HW SOL 2.1

October 25, 2016   1:55 PM

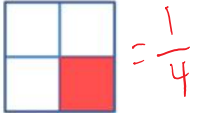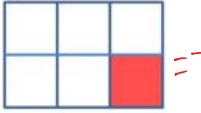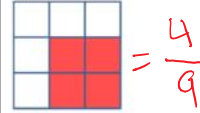Name:_**Key by: Crystal Wu**_   Date:_**Oct.25,2016**_
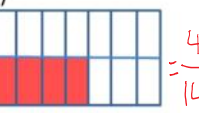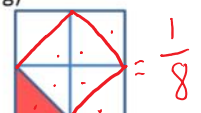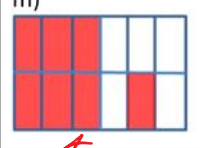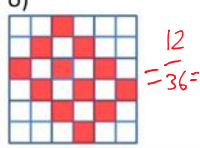
Math 8 Section 2.1 Multiplying Fractions with Manipulatives:
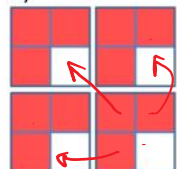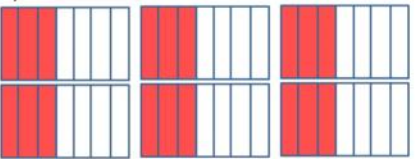
1. Given that one hexagon is equal to one unit, shade in each of the following fractions:

a) ⅙	b) ⅓	c) ½	d) ⅔	e) ⅚

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) $4\times\frac{1}{2}=2$ (2)	L) $4\times\frac{1}{3}$ $=1\frac{1}{3}$	m) $\frac{7}{12}$	n) $=\frac{2}{3}$	o) $\frac{12}{36}=\frac{1}{3}$

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

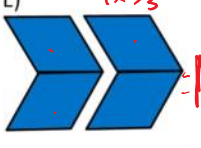| a) $\frac{6}{1}\times\frac{1}{3}=\frac{6}{3}=2$	b) $=7\times\frac{1}{6}=\frac{7}{6}=1\frac{1}{6}$
c) $6\times\frac{1}{3}=\frac{6}{3}=2$	d) $4\times\frac{3}{4}=\frac{12}{4}=3$
e) $6\times\frac{3}{7}=\frac{18}{7}=2\frac{4}{7}$	f) $12\times\frac{4}{6}=\frac{48}{6}=8$

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

a) $6 \times \dfrac{2}{3} = \dfrac{12}{3} = 4$	b) $8 \times \dfrac{3}{4} = \dfrac{24}{4} = 6$	c) $15 \times \dfrac{3}{5} = \dfrac{9}{1} = 9$	d) $27 \times \dfrac{8}{9} = 24$
e) $4 \times \dfrac{11}{3} = \dfrac{44}{3}$	f) $9 \times \dfrac{4}{12} = 3$	g) $10 \times \dfrac{3}{24} = \dfrac{5}{4}$	h) $10 \times \dfrac{8}{5} \times \dfrac{4}{9} = \dfrac{64}{9}$
i) $100 \times \dfrac{9}{25} \times \dfrac{15}{18} = \dfrac{30}{1}$ $= 30$	j) $23 \times \dfrac{22}{44} \times \dfrac{12}{46} = \dfrac{3}{1}$	k) $\dfrac{18}{3} \times \dfrac{12}{9} \times \dfrac{8}{24} = \dfrac{16}{9}$	l) $16 \times \dfrac{22}{12} \times \dfrac{27}{25} \times \dfrac{15}{18} = \dfrac{132}{5}$

$$\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \cdots\cdots \frac{99}{100}$$

5. Johnny bought six chicken pot pies from Costco. He only ate 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?
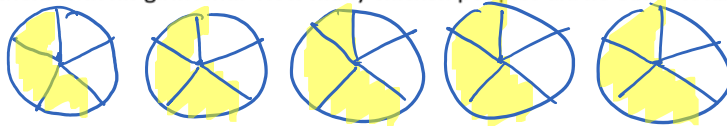
15 PIECES, 5 PIECE PER PIE

SO $\dfrac{15}{5} = 3$ PIES

6. Sandy has $3000 in her bank account. 5/6 of the money is for tuition. How much money will she have left after paying her tuition?

TUITION: $3000 \times \dfrac{5}{6} = 2500$

LEFT $= \$3000 - 2500$
$= \$500$

7. There are 60 students in Mr. Lee's class. 1/5 of the students black hair, 1/3 have blonde, and the rest have brown hair. How many students have brown hair?
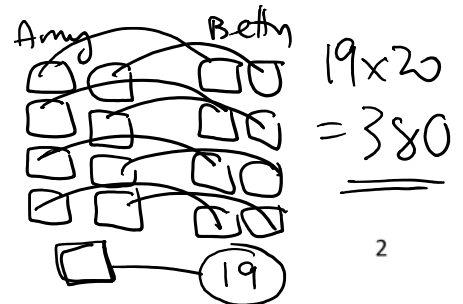
① BLACK HAIR   ② BLONDE   ③ REST BROWN HAIR
$\dfrac{1}{5} \times 60 = 12$ $\dfrac{1}{3} \times 60 = 20$ $60 - 12 - 20 = 28$

8. Challenge: Amy, Betty, and Graham ran for Student Council president. Amy won with $\dfrac{9}{20}$ of the votes, Betty got $\dfrac{2}{5}$, and Graham got $\dfrac{3}{20}$. 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?

Amy $= \dfrac{9}{20}$

Betty: $\dfrac{2}{5} = \dfrac{8}{20}$

Graham: $\dfrac{3}{20}$

A	A	Ⓐ	B	B
A	A	B	B	G
A	A	B	B	G
A	A	B	B	G

$19 \times 20 = 380$

Betty $\dfrac{8}{20}$: $+20 =$ Amy $\dfrac{9}{20} + 1$

2

$$\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} \times \frac{6}{7} \times \cdots \cdots \frac{99}{100} = \frac{1}{3}$$