HW SOL 2.2

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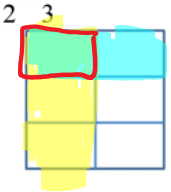
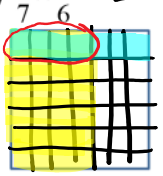
Name:_____ Date:_____

Math 8 HW Section 2.2 Multiplying Proper Fractions

1. Simplify each of the fractions to lowest terms:

a) $\frac{8}{12} = \frac{2}{3}$	b) $\frac{15}{25} = \frac{3}{5}$	c) $\frac{24}{36} = \frac{2}{3}$	d) $\frac{36}{63} = \frac{4}{7}$	e) $\frac{56}{49} = \frac{8}{7}$	f) $\frac{48}{84} = \frac{4}{7}$
g) $\frac{65}{117} = \frac{5}{9}$	h) $\frac{150}{105} = \frac{10}{7}$	i) $\frac{224}{36} = \frac{56}{9}$	j) $\frac{24}{96} = \frac{1}{4}$	k) $\frac{81}{135} = \frac{3}{5}$	L) $\frac{720}{1080} = \frac{2}{3}$

2. Multiply each of the following by using the area model:

a) $\frac{1}{2} \times \frac{1}{3}$  $= \frac{1}{6}$	b) $\frac{2}{3} \times \frac{4}{5}$  $= \frac{8}{15}$	c) $\frac{4}{7} \times \frac{1}{6}$  $= \frac{4}{42} = \frac{2}{21}$

3. Multiply each of the following without a calculator:

a) $\frac{2}{3} \times \frac{4}{5}$ $= \frac{8}{15}$	b) $\frac{4}{6} \times \frac{3}{4}$ $= \frac{1}{2}$	c) $\frac{12}{7} \times \frac{14}{9}$ $= \frac{8}{3}$	d) $\frac{25}{24} \times \frac{16}{15}$ $= \frac{10}{9}$
e) $\frac{12}{18} \times \frac{27}{15}$ $= \frac{2 \times 3}{2 \times 5} = \frac{6}{5}$	f) $\frac{45}{39} \times \frac{26}{27}$ $= \frac{10}{9}$	g) $\frac{55}{56} \times \frac{48}{45}$ $= \frac{11 \times 6}{7 \times 9} = \frac{22}{21}$	h) $\frac{12}{28} \times \frac{15}{8} \times \frac{2}{9}$ $= \frac{3 \times 5 \times 1}{7 \times 4 \times 3} = \frac{5}{28}$
i) $\frac{77}{14} \times \frac{45}{11} \times \frac{12}{81}$ $= \frac{7 \times 5 \times 6}{7 \times 1 \times 9} = \frac{10}{3}$	j) $\frac{26}{24} \times \frac{12}{14} \times \frac{56}{65}$ $= \frac{2 \times 1 \times 4}{2 \times 1 \times 5} = \frac{4}{5}$	k) $\frac{25}{21} \times \frac{54}{11} \times \frac{28}{15} \times \frac{22}{18}$ $= \frac{5 \times 6 \times 4}{3 \times 1 \times 3} = \frac{40}{3}$	l) $\frac{14}{27} \times \frac{18}{40} \times \frac{36}{15} \times \frac{32}{21}$ $= \frac{2 \times 2 \times 4}{3 \times 5 \times 1} = \frac{64}{75}$

4. Johnny's gas tank is 8/15 full. He uses ¾ of the gas he has to drive to work. If his car can hold 90L of gas, how much gas did he use to get to work?

① $90 \times \frac{8}{15} = 48L$ ② $48 \times \frac{3}{4} = 36L$

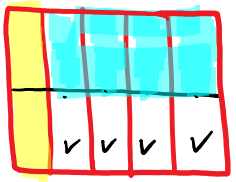
5. 4/5 of the students are passing in Science class and 1/3 of these students are getting A's. What fractions of students are getting A's?

$N \times \frac{4}{5} \times \frac{1}{3} = N \times \frac{4}{15}$ $\frac{4}{15} = \frac{8}{30} = \frac{12}{45}$

6. In Mr. T's class of 60 students, a quarter of them have blonde hair and three-fifths of them are boys. How many students in Mr. T's class are boys with blonde hair?

$60 \times \frac{1}{4} \times \frac{3}{5} = 9$

7. Albert spent 1/5 of his savings on a new computer. Later that week, he spent ½ of the rest on another desktop computer. What fraction of his original savings did he have left?



$\frac{4}{10} = \frac{2}{5}$

① AFTER 1st computer: $1 - \frac{1}{5} = \frac{4}{5}$

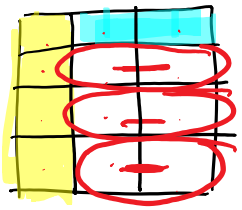
② AFTER 2nd computer $\frac{4}{5} \times \frac{1}{2} = \frac{2}{5}$

8. Jenny has a purse of coins. 3/7 of the coins are pennies. 1/8 of the other coins are quarters. If there are 14 quarters, how many coins pennies does she have?

EACH BOX = 2 COINS

24 BOXES PENNIES ⇒ 48 PENNIES

9. Shirley bought a bunch of donuts and left it in the common room. Mike arrives and eats 1/3 of all the donuts. Then Eva arrives and eats ¼ of what remained. If there was 3 donuts left, how many donuts did Shirley buy?



6 DONUTS