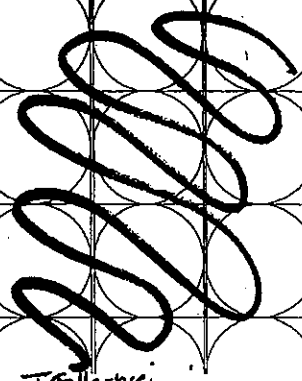


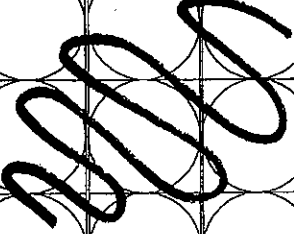
$5 \times 3 =$

$9 \times 3 =$
 $3 \times 9 =$



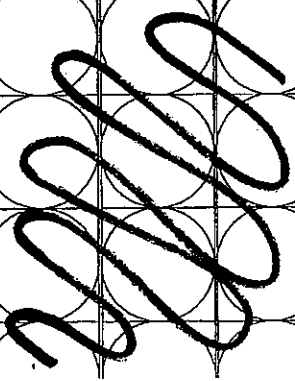
$4 \times 3 =$

$10 \times 3 =$



$3 \times 4 =$

$3 \times 10 =$

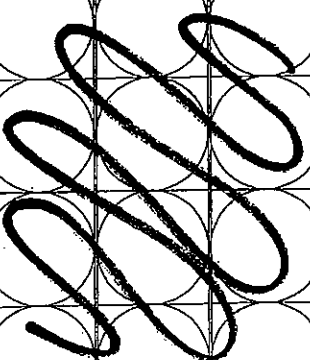


$5 \times 3 =$

$8 \times 3 =$

$3 \times 5 =$

$3 \times 8 =$



$6 \times 3 =$

$7 \times 3 =$

$3 \times 6 =$

$3 \times 7 =$



$4 \times 6 =$

$6 \times 4 =$

$4 \times 5 =$

$5 \times 4 =$

$4 \times 4 =$

$4 \times 7 =$

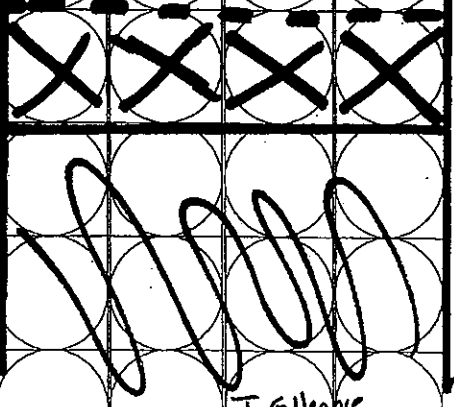
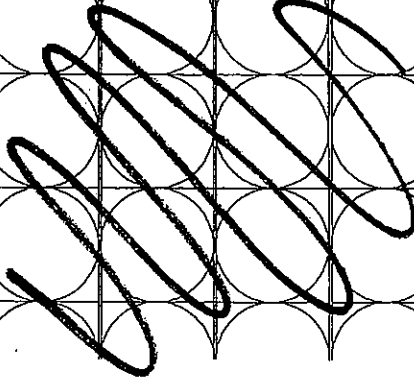
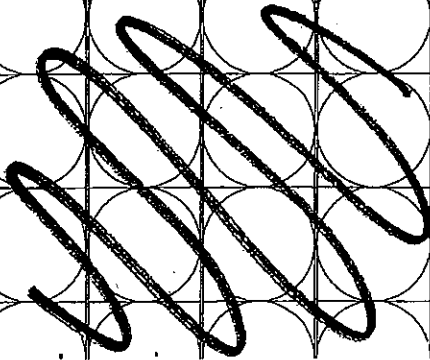
$7 \times 4 =$

