6.1.21
WALT Recall and Use Division Facts for the 6 x Table

F
R
PS

Vocabulary

concrete apparatus array

pictorial representation equal

groups of lots of times table

total altogether number sentence

multiply multiplication product sum

multiples odd even

double division inverse

Concrete Apparatus

Complete the sentences to describe the eggs:



There are _____ lots of _____.

There are eight _____.

8 × _____ = _____

At first, there were _____ eggs.

Then, they were shared into _____ boxes.

Now, there are _____ eggs in each box.

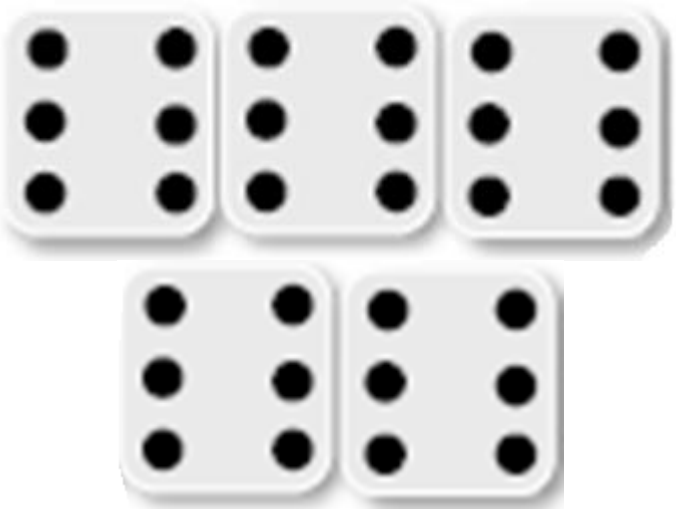
_____ ÷ _____ = _____

Fact Families

Remember that there are 4 number sentences for every fact family.

5 × 6 = 30
6 × 5 = 30

30 ÷ 6 = 5
30 ÷ 5 = 6



Where is the BIG number in each number sentence?

- the answer for the ×
- at the start for the ÷

Fact Families

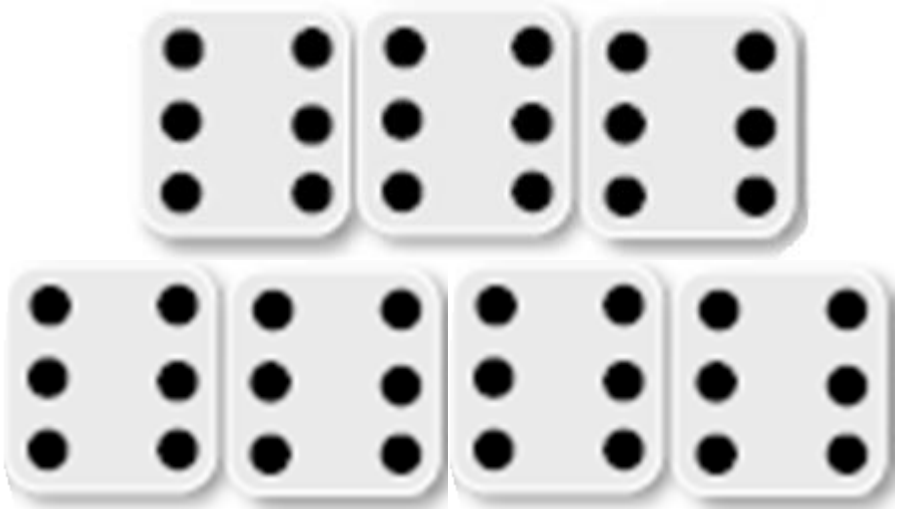
Can you write all four different number sentences for this fact family?

_____ × _____ = _____

_____ × _____ = _____

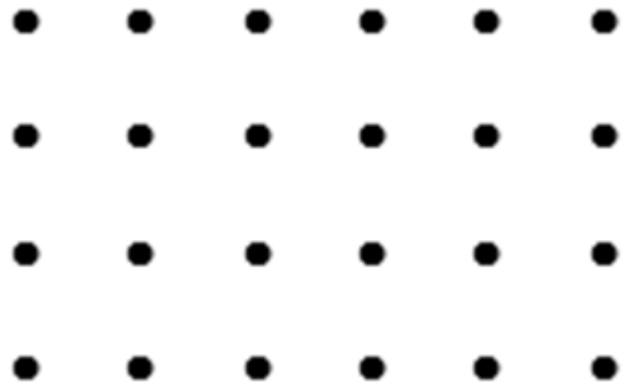
_____ ÷ _____ = _____

_____ ÷ _____ = _____



Check that the BIG number is in the correct place in each number sentence?

