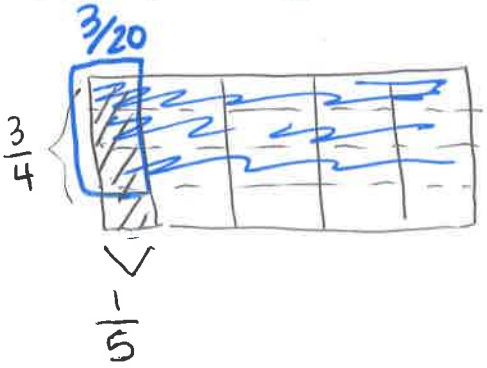
Module 4 Review - Answer Key

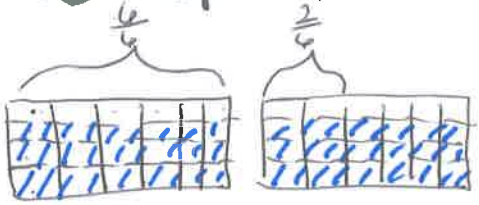
Name/# _____

A. Multiply or divide. Draw a model to explain your thinking.

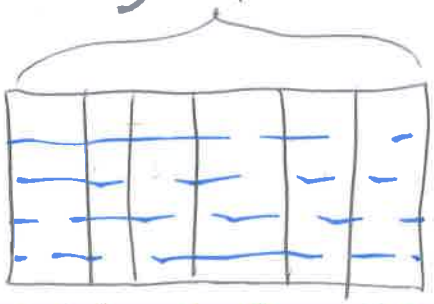
1. $\frac{3}{4}$ of $\frac{1}{5} = \frac{1}{5} \times \frac{3}{4} = \boxed{\frac{3}{20}}$



2. $1\frac{2}{6} \times \frac{3}{4} = \frac{8}{6}^{4} \times \frac{3}{4} = \frac{12}{12} = \frac{1}{1} = \boxed{1}$

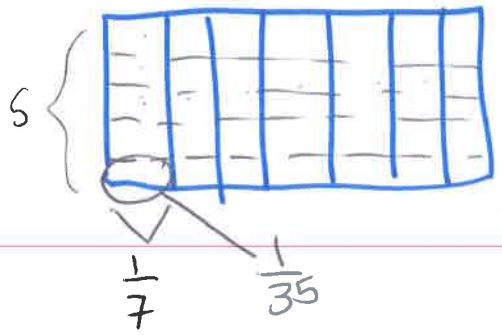


3. $6 \div \frac{1}{5} = \boxed{30}$



$6 \div \frac{1}{5} = 6 \times \frac{5}{1} = 30$

4. $\frac{1}{7} \div 5 = 7 \times \frac{1}{5} = \boxed{\frac{1}{35}}$



B. Estimate first. Then solve. Check your answer with multiplication.

5. $14 \div 0.02 = 700$ Think how many pennies!

① $14 \overset{\times 100}{\div} 0.02 \overset{\times 100}{}$

② $1400 \div 2 \approx 700$

③ $2\overline{)1400}$ → 700, -14, 000

④ $700 \times .02 = 14.00$

⑤ $\boxed{700}$

6. $57.6 \div 2.4 = \boxed{24}$

① $57.6 \overset{\times 10}{\div} 2.4 \overset{\times 10}{}$

② $576 \div 24$

$24\overline{)576}$ → 24, -48, 96, -96, 0

③ 24×2.4

24
×2.4
96
480
576

7. $1.4 \div 0.2 = 7$

① $1.4 \overset{\times 10}{\div} 0.2 \overset{\times 10}{} = 14 \div 2 \approx 7$

② $2\overline{)14}$ → 7, -14, 0

③ $0.2 \times 7 = 1.4$

④ $\boxed{7}$

C. Fill in the chart by writing an equivalent expression. You do not need to evaluate.

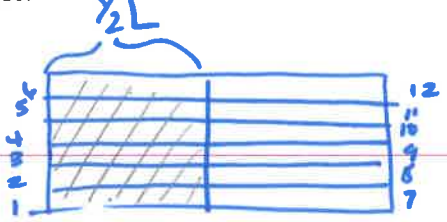
(8)	one third the sum of $\frac{1}{7}$ and $\frac{1}{5}$	$\frac{1}{3} \times (\frac{1}{7} + \frac{1}{5})$
(9)	one fifth the difference of $\frac{1}{2}$ and $\frac{1}{3}$	$\frac{1}{5} \times (\frac{1}{2} - \frac{1}{3})$
(10)	twenty-eight divided by the sum of $1\frac{2}{3}$ and $\frac{1}{4}$	$28 \div (1\frac{2}{3} + \frac{1}{4})$ or $\frac{28}{(1\frac{2}{3} + \frac{1}{4})}$
(11)	Three and a half times the difference of 11 and 9	$3\frac{1}{2} \times (11-9)$ or $3.5 \times (11-9)$

D. Solve. Show all steps, label, & write your answer in a sentence.

1. Ms. Hayes has $\frac{1}{2}$ liter of juice. She distributes it equally to 6 students in her tutoring group.

   a. How many liters of juice does each student get?

$\frac{1}{2} \div 6$



Each student gets $\frac{1}{12}$ L.

   b. How many more liters of juice will Ms. Hayes need if she wants to give each of the 24 students in her class the same amount of juice found in Part (a)?

$\frac{1}{12}$

$1\frac{1}{2} \times 24$ students

$\frac{1}{12} \times \frac{24}{1} = 2$ Liters

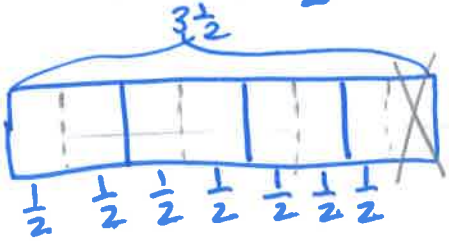
She'll need 2L for all 24 students but she already has $\frac{1}{2}$L.

$2 - \frac{1}{2} = 1\frac{1}{2}$. She still needs to buy $1\frac{1}{2}$L of juice.

2. Lucia has 3.5 hours left in her workday as a car mechanic. Lucia needs $\frac{1}{2}$ of an hour to complete one oil change.

a. How many oil changes can Lucia complete during the rest of her workday?

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



She can complete 7 more oil changes in the rest of her workday.

b. Lucia can complete two car inspections in the same amount of time it takes her to complete one oil change. How long does it take her to complete one car inspection?

One oil change = $\frac{1}{2}$ hr or 30 min

$\frac{1}{2} \div 2 = \frac{1}{4}$ hr

or

$\frac{30}{2}$ / $30 \div 2 = 15$ min

It takes 15 min or $\frac{1}{4}$ an hour to complete one car inspection.

c. How many inspections can she complete in the rest of her workday?

① inspection = $\frac{1}{4}$ hr or 15 min
3.5 hrs left in workday

② $3.5 \div \frac{1}{4}$

③ $3.5 \div 0.25$
(×100) (×100)

$25\overline{)350}$ = 14
25
100

④ $14 \times \frac{1}{4} = \frac{14}{4} = 3\frac{2}{4} = 3\frac{1}{2}$

She can do 14 more car inspections in 3.5 hrs.

Or since she does 7 oil changes & does 2 car inspections in the same time, $7 \times 2 = 14$.