{5}{9} = -\frac{40}{18} = -\frac{20}{9} =$$

$$\textcircled{7} 3 - \left(1 - \left(-\frac{11}{2}\right)\right)$$

$$3 - \left(1 + \frac{11}{2}\right)$$

$$3 - \left(\frac{2}{2} + \frac{11}{2}\right)$$

$$3 - \frac{13}{2} = \frac{6}{2} - \frac{13}{2} = -\frac{7}{2}$$

$$\textcircled{8} \frac{2}{5} \div \frac{1}{2} \times (-12) =$$

$$\frac{2}{5} \times \frac{2}{1} \times (-3) =$$

$$\frac{4}{5} \times (-3) = -\frac{12}{5}$$

$$\textcircled{9} 8 \div \left(-\frac{12}{7}\right) + (-4) - 3 =$$

Order of operations (A)

$$\textcircled{1} \frac{5}{2} - 2 \div 3 =$$

$$\frac{5}{2} - \frac{4}{6} = \frac{11}{6}$$

$$\textcircled{2} \frac{1}{2} \div (1 \div 1) =$$

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

$$\textcircled{3} 9 \times \frac{3}{2} - \frac{7}{2} =$$

$$\frac{27}{2} - \frac{7}{2} = \frac{20}{2}$$

$$\textcircled{4} 3^{\frac{4}{3} \times \frac{3}{2}} = 3^4$$

$$3 \times 3 \times 3 \times 3 = 81$$

$$\textcircled{5} 1 \times 3 - \frac{1}{2} =$$

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

$$\textcircled{6} \frac{3}{5} \times \frac{8}{5} + 1 = \frac{24}{5} + 1 = \frac{29}{5} =$$

$$\textcircled{7} 3 \quad (\quad) \quad (\quad)$$

$$\textcircled{4} 8 \div \left(-\frac{12}{5}\right) + (-4) - 3 =$$

$$\left(-8 \times \frac{5}{12}\right) + (-4) - 3 =$$

$$-3\frac{1}{3} - 4 - 3 = -7\frac{1}{3} - 3 = -10\frac{1}{3} = -\frac{31}{3}$$

$$\textcircled{6} \frac{1}{2} + \left(-\frac{1}{2}\right) + \frac{1}{4} - \left(-\frac{7}{6}\right) =$$

$$\frac{1}{2} - \frac{1}{2} + \frac{1}{4} + \frac{7}{6} = \frac{17}{12}$$

$$\textcircled{7} \frac{3}{2} \times (1-5)$$

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

$$\textcircled{8} \frac{1}{6} \frac{8}{3} - \frac{2}{3} =$$

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

$$\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$$

$$\textcircled{9} 3^3 \div 5 =$$

$$9 \div 5 = \frac{9}{5}$$

$$\textcircled{10} 1 \times \frac{5}{2} \div \frac{1}{2} =$$

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

$$\textcircled{11} \frac{1}{2} + 10 - 4 =$$

$$\frac{5}{10} + \frac{10}{10} = \frac{15}{10} =$$

$$\frac{30}{20} - \frac{40}{20} = -\frac{10}{20}$$

$$\textcircled{12} \left(6 - \frac{4}{3}\right) \times \frac{11}{2}$$

Name: _____

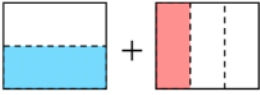
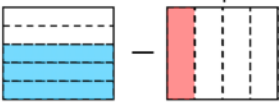
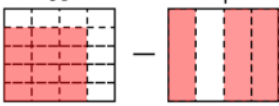
Date: _____

