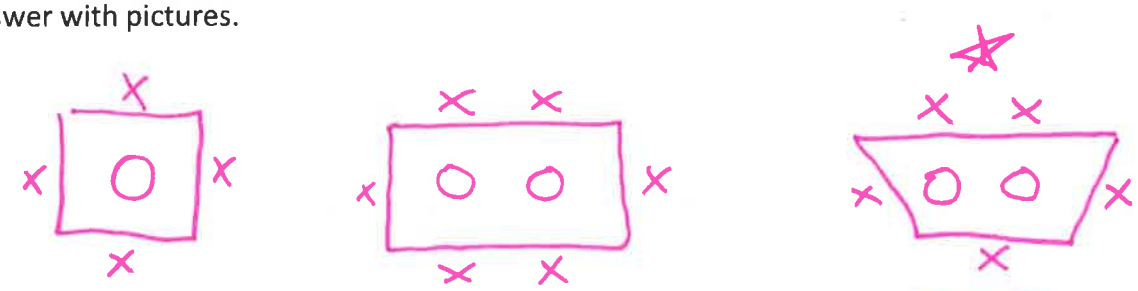
Lesson 3 Application Problem 5.4

Hudson is choosing a seat in art class. He scans the room and sees a 4-person table with 1 bucket of art supplies, a 6-person table with 2 buckets of supplies, and a 5-person table with 2 buckets of supplies. Which table should Hudson choose if he wants the largest share of art supplies? Support your answer with pictures.



$\frac{1}{4} < \frac{2}{6} < \boxed{\frac{2}{5}}$

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

$\frac{2}{6}$ $\qquad$ $\frac{2}{5}$

$\frac{10}{30} < \frac{12}{30}$

Hudson should sit at the 5 Person table with 2 bucket(s).

Read **Draw** **Write**

M4 · L3 ~ Interpret a Fraction as Division

Fluency-

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

$5 \div 2 = \frac{5}{2} = 2\frac{1}{2}$ $13 \div 5 = \frac{13}{5} = 2\frac{3}{5}$ $7 \div 6 = \frac{7}{6} = 1\frac{1}{6}$

$17 \div 4 = \frac{17}{4} = 4\frac{1}{4}$ $\frac{4}{3} = 4 \div 3 = 1\frac{1}{3}$ $\frac{13}{2} = 13 \div 2 = 6\frac{1}{2}$

$\frac{23}{4} = 23 \div 4 = 5\frac{3}{4}$ $\frac{32}{5} = 32 \div 5 = 6\frac{2}{5}$

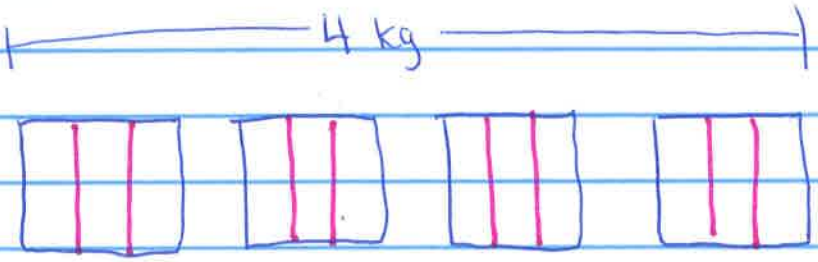
$\frac{1}{10} = 0.1$ $\frac{2}{10} = 0.2$ $\frac{3}{10} = 0.3$ $\frac{7}{10} = 0.7$ $\frac{5}{10} = 0.5$

$0.1 = \frac{1}{10}$ $0.2 = \frac{2}{10}$ $0.4 = \frac{4}{10}$ $0.8 = \frac{8}{10}$ $0.6 = \frac{6}{10}$