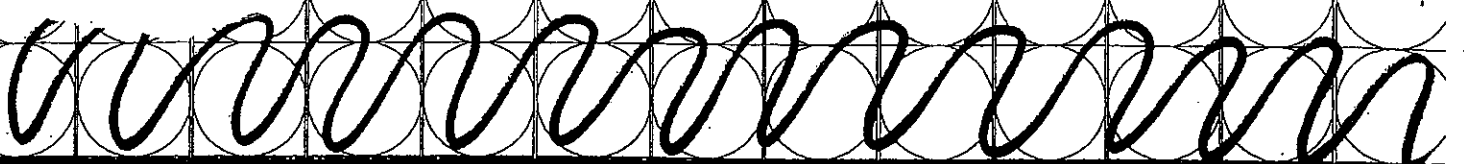
$4 \times 8 =$

$8 \times 4 =$

$4 \times 9 =$

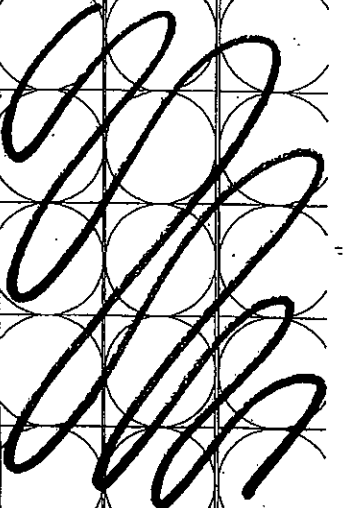
$9 \times 4 =$





$9 \times 5 =$

$5 \times 9 =$



$6 \times 5 =$

$7 \times 5 =$

$5 \times 6 =$

$5 \times 7 =$

$5 \times 5 =$

$8 \times 5 =$

$5 \times 8 =$

$6 \times 7 =$

$7 \times 6 =$

$6 \times 6 =$

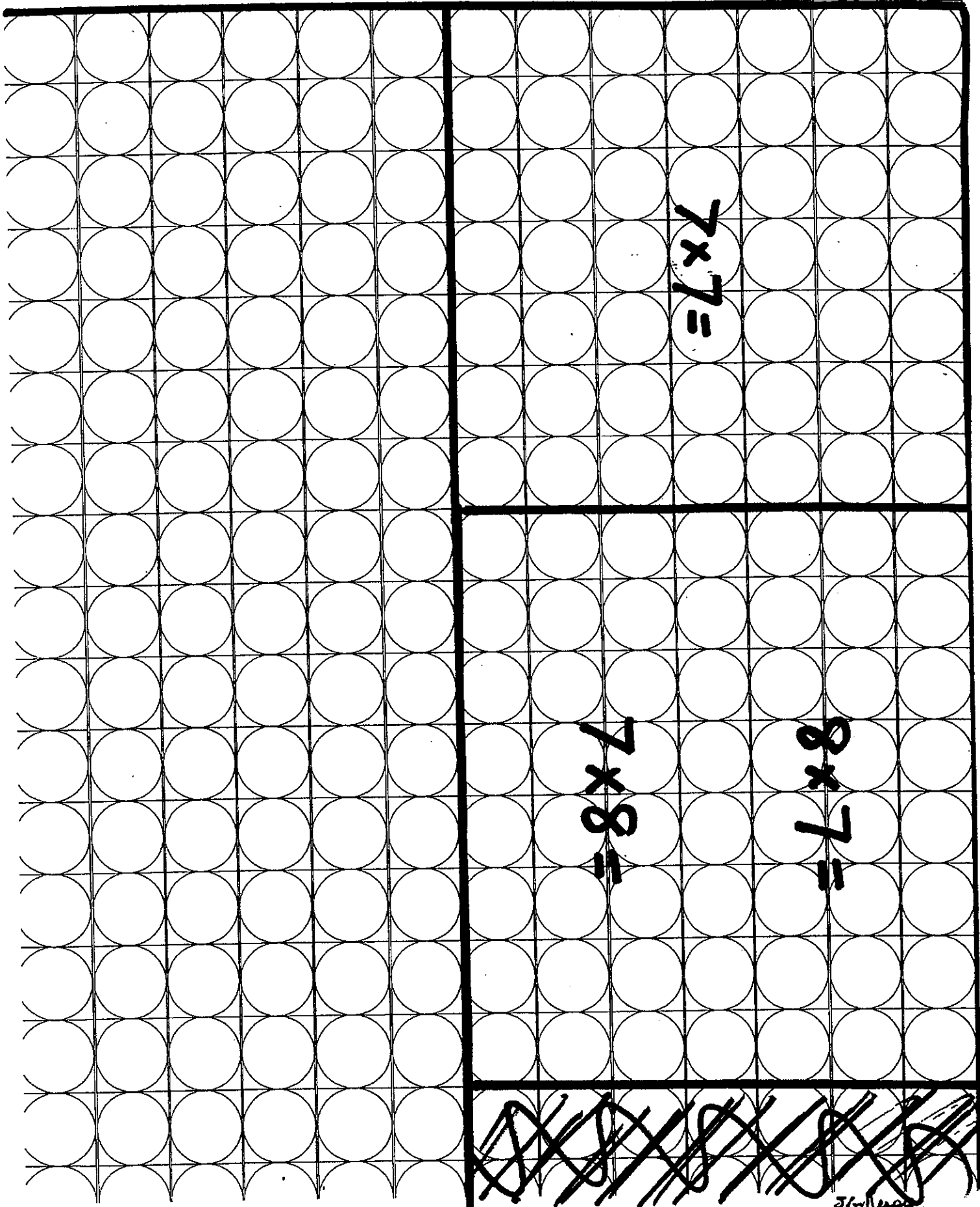
$6 \times 8 =$

$8 \times 6 =$

$6 \times 9 =$

$9 \times 6 =$

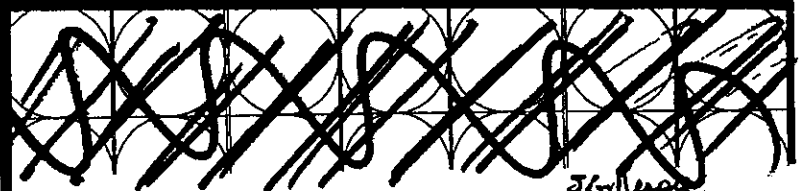
X X X X X



$$7 \times 7 =$$

$$7 \times 8 =$$

$$8 \times 7 =$$



8×8

9×7

7×9

X

X

X

X

X

X

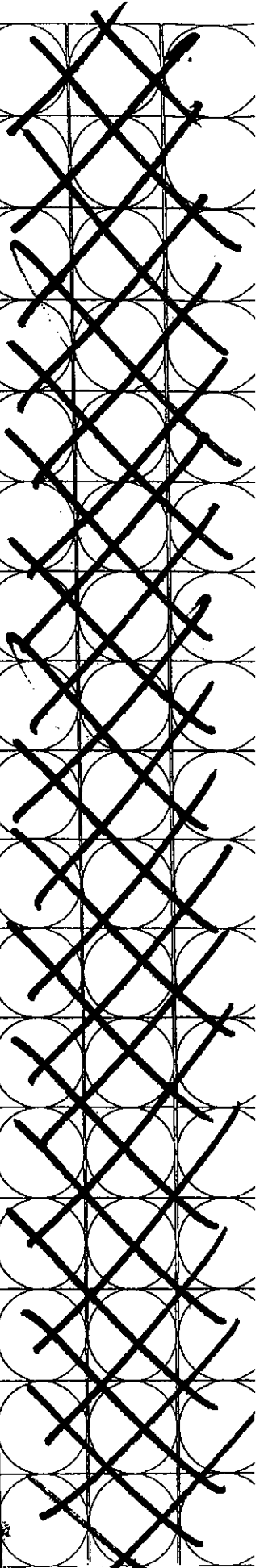
X

9 x 9

9 x 8

8 x 9

X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X
X



xA x2	$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$		
xB x5	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$	
xC x4	$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$	
xD x3	$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$	
xE x6	$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$	
xF x7, x8, x9	$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \text{Text} \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$

PPS

1 to 1 Interview

X Facts Oral Practice ----- Choose Your Row -----“SEE IT, SAY IT” ----- X = “groups of”