Math 8 Section 2a Adding and Subtracting Fractions

1. Add or Subtract the following:

<p>a) $\frac{13}{8} + \frac{6}{8} = \frac{19}{8}$ $= 2\frac{3}{8}$</p>	<p>b) $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$</p>	<p>c) $\frac{3}{4} + \frac{6}{8} =$ $\frac{3}{4} + \frac{3}{4} = \frac{6}{4}$ $= \frac{3}{2}$</p>	<p>d) $\frac{7}{3} - \frac{5}{6} =$ $\frac{14}{6} - \frac{5}{6} = \frac{9}{6}$ $= \frac{3}{2}$</p>
<p>e) $\frac{2}{5} + \frac{3}{10} =$ $\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$</p>	<p>f) $\frac{2}{3} + \frac{1}{6} =$ $\frac{4}{6} + \frac{1}{6}$ $= \frac{5}{6}$</p>	<p>g) $\frac{8}{5} - \frac{10}{3} =$ $\frac{24}{15} - \frac{50}{15}$ $= -\frac{26}{15}$</p>	<p>h) $3\frac{1}{4} - 2\frac{5}{8} =$ $3 + \frac{1}{4} - 2 - \frac{5}{8}$ $1 + \frac{1}{4} - \frac{5}{8}$ $\frac{8}{8} + \frac{2}{8} - \frac{5}{8} = \frac{5}{8}$</p>
<p>i) $2\frac{2}{3} - 1\frac{5}{12} =$ $\frac{8}{3} - \frac{17}{12}$ $\frac{32}{12} - \frac{17}{12}$ $= \frac{15}{12} = \frac{5}{4}$</p>	<p>j) $\frac{1}{3} + 2\frac{7}{8} =$ $\frac{1}{3} + \frac{23}{8}$ $\frac{8}{24} + \frac{69}{24}$ $= \frac{77}{24}$</p>	<p>k) $\frac{3}{6} + \frac{1}{4} - \frac{5}{3} =$ $\frac{6}{12} + \frac{3}{12} - \frac{20}{12}$ $\frac{9}{12} - \frac{20}{12}$ $= -\frac{11}{12}$</p>	<p>l) $\frac{7}{4} + \frac{2}{3} - \frac{7}{2} =$ $\frac{21}{12} + \frac{8}{12} - \frac{42}{12}$ $\frac{29}{12} - \frac{42}{12}$ $= -\frac{13}{12}$</p>
<p>m) $2\frac{2}{3} - \frac{1}{4} + 1\frac{1}{3} =$</p>	<p>n) $4\frac{1}{3} - 2\frac{3}{5} + 3\frac{2}{3} =$</p>	<p>o) $3\frac{5}{6} - 3\frac{3}{12} + 2\frac{2}{3} =$</p>	<p>p) $3\frac{9}{25} - 2\frac{3}{20} - 1\frac{2}{15} =$</p>

2. Evaluate the following equation by drawing area model:

<p>a)</p> $\frac{1}{2} + \frac{1}{3}$ 	<p>b)</p> $\frac{3}{5} - \frac{1}{4}$ 	<p>c)</p> $\frac{9}{16} - \frac{3}{4}$ 
<p>d) $3\frac{2}{3} - 2\frac{1}{2} =$</p>	<p>e) $4\frac{1}{2} - 3\frac{1}{4} =$</p>	<p>f) $4\frac{2}{3} - 2\frac{1}{6} =$</p>

3. When adding or subtracting two fractions, they must have the same "intnearmood" {unscramble}

denominator

4. Nelson ran $3\frac{1}{3}$ laps around a track. Charlie ran $4\frac{1}{4}$ laps. How many laps did they run in total?

$$\begin{aligned}
 3\frac{1}{3} + 4\frac{1}{4} &= \frac{91}{12} \\
 \frac{10}{3} + \frac{17}{4} &= 7\frac{7}{12} \\
 \frac{40}{12} + \frac{51}{12} &
 \end{aligned}$$

5. In a regular day, Tom spends $\frac{1}{3}$ of his day sleeping, $\frac{1}{6}$ of his day eating, $\frac{1}{8}$ of his day doing homework, $\frac{1}{12}$ of his day watching TV. The rest of the time is spent playing video games on his computer. How many hours does he spend on his computer?

$$\Rightarrow \text{sleeping} = \frac{1}{3}(24) = 8\text{h}$$

$$\text{eating} = \frac{1}{6}(24) = 4\text{h}$$

$$\text{HW} = \frac{1}{8}(24) = 3\text{h}$$

$$\text{T.V} \Rightarrow \frac{1}{12}(24) = 2\text{h}$$

VIDEO GAMES

$$= 24 - 8 - 4 - 3 - 2$$

$$= 7 \text{ hours}$$



6. One third of the students in Mr. X's class have black hair. One quarter of the students have blonde hair and one fifth of the students have brown hair. The rest of the students have red hair. What fraction of the students have red hair?