Pictorial Representation



How many equal groups are there?

How many are in each group?

How many are there altogether?

Now, write four different number sentences for this array?

Patterns in Times Tables

Look carefully at the beginnings of the 3x table and the 6 x table. Can you see any patterns?

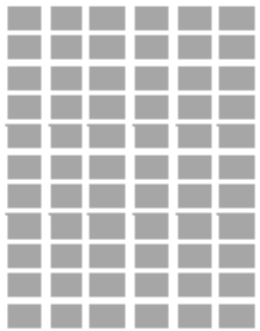
1 x 3 = 3
2 x 3 = 6
3 x 3 = 9
4 x 3 = 12
5 x 3 = 15
6 x 3 = 18

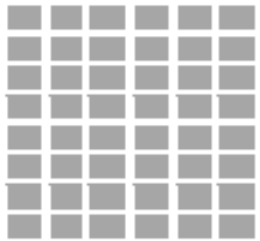
1 x 6 = 6
2 x 6 = 12
3 x 6 = 18

Knowing your 3x table can help you to answer 6x table questions.

Fluency 1

1. For each array, write 4 number sentences from the same fact family.

a) 

b) 

2. Complete each **multiplication** number sentence, then write one of the **division** number sentences from the same fact family.

Look at the first question to help you understand what to do.

a) 2 × 6 - 12 so 12 ÷ 6 - 2

b) 6 × 6 - _____ so _____ - _____

c) 11 × 6 - _____ so _____ - _____

d) 7 × 6 - _____ so _____ - _____

e) 10 × 6 - _____ so _____ - _____

f) 12 × 6 - _____ so _____ - _____

g) 1 × 6 - _____ so _____ - _____

h) 9 × 6 - _____ so _____ - _____

i) 3 × 6 - _____ so _____ - _____

j) 8 × 6 - _____ so _____ - _____

3. Which missing numbers have been covered by the splats?

a) 24 ÷ 6 - 

b) 6 ×  - 48

c)  ÷ 6 - 8

d) 54 ÷ 6 - 

e)  × 6 - 42

f)  ÷ 6 - 11

Fluency 2

1		36	÷	6	=			16		72	÷	6	=	
2		66	÷	6	=			17		18	÷	6	=	
3		24	÷	6	=			18		60	÷	6	=	
4		48	÷	6	=			19		66	÷	6	=	
5		42	÷	6	=			20		48	÷	6	=	
6		18	÷	6	=			21		12	÷	6	=	
7		30	÷	6	=			22		30	÷	6	=	
8		54	÷	6	=			23		36	÷	6	=	
9		72	÷	6	=			24		6	÷	6	=	
10		6	÷	6	=			25		66	÷	6	=	
11		60	÷	6	=			26		72	÷	6	=	
12		12	÷	6	=			27		12	÷	6	=	
13		54	÷	6	=			28		36	÷	6	=	
14		24	÷	6	=			29		48	÷	6	=	
15		42	÷	6	=			30		6	÷	6	=	

Reasoning

Always, sometimes or never?

If a number is a multiple of 6, it will also be a multiple of 3.

Use a sentence starter and mathematical vocabulary to explain your reasoning.

Problem Solving 1

I am thinking of 2 numbers.

The sum of the numbers is 15.

The product of the numbers is 54.

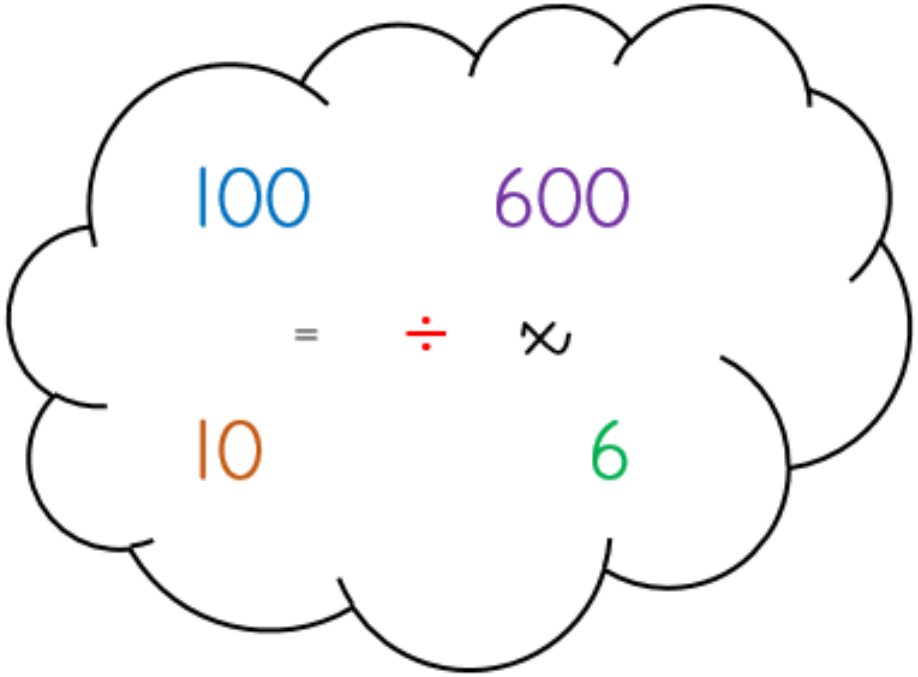
What are my 2 numbers?