M4.L3

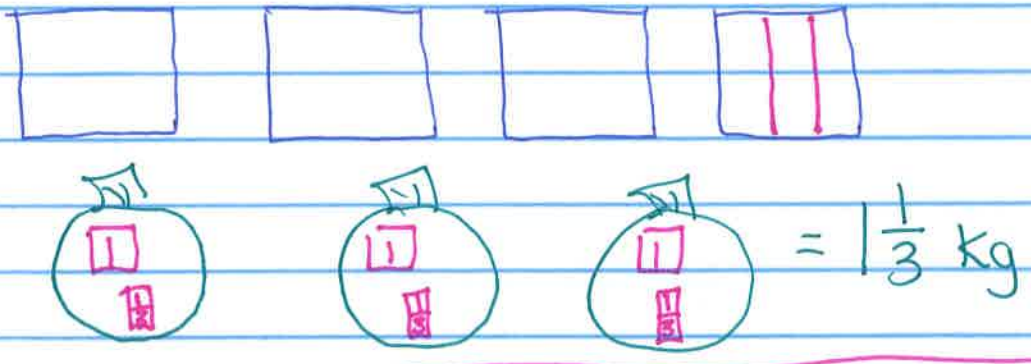
A baker poured 4 kg of oats equally into 3 bags. What is the weight of each bag of oats?

4 ÷ 3



12 thirds ÷ 3 = 4 thirds $\frac{4}{3}$ per bag

4÷3

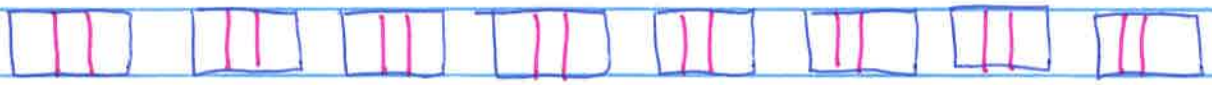


$$\begin{array}{r} 1\frac{1}{3} \\ 3\overline{)\,4} \\ -3 \\ \hline 1 \end{array}$$

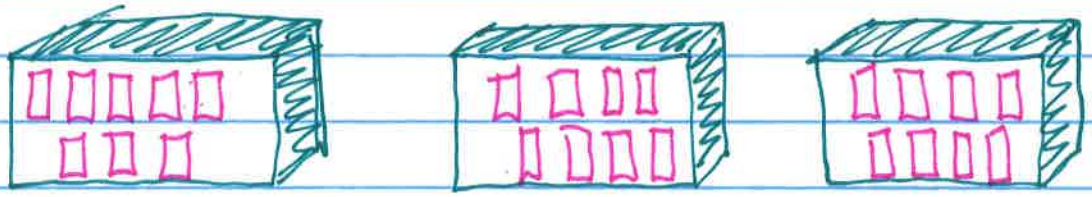
$$\begin{aligned} 3 \times 1\tfrac{1}{3} &= 1\tfrac{1}{3} + 1\tfrac{1}{3} + 1\tfrac{1}{3} \\ &= 3 + \tfrac{3}{3} \\ &= 3 + 1 \\ &= 4 \end{aligned}$$

If the baker doubles the number of Kg of oats to be poured equally into 3 bags, what is the weight of each bag of oats?