$$\text{BLACK HAIR} = \left(\frac{1}{3}\right) =$$

$$\text{Blonde HAIR} = \left(\frac{1}{4}\right)$$

$$\text{Brown " } = \left(\frac{1}{5}\right)$$

$$\text{Red HAIR} = (?)$$

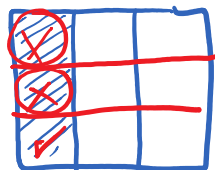
$$? = 1 - \left(\frac{1}{3}\right) - \frac{1}{4} - \frac{1}{5}$$

$$= \frac{60}{60} - \left(\frac{20}{60}\right) - \frac{15}{60} - \frac{12}{60}$$

$$? = \frac{13}{60}$$

7. About $\frac{1}{2}$ of Canada is covered in forest, and about $\frac{1}{12}$ is covered in fresh water. What fraction of Canada is not covered in either forest or fresh water?

8. One third of all the land surface of the Earth used to be covered with trees. In the last century, two thirds of all forests have been cleared. What fraction of the Earth is now covered with trees?



9. Mr. Young has a jar of Smarties. In the jar, $\frac{1}{5}$ of the Smarties are blue and $\frac{1}{6}$ are green. If there are 300

Smarties altogether, how many blue and green Smarties are in the jar?

$$\text{BLUE: } \frac{1}{5} \text{ of } 300 = 60$$

$$\text{GREEN } \frac{1}{6} \text{ of } 300 = 50$$

$$\text{Total} = 110$$

$$\left\{ \begin{array}{l} \frac{1}{5} + \frac{1}{6} \\ \frac{6}{30} + \frac{5}{30} \\ \frac{11}{30} \end{array} \right.$$

$$\frac{11}{30} \times 300 = 110$$

10. Mr. Young made a snack by combining $\frac{2}{7}$ of a bowl of raisins with $\frac{3}{5}$ of a bowl of granola, and $\frac{1}{2}$ of a bowl of yogurt. Did one bowl hold all the ingredients at one time.

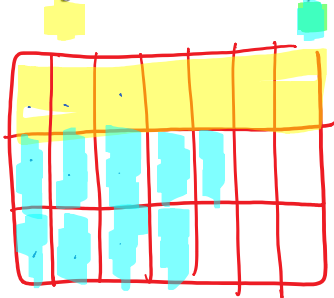
$$\frac{2}{7} + \frac{3}{5} + \frac{1}{2}$$

$$\frac{62}{35}$$

$$\frac{20}{70} + \frac{42}{70} + \frac{35}{70} = \frac{97}{70} > 1$$

↑ MORE THAN A BOWL

11. If $\frac{1}{3}$ of Canada is flat and $\frac{3}{7}$ is mountainous, what fraction of Canada is neither flat or mountainous?



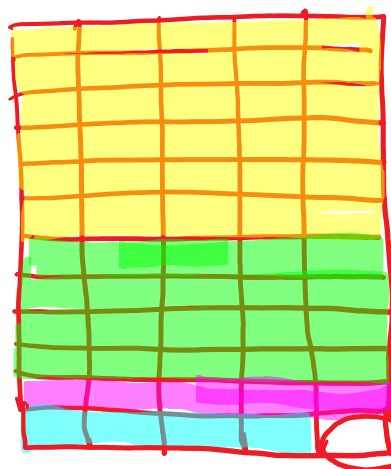
$$\frac{5}{21} \text{ NEITHER FLAT OR MTNS}$$

$$1 - \frac{1}{3} - \frac{3}{7} = \text{NEITHER}$$

$$\frac{21}{21} - \frac{7}{21} - \frac{9}{21} = \frac{5}{21}$$

12. King Arthur has a stable of horses and he plans to give them away to people in his kingdom. He gives half of them to his knights, one third to his nobles, one-twelfth to his peasants, one-fifteenth to his wives, and two of his favorite horses to Merlin the wizard. Afterwards, he rode off with his horse. How many horses did King Arthur have at the beginning?

