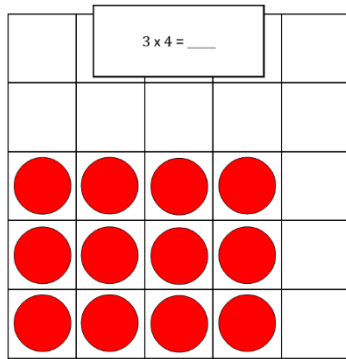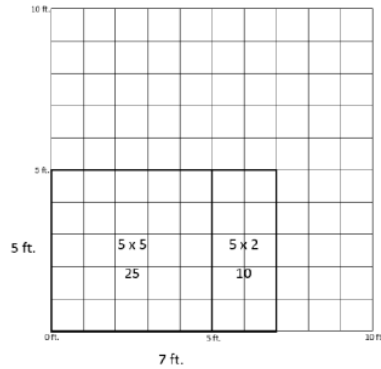# Build/Draw/Write to Multiply and Divide Numbers to 10

(**Note:** Different problems may be represented in each progression.)

Multiply numbers from 0 to 10 (3.OA.7a)

3 x 4 = ____

Think equal groups and skip count:
"3, 6, 9, 12" or "4, 8, 12"

5 ft.

5 x 5	5 x 2
25	10

7 ft.

5 x 7 = ____35____

Area model drawing with break-aparts at 5:
"5 x 5 + 5 x 2"
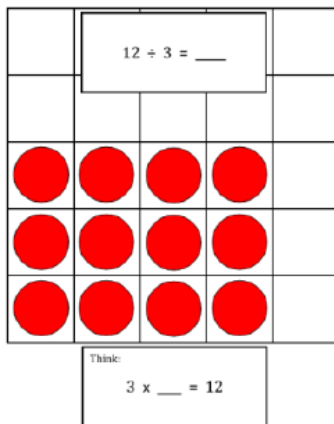
8 boxes hold 6 cupcakes each

8 x 6 = 40 + 8 = 48
       /   \
      5   1

"4 times 5 is 20 and 4 times 2 is 8"
"20 plus 8 equals 28"

$4 \times 7 =$ ____20 + 8 = 28____
       /   \
      5   2

Divide numbers by 1 to 10 (3.OA.7b)

12 ÷ 3 = ____

Think:
3 x ____ = 12

Think multiply to divide:
"3 groups of what?"

6 ft.

6 x 5	6 x 3
30	18

8 ft.
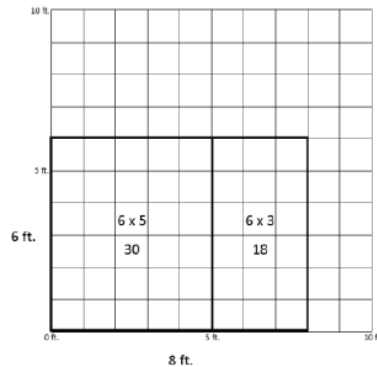
48 ÷ 6 = ____8____
−30
18
       /   \
      5   3

Think multiply to divide: "6 groups of what...5 and 3"

48 cupcakes...each box holds 6 cupcakes

48 ÷ 6 = __8__   "Think: 6 x ____ = 48"
−30
18
       /   \
      5   3

"7 times what number equals 42?"

42 ÷ 7 = ____6____
−35
7
       /   \
      5   1

Build/Draw/Write to Multiply Multi-digit Numbers
(Note: Different problems may be represented in each progression.)

Multiply up to a 4-digit by a 1-digit number and two 2-digit numbers (4.NBT.5)

Multiplication Mat
5th Grade - Readiness Standard 4.NBT.5

| 1 0 | 2 |

Number in Each Group

3

Number of Groups

| 3 | 6 |

125 per case

	100	+	20	+	5
9 Cases	9 x 100		9 x 20		9 x 5
	900		180		45

```
   900
   180
+   45
 1,125
```

```
   2 5 7
 x     9       Think:
 1 8 0 0   (9 x 2 hundreds)
   4 5 0   (9 x 5 tens)
 +   6 3   (9 x 7 ones)
 2 3 1 3
```

Multiply multi-digit numbers (5.NBT.5)

| 4 x 12 |

Use for Modeling Problem

Multiplication Mat
5th Grade - Readiness Standard 4.NBT.5

| 1 0 | 2 |

Number in Each Group

4

Number of Groups

| 4 | 8 |

125 Per Box

	100	+	20	+	5
10	10 x 100		10 x 20		10 x 5
	1000		200		50
+					
3	3 x 100		3 x 20		3 x 5
	300		60		15