Count by 2 X2 or doubling	6 x 2 2 x 6	4 x 2 2 x 4	9 x 2 2 x 9	5 x 2 2 x 5	2 x 2	8 x 2 2 x 8	3 x 2 2 x 3	7 x 2 2 x 7	10 x 2
Count by 3 X3 or tripling	8 x 3 3 x 8 (8 + 8) + 8	3 x 3	5 x 3 3 x 5	9 x 3 (10 x 3) - 3	7 x 3 3 x 7 (7 + 7) + 7	10 x 3 3 x 10	6 x 3 3 x 6 (6 + 6) + 6	3 x 4 (4 + 4) + 4	
X4 Double 2x	4 x 5	4 x 7 Double 2x	4 x 10	4 x 8 Double 2x	4 x 4 Double 2x	4 x 6 Double 2x	9 x 4 (10 x 4) - 4		
5-minute marks X5 on clock	7 x 5	5 x 5	9 x 5 (10x5) - 5	6 x 5	8 x 5	10 x 5			
X6 Double 3x	6 x 6	6 x 8 Double 3x	9 x 6 (10 x 6) - 6	6 x 7 Double 3x	6 x 10				
X7	9 x 7 (10 x 7) - 7	7 x 10	7 x 7 Hint: San Francisco ____	7 x 8 Hint: 5 6 7 8					
X8	9 x 8 (10 x 8) - 8	8 x 10 Double 4x	8 x 8 Double 4x						
10 x - 1 group X9	9 x 9 (10 x 9) - 9	9 x 10	9 x 5 (10 x 5) - 5	9 x 8 (10 x 8) - 8	9 x 3 (10 x 3) - 3	9 x 7 (10 x 7) - 7	9 x 4 (10 x 4) - 4	9 x 2 (10 x 2) - 2	9 x 6 (10 x 6) - 6

Example x4 language: “4 groups of 5 are ____”. “4 times 7 is ____”. “4 tens are ____”. “4 times 8 is ____”. “4 fours are ____”. “4 times 6 is ____”. “9 groups of 4 are ____”.

One Pacing Option for Schools Using *Calendar Math* Routines
 X FACT Mastery using Circle Array Flash Cards with \times , \div , and fraction of set language.

MONTH	Grade 3	Grade 4	Grade 5
Sept	x2 Array Cards Counting Tape: x2's Calendar Pattern: x2, x 3	x2, \div2, 1/2 Array Cards X5 Array Cards ? Counting Tape: x2's Calendar Pattern: x2 x 5	x2, \div2, 1/2 x3, \div3, 1/3 Array Cards Calendar Pattern: x2, x3 LCM
Oct	x5 Array Cards Counting Tape: x5's Calendar Pattern: x5, x2 Measurement: cm x10	x3, \div3, 1/3 Array Cards X6 Array Cards ? Counting Tape: x3's Calendar Pattern: x2, x3 LCM Measurement: ft/yd Fraction a Day: 1/3's	x3, \div3, 1/3's x4, \div4, 1/4's x5, \div5, 1/5's Array Cards Calendar Pattern: x3, x4, x5 LCM's Daily Array: x, \div , Primes/Composites
Nov	x3 Array Cards (?) Counting Tape: x2, x5, x10 Calendar Pattern: x3	x4, \div4, 1/4 Array Cards Counting Tape: x4's Calendar Pattern: x3, x4 Measurement: cups/quart Fraction a Day 1/4's	x6, \div6, 1/6's x7, \div7, 1/7's x8, \div8, 1/8's x9, \div9, 1/9's Array Cards for ten facts: 6x6 to 9x9 Calendar Pattern: x6, x7, x8. x9 Daily Array: x, \div , fraction of set
Dec	X4 Array Cards (?) Counting Tape: x2, x5, x10 Calendar Pattern: x4	x5, \div5, 1/5 Array Cards Counting Tape: x5's Calendar Pattern: x3's, x5's	Practice 6x6 to 9x9 Daily Array: x, \div , fraction of set
Jan	x3, \div3, 1/3 Array Cards Counting Tape: x3's Comp and Connections: x3, \div 3	x6, \div6, 1/6 Array Cards Counting Tape: x6's Calendar Pattern:	
Feb	x4, \div4, 1/4 Array Cards Counting Tape x4's Comp and Connections: x4, \div 4	x7, \div7, 1/7 Array Cards Counting Tape: x7's	
March	x6, \div6 Array Cards Counting Tape x6's Comp and Connect: x10, \div 10	x8, \div8, 1/8 Array Cards Counting Tape: x8's	
April	Counting Tape Comp and Connect: Sharing Division	x9, \div9, 1/9 Array Cards Counting Tape x9's	