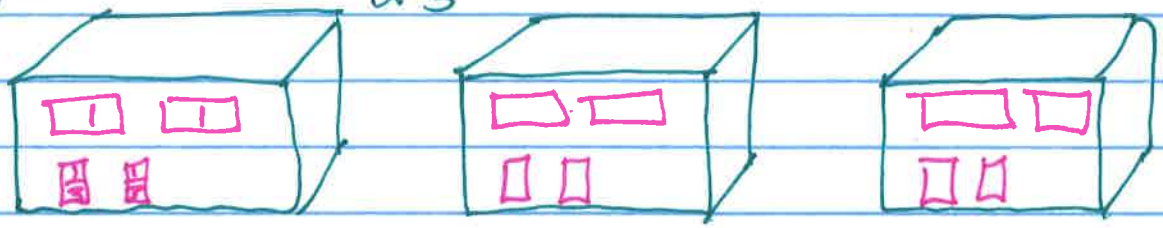
$8 \div 3$

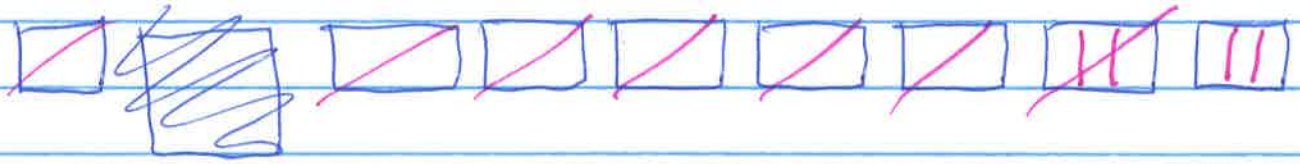


24 thirds $\div$ 3 = 8 thirds = $\frac{8}{3}$



$8 \div 3 =$ $2\frac{1}{3}$





$$\begin{array}{r} 2\frac{2}{3} \\ 3\overline{)\,8} \\ -6 \\ \hline 2 \end{array}$$

$$\begin{aligned} 3 \times 2\tfrac{2}{3} &= 2\tfrac{2}{3} + 2\tfrac{2}{3} + 2\tfrac{2}{3} \\ &= 6 + \tfrac{6}{3} \\ &= 6 + 2 \\ &= 8 \end{aligned}$$

The baker doubles the number of kg of oats again, and they are poured equally into 3 bags, what is the weight of each bag?

$16 \div 3$

$$\begin{array}{r} 5\frac{1}{3} \\ 3\overline{)16} \\ -15 \\ \hline 1 \end{array}$$

$$\begin{aligned} & 3 \times 5\tfrac{1}{3} \\ &= 5\tfrac{1}{3} + 5\tfrac{1}{3} + 5\tfrac{1}{3} \\ &= 15 + \tfrac{3}{3} \\ &= 15 + 1 \\ &= 16 \end{aligned}$$

Name _____ Date _____

1. Fill in the chart. The first one is done for you.

Division Expression	Unit Forms	Improper Fraction	Mixed Numbers	Standard Algorithm (Write your answer in whole numbers and fractional units. Then check.)
a. $5 \div 4$	20 fourths ÷ 4 = 5 fourths	$\frac{5}{4}$	$1\frac{1}{4}$	$4\overline{)5}$ → $1\frac{1}{4}$, -4, 1 Check $4 \times 1\frac{1}{4} = 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4}$ $= 4 + \frac{4}{4}$ $= 4 + 1$ $= 5$
b. $3 \div 2$	6 halves ÷ 2 = 3 halves	$\frac{3}{2}$	$1\frac{1}{2}$	$2\overline{)3}$ → $1\frac{1}{2}$, -2, 1 $2 \times 1\frac{1}{2} =$ $= 1\frac{1}{2} + 1\frac{1}{2}$ $= 2 + \frac{2}{2}$ $= 2 + 1$ $= 3$
c. $6 \div 4$	24 fourths ÷ 4 = 6 fourths	$\frac{6}{4}$ $1\frac{2}{4}$ $1\frac{1}{2}$		$4\overline{)6}$ → $1\frac{2}{4}$, $\frac{4}{2}$ $4 \times 1\frac{1}{2}$ $= 1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2}$ $= 4 + \frac{4}{2}$ $= 4 + 2$ $= 6$
d. $5 \div 2$	10 halves ÷ 2 = 5 halves	$\frac{5}{2}$	$2\frac{1}{2}$	$2\overline{)5}$ → $2\frac{1}{2}$, -4, 1 $2 \times 2\frac{1}{2}$ $= 2\frac{1}{2} + 2\frac{1}{2}$ $= 4 + \frac{2}{2}$ $= 4 + 1$ $= 5$