13 Boxes

```
  1000
   200
    50
   300
    60
+   15
 1,625
```

```
     6 1 8
 x      2 5        Think:
   1 2 0 0    (20 times 6 hundreds)
     2 0 0    (20 times 1 ten)
     1 6 0    (20 times 8 ones)
   3 0 0 0    (5 times 6 hundreds)
     5 0      (5 times 1 ten)
 +     4 0    (5 times 8 ones)
 1 5 4 5 0
```
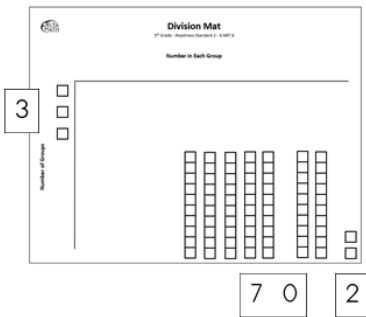
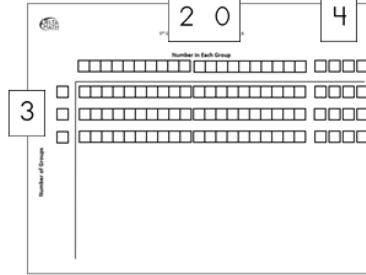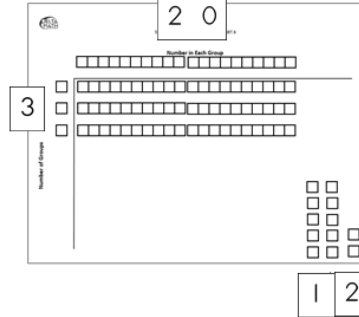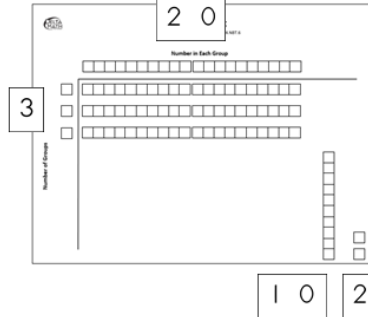# Build/Draw/Write to Divide Multi-digit Numbers

(Note: Different problems may be represented in each progression.)

Divide up to a 4-digit number by a 1-digit number (4.NBT.6)

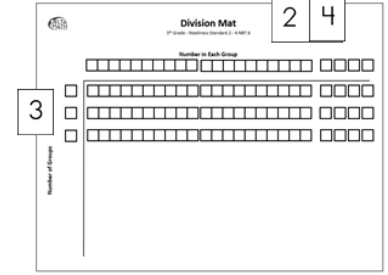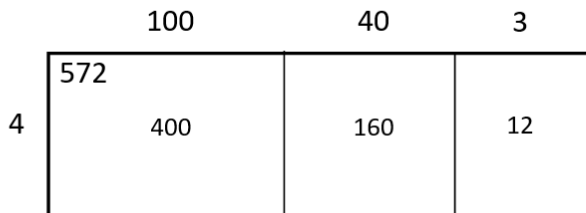| Prepare to Divide	Find each Sub-total			Find the total

---

How many are in each group? 572 = 4 x <u>*143*</u>

4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40

	100	40	3
4	572		
	400	160	12

```
        3  ⌉
       40  │  143
      100  ⌋
   4) 572
   −  400
      172
   −  160
       12
   −    12
        0
```

448 ounces is 7 groups of how many?

7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70

```
        4  ⌉  64 Cups
       60  ⌋
   7) 448
   −  420
       28
   −   28
        0
```

Build/Draw/Write to Divide Multi-digit Numbers:
6th Grade Readiness
(**Note:** Different problems may be represented in each progression.)

Divide 4-digit numbers (5.NBT.6)

Prepare to Divide	Find each Sub-total			Find the total

---

13 groups of:

13 x 1 = 13
13 x 2 = 26
13 x 3 = 39
13 x 4 = 52
13 x 5 = 65
13 x 6 = 78
13 x 7 = 91
13 x 8 = 104
13 x 9 = 117
13 x 10 = 130

How many are in each equal group?

	200	90	3
3809			
13	2600	1170	39

$$
\begin{array}{r}
3 \\
90 \\
200 \\
\end{array} \Big]\ \textbf{293}
$$

$$
\begin{array}{r}
13\overline{)3809} \\
-\ 2600 \\
\hline
1209 \\
-\ 1170 \\
\hline
39 \\
-\ \ \ \ 39 \\
\hline
0 \\
\end{array}
$$

15 boxes of ____ is 3240 total golf balls?

15 x 1 = 15
15 x 2 = 30
15 x 3 = 45
15 x 4 = 60
15 x 5 = 75
15 x 6 = 90
15 x 7 = 105
15 x 8 = 120
15 x 9 = 135
15 x 10 = 150

$$
\begin{array}{r}
6 \\
10 \\
200 \\
\end{array} \Big]\ \textbf{216}
$$

$$
\begin{array}{r}
15\overline{)3240} \\
-\ 3000 \\
\hline
240 \\
-\ \ \ 150 \\
\hline
90 \\
-\ \ \ \ 90 \\
\hline
0 \\
\end{array}
$$