- $\frac{1}{2}$ → KNIGHTS
- $\frac{1}{3}$ → NOBLES
- $\frac{1}{12}$ → PEASANTS
- $\frac{1}{15}$ → WIVES
- 2H → MERLIN
- 1H → HIMSELF



$$60 \times 3 = 180 \text{ HORSES}$$

SOL HW 2.b

October 25, 2016 1:25 PM

Name: _____

Date: _____

HW Section 2.b Adding and Subtracting Fractions

1. Show all your steps when adding or subtracting the following fractions

a) $\frac{9}{24} + \frac{12}{18}$	b) $\frac{45}{81} + \frac{10}{27}$
c) $\frac{7}{15} + \frac{22}{30}$	d) $\frac{12}{45} + \frac{3}{5}$
e) $\frac{13}{22} + \frac{8}{33}$	f) $\frac{16}{25} + \frac{8}{15}$
g) $\frac{17}{30} + \frac{23}{60}$	h) $\frac{22}{56} + \frac{7}{8}$
i) $\frac{11}{28} + \frac{17}{21}$	j) $\frac{23}{51} - \frac{8}{17}$

k) $\frac{5}{6} - \frac{13}{24}$	l) $\frac{37}{45} - \frac{4}{15}$
m) $\frac{17}{18} - \frac{5}{12}$	o) $\frac{17}{36} - \frac{6}{16}$
p) $\frac{13}{18} - \frac{16}{27}$	q) $\frac{65}{52} - \frac{11}{13}$
r) $5\frac{1}{2} + 2\frac{2}{3}$	s) $7\frac{9}{10} - 2\frac{16}{20}$
t) $9\frac{6}{7} - 5\frac{2}{14}$	u) $2\frac{3}{10} - 3\frac{13}{20}$

v) $5\frac{2}{3} - 2\frac{5}{8}$	w) $3\frac{1}{2} + 2\frac{1}{3} - 4\frac{1}{4}$
x) $2\frac{2}{10} - 3\frac{1}{5} + 5\frac{2}{15}$	y) $3\frac{1}{2} + 2\frac{6}{18} - 1\frac{1}{4}$
i) $1\frac{2}{12} + 2\frac{1}{4} - \frac{2}{3}$	ii) $\frac{10}{3} - \frac{22}{4} + \frac{55}{6}$
iii) $\frac{26}{5} + \frac{33}{10} - \frac{18}{20}$	iv) $\frac{34}{12} - \frac{33}{18} + \frac{35}{24}$

- 2 The number represented by \square so that $\frac{1}{2} + \frac{1}{4} = \frac{\square}{12}$ is
(A) 3 (B) 12 (C) 9 (D) 6 (E) 15

- 3 Consider the set of fractions $\{\frac{3}{7}, \frac{3}{2}, \frac{6}{7}, \frac{3}{5}\}$. Ordered from smallest to largest, the set is
(A) $\{\frac{3}{7}, \frac{3}{5}, \frac{6}{7}, \frac{3}{2}\}$ (B) $\{\frac{3}{2}, \frac{3}{5}, \frac{6}{7}, \frac{3}{7}\}$ (C) $\{\frac{3}{2}, \frac{3}{5}, \frac{3}{7}, \frac{6}{7}\}$
(D) $\{\frac{3}{5}, \frac{3}{7}, \frac{6}{7}, \frac{3}{2}\}$ (E) $\{\frac{3}{7}, \frac{3}{5}, \frac{3}{2}, \frac{6}{7}\}$

- 4 The largest number in the list $\{\frac{3}{10}, \frac{9}{20}, \frac{12}{25}, \frac{27}{50}, \frac{49}{100}\}$ is
(A) $\frac{3}{10}$ (B) $\frac{9}{20}$ (C) $\frac{12}{25}$ (D) $\frac{27}{50}$ (E) $\frac{49}{100}$

- 5 The smallest number in the set $\{\frac{1}{2}, \frac{2}{3}, \frac{1}{4}, \frac{5}{6}, \frac{7}{12}\}$ is
(A) $\frac{1}{2}$ (B) $\frac{2}{3}$ (C) $\frac{1}{4}$ (D) $\frac{5}{6}$ (E) $\frac{7}{12}$

