07.12.2020

Multiplying by 9

x	1		3	4	5	6	7		9	10	11	
9		18						72				108

Write the next three multiples of 9.

9, 18, 27, 36, _____, _____, _____.

63, 72, _____, _____, _____.

108, 99, 90, _____, _____, _____.

A box of pencils holds 9 pencils. Steven wants 72 pencils. How many boxes will he need to buy?

_____

_____

_____

Sometimes, always, never...

"When you multiply a number by 9, the answer will be an odd number."

Explain your reasoning.

_____

_____

_____

_____

_____

Emily counts in multiples of 90. Circle the numbers she will say.

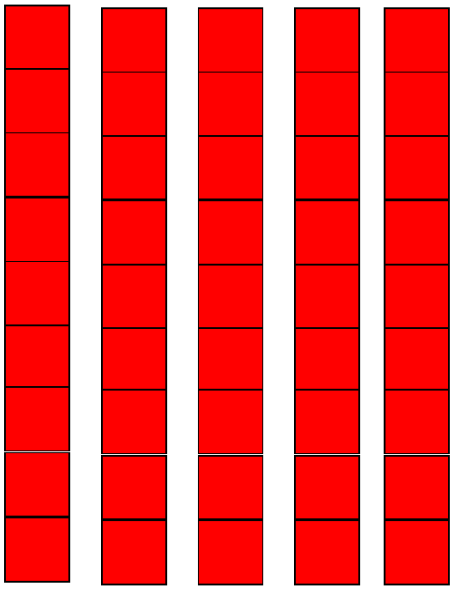
99 360 490 630 819 8,100

Create a word problem that requires you to use the 9 x table.

_____

_____

_____



_____ × _____ = _____

_____ × _____ = _____

_____ ÷ _____ = _____

_____ ÷ _____ = _____

07.12.2020

Multiplying by 9 - Challenge

Fill in the missing numbers:

9 x _____ = 36

90 x _____ = 450

9 x _____ = 180

63 ÷ _____ = 9

81 ÷ 9 = _____

540 ÷ _____ = 9

Sarah says "If a number is a multiple of 9, then it will also be a multiple of 3." Is Sarah correct?

Explain your reasoning.

_____

_____

_____

_____

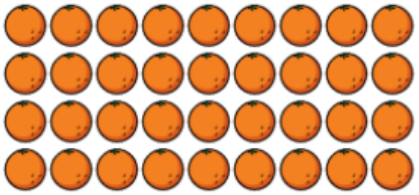
_____

Complete the sentences to describe the oranges:

There are ____ lots of 9

There are ____ nines.

4 × ____ = ____



I am thinking of two numbers.

The sum of the numbers is 17.

The product of the numbers is 72.

What are my secret numbers?

Create your own two secret numbers from