Problem Solving 2

Choose the correct number or symbol from the cloud to complete the number sentences.

□ ÷ □ = 6

60 = 600 □ 10



Plenary

Practise your 6x table and 6x table division on 'Hit the Button'

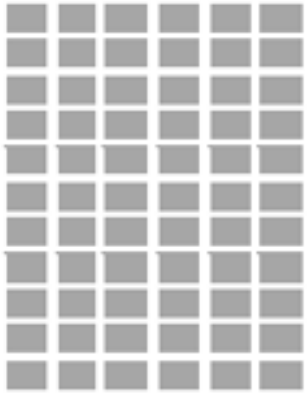
https://www.topmarks.co.uk/maths-games/hit-the-button

Answers

Fluency 1

1. For each array, write 4 number sentences from the same fact family.

a)



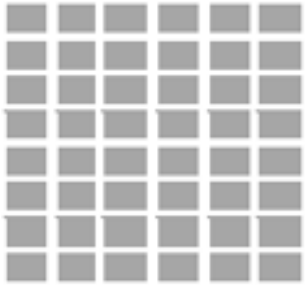
$11 \times 6 = 66$

$6 \times 11 = 66$

$66 \div 6 = 11$

$66 \div 11 = 6$

b)



$8 \times 6 = 48$

$6 \times 8 = 48$

$48 \div 6 = 8$

$48 \div 8 = 6$

2. Complete each multiplication number sentence, then write one of the division number sentences from the same fact family.

a) 2 × 6 = 12 so 12 ÷ 6 = 2

b) 6 × 6 = 36 so 36 ÷ 6 = 6

c) 11 × 6 = 66 so 66 ÷ 6 = 11

d) 7 × 6 = 42 so 42 ÷ 6 = 7

e) 10 × 6 = 60 so 60 ÷ 6 = 10

f) 12 × 6 = 72 so 72 ÷ 6 = 12

g) 1 × 6 = 6 so 6 ÷ 6 = 1

h) 9 × 6 = 54 so 54 ÷ 6 = 9

i) 3 × 6 = 18 so 18 ÷ 6 = 3

j) 8 × 6 = 48 so 48 ÷ 6 = 8

3. Which missing numbers have been covered by the splats?

a) 24 ÷ 6 = 4

b) 6 × 8 = 48

c) 48 ÷ 6 = 8

d) 54 ÷ 6 = 9

e) 7 × 6 = 42

f) 66 ÷ 6 = 11

Fluency 2

1	36	÷	6	=	6	16	72	÷	6	=	12
2	66	÷	6	=	11	17	18	÷	6	=	3
3	24	÷	6	=	4	18	60	÷	6	=	10
4	48	÷	6	=	8	19	66	÷	6	=	11
5	42	÷	6	=	7	20	48	÷	6	=	8
6	18	÷	6	=	3	21	12	÷	6	=	2
7	30	÷	6	=	5	22	30	÷	6	=	5
8	54	÷	6	=	9	23	36	÷	6	=	6
9	72	÷	6	=	12	24	6	÷	6	=	1
10	6	÷	6	=	1	25	66	÷	6	=	11
11	60	÷	6	=	10	26	72	÷	6	=	12
12	12	÷	6	=	2	27	12	÷	6	=	2
13	54	÷	6	=	9	28	36	÷	6	=	6
14	24	÷	6	=	4	29	48	÷	6	=	8
15	42	÷	6	=	7	30	6	÷	6	=	1

Reasoning

Always

The numbers in the 6x table are all of the even numbers in the 3x table.

This happens because 6 is double 3 so every 2nd answer in the 3x table is in the 6x table.

Also, 6 can be divided by 3 so any number in the 6x table will be able to be divided by 3 (or in the 3x table).

Problem Solving 1

The numbers are 9 and 6.

Problem Solving 2

$600 \div 100 = 6$

$60 = 600 \div 10$