Division pt1

Learning Goal:

By the end of this lesson I should be able to DIVIDE small positive numbers, WITHOUT the use of a calculator (technology).

Feb 3-1:54 PM

Multiplication is a shortcut for repetitive addition.

Product is the result of multiplication.

Division is a shortcut for repetitive subtraction.

Quotient is the result of division.

Mar 5-1:55 PM

<u>Division Notation:</u>

$$8 \div 2 \qquad \frac{8}{2} \qquad 2\overline{)8}$$

"Eight divided by two"   fraction form   long (traditional) division

<u>What does it mean?</u>

Case 1 - If eight was divided into two equal groups, how many (chips, counters, etc.) would be in each group?

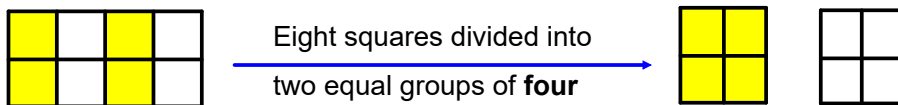**Case 2** - How many groups of two are there in a group of eight?

<u>or</u>

How many groups of two can I subtract from eight?

Mar 5-3:08 PM

Area Model

"Eight divided by two" can be represented by the following:

Case 1 - If eight was divided into two equal groups, how many (chips, counters, squares, etc.) would be in each group?

Eight squares divided into two equal groups of **four**

$$8 \div 2 = 4$$

Case 2 - How many groups of two are there in a group of eight?
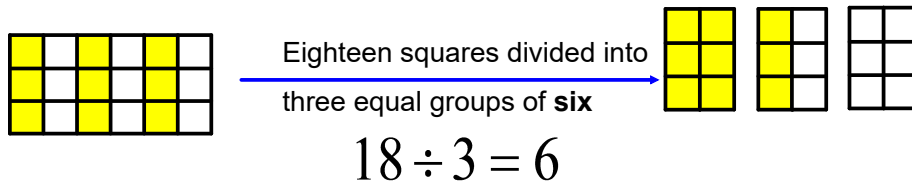

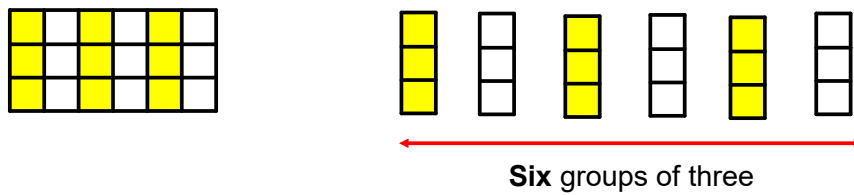**Four** groups of two

Feb 2-9:31 AM

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Area Model

"Eighteen divided by three" can be represented by the following:

Case 1 - If eighteen was divided into three equal groups, how many (chips, counters, squares, etc.) would be in each group?
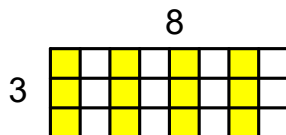

Eighteen squares divided into three equal groups of **six**

$$18 \div 3 = 6$$

Case 2 - How many groups of three are there in a group of eighteen?

Six groups of three

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Area Model for Multiplication

dimension x dimension = area

3 x 8 = 24

Area Model for Division

Area = 24 squares
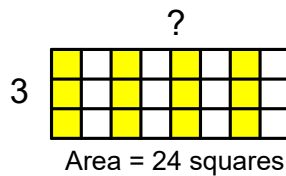
area ÷ dimension = dimension

$$24 \div 8 = 3$$

Multiplication Chart

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Mar 5-2:57 PM

Find the quotient (answer) for the following:

$16 \div 2 =$

Case 1 - If sixteen was divided into two equal groups, how many would be in each group?

●●●●●●●●
●●●●●●●●

| group one |

| group two |

$16 \div 2 =$

Case 2 - How many groups of two are there in a group of sixteen?

How many two's can I subtract from sixteen?

16 - 2 = 14
14 - 2 = 12
12 - 2 = 10
10 - 2 = 8
8 - 2 = 6
6 - 2 = 4
4 - 2 = 2
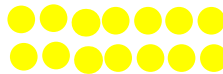2 - 2 = 0

Case 3 - Area Model

$16 \div 2 =$

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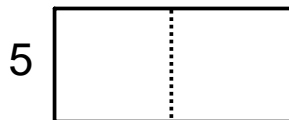---

Find the QUOTIENT for the following:

(a) $9 \div 3 =$ ●●●●●●●●●

(three equal groups)

(b) $14 \div 7 =$ ●●●●●●●
                           ●●●●●●●

(How many groups of 7 fit into 14?)

(c) $20 \div 5 =$

5 | [rectangle with dotted line]
Area = 20

Feb 3-2:08 PM

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Task - Front side 3.1

Oct 2-12:57 PM

Find the quotient (answer) for the following:

$32 \div 4 =$ (How many "4's" can I subtract from 32?)

$4\overline{)32}$ $4\overline{)32}$

Feb 2-9:31 AM

Find the quotient (answer) for the following:

$128 \div 8 =$ (How many "8's" can I subtract from 128?)

$$8\overline{)128}$$ $$8\overline{)128}$$

Feb 2-9:31 AM

Task 2.1.2 - backside

Feb 5-10:12 AM