- 6 The number 0.2012 is between
(A) 0 and $\frac{1}{10}$ (B) $\frac{1}{10}$ and $\frac{1}{5}$ (C) $\frac{1}{5}$ and $\frac{1}{4}$ (D) $\frac{1}{4}$ and $\frac{1}{3}$ (E) $\frac{1}{3}$ and $\frac{1}{2}$

- 7 Ronald buys a pizza cut into 12 equal parts. He then cuts each part into 2 equal pieces. If he eats 3 of these pieces, what fraction of the pizza does he eat?
(A) $\frac{1}{24}$ (B) $\frac{1}{2}$ (C) $\frac{3}{8}$ (D) $\frac{1}{6}$ (E) $\frac{1}{8}$

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Math 8 Section 2.1 Multiplying Fractions with Manipulatives:

1. Given that one hexagon is equal to one unit, shade in each of the following fractions:

a) $\frac{1}{6}$ 	b) $\frac{1}{3}$ 	c) $\frac{1}{2}$ 	d) $\frac{2}{3}$ 	e) $\frac{5}{6}$
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2. Indicate the fraction represented by each of the shaded areas. Reduce the fraction to lowest terms:

a) $= \frac{1}{4}$	b) $= \frac{1}{6}$	c) $= \frac{4}{9}$	d) $\frac{3}{6} = \frac{1}{2}$	e) $= \frac{5}{7}$
f) $= \frac{4}{14}$	g) $= \frac{1}{8}$	h) $= \frac{5}{6}$	i) $= \frac{3}{6} = \frac{1}{2}$	j) $= \frac{7}{8}$
k) $= 2$	l) $= 1\frac{1}{3}$	m) $= \frac{7}{12}$	n) $= \frac{2}{3}$	o) $= \frac{12}{36} = \frac{2}{3}$

3. Given each of the diagram, write the multiplication statement and then draw the answer with the space given:

a) $6 \times \frac{1}{3} = \frac{6}{3} = 2$	b) $= 7 \times \frac{1}{6} = \frac{7}{6} = 1\frac{1}{6}$
c) $6 \times \frac{1}{3} = \frac{6}{3} = 2$	d) $4 \times \frac{3}{4} = \frac{12}{4} = 3$
e) $6 \times \frac{3}{7} = \frac{18}{7} = 2\frac{4}{7}$	f) $12 \times \frac{4}{6} = \frac{48}{6} = 8$

4. Determine the product for each of the following. Simplify your answer:

a) $6 \times \frac{2}{3} = \frac{12}{3} = 4$	b) $8 \times \frac{3}{4} = \frac{24}{4} = 6$	c) $15 \times \frac{3}{5}$	d) $27 \times \frac{8}{9}$
e) $4 \times \frac{11}{3}$	f) $9 \times \frac{4}{12}$	g) $10 \times \frac{3}{24}$	h) $10 \times \frac{8}{5} \times \frac{4}{9}$
i) $100 \times \frac{9}{25} \times \frac{15}{18}$	j) $23 \times \frac{22}{44} \times \frac{12}{46}$	k) $\frac{18}{3} \times \frac{2}{3} \times \frac{12}{9} \times \frac{8}{24}$	l) $16 \times \frac{22}{12} \times \frac{27}{25} \times \frac{15}{18}$

5. Johnny bought six chicken pot pies from Costco. He only ate $\frac{3}{5}$ of each pie because he shared every one of them with his girlfriend. How many chicken pot pies did he eat in total?
6. Sandy has \$3000 in her bank account. $\frac{5}{6}$ of the money is for tuition. How much money will she have left after paying her tuition?
7. There are 60 students in Mr. Lee's class. $\frac{1}{5}$ of the students black hair, $\frac{1}{3}$ have blonde, and the rest have brown hair. How many students have brown hair?
8. Challenge: Amy, Betty, and Graham ran for Student Council president. Amy won with $\frac{9}{20}$ of the votes, Betty got $\frac{2}{5}$, and Graham got $\frac{3}{20}$. If 20 people had switched their vote from Graham to Betty, then Betty would have ended up with 1 more vote than Amy. How many people voted?