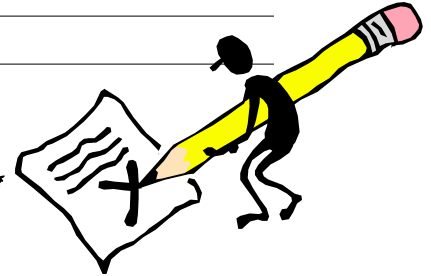


Math Journal



Learning Target

I can represent and solve division problems requiring decomposing a remainder in the tens.

DIVISION WITH DECOMPOSITION

When multiplying, we are often required to regroup, which involves bundling groups of ten and shifting them to the next place. When dividing, sometimes a similar process is necessary, requiring mathematicians to decompose (unbundle / break apart) numbers, again by tens.

Divide two-digit numbers by one-digit numbers using place value discs, regrouping in the tens.

$$3 \div 2 = m$$

Place Value Discs

T	O
	...

2 groups

Standard Algorithm

$$\begin{array}{r} \\ 2 \overline{) 3} \end{array}$$

$$30 \div 2 = m$$

Place Value Discs

T	O
...	

2 groups

Standard Algorithm

$$\begin{array}{r} \\ 2 \overline{) 30} \end{array}$$

Check:

Check:

Reflect:

How do the place value discs help you understand how the standard algorithm works?

Noticings

I notice...



Represent the problem using place value discs and connect it to the standard algorithm.

$4 \div 3 = m$

T	O
	••••

Standard Algorithm

$$3 \overline{) 4}$$

3 groups

$42 \div 3 = m$

T	O
••••	••

Standard Algorithm

$$3 \overline{) 42}$$

3 groups

$84 \div 3 = m$

T	O
••••	••••

Standard Algorithm

$$3 \overline{) 84}$$

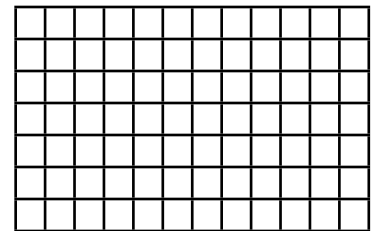
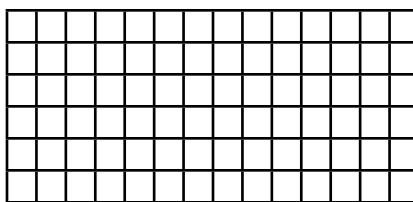
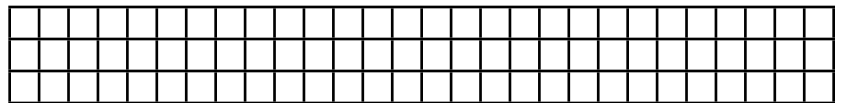
3 groups

$84 \div 3 = m$

Fraction

$$\frac{84}{3} = m$$

Area Model



Mots Mathématiques

Decomposition: the process of breaking apart numbers

$$349 = 300 + 40 + 9$$

300	40	9
-----	----	---

or

1 ten = 10 ones

T	O
•	•••••

Represent the problem using place value discs and connect it to the long division standard algorithm. Check your answer using multiplication.

$5 \div 2 = m$

Place Value Discs	
T	O

Standard Algorithm

$$2 \overline{) 5}$$

2 groups

$50 \div 2 = m$

Place Value Discs	
T	O
.....	

Standard Algorithm

$$2 \overline{) 50}$$

2 groups

$$\begin{array}{r} 5 \\ \hline 2 \end{array} =$$

$$\begin{array}{r} 50 \\ \hline 2 \end{array} =$$

Check:

Check:

$7 \div 3 = m$

Place Value Discs	
T	O

Standard Algorithm

$$3 \overline{) 7}$$

3 groups

$75 \div 3 = m$

Place Value Discs	
T	O
.....

Standard Algorithm

$$3 \overline{) 75}$$

3 groups

$$\begin{array}{r} 7 \\ \hline 3 \end{array} =$$

$$\begin{array}{r} 75 \\ \hline 3 \end{array} =$$

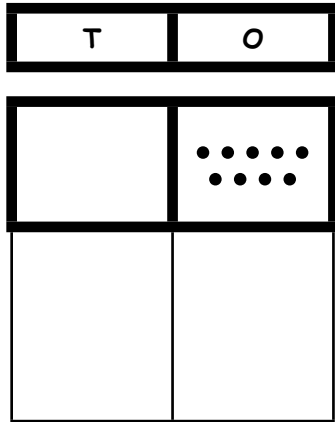
Check:

Check:

Represent the problem using place value discs and connect it to the long division standard algorithm. Check your answer using multiplication.

$$9 \div 4 = m$$

Place Value
Discs



Standard
Algorithm

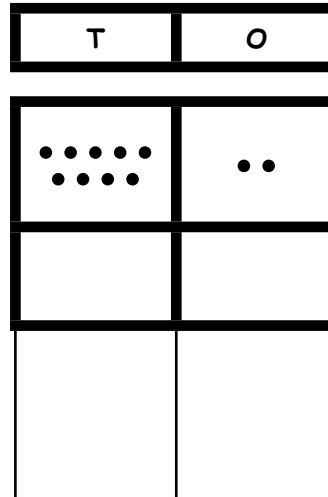
$$4 \overline{) 9}$$

$$\begin{array}{r} 9 \\ \underline{4} \\ 4 \end{array} =$$

Check:

$$92 \div 4 = m$$

Place Value
Discs



Standard
Algorithm

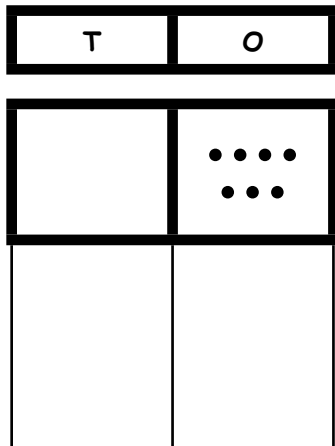
$$4 \overline{) 92}$$

$$\begin{array}{r} 92 \\ \underline{4} \\ 4 \end{array} =$$

Check:

$$7 \div 2 = m$$

Place Value
Discs



Standard
Algorithm

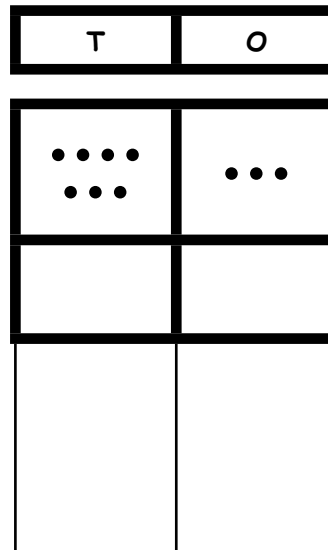
$$2 \overline{) 7}$$

$$\begin{array}{r} 7 \\ \underline{2} \\ 2 \end{array} =$$

Check:

$$73 \div 2 = m$$

Place Value
Discs



Standard
Algorithm

$$2 \overline{) 73}$$

$$\begin{array}{r} 73 \\ \underline{2} \\ 2 \end{array} =$$

Check:

Represent the problem using place value discs and connect it to the long division standard algorithm. Check your answer using multiplication.

$$6 \div 4 = m$$

Place Value
Discs

T	O
	•••

Standard
Algorithm

$$4 \overline{) 6}$$

$$\begin{array}{r} 6 \\ \underline{4} \\ 4 \end{array} =$$

Check:

$$62 \div 4 = m$$

Place Value
Discs

T	O
•••	••

Standard
Algorithm

$$4 \overline{) 62}$$

$$\begin{array}{r} 62 \\ \underline{4} \\ 4 \end{array} =$$

Check:

$$8 \div 3 = m$$

Place Value
Discs

T	O
	••••

Standard
Algorithm

$$3 \overline{) 8}$$

$$\begin{array}{r} 8 \\ \underline{3} \\ 3 \end{array} =$$

Check:

$$84 \div 3 = m$$

Place Value
Discs

T	O
••••	••••

Standard
Algorithm

$$3 \overline{) 84}$$

$$\begin{array}{r} 84 \\ \underline{3} \\ 3 \end{array} =$$

Check:

Homeroom: R

Name: _____

Date: _____



Show the division using discs. Relate your work on the place value chart to long division. Check your quotient and remainder by using multiplication and addition.

$$5 \div 4$$

Check:

T	O
---	---

$$4 \overline{) 5}$$

$$56 \div 4$$

Check:

T	O
---	---

$$4 \overline{) 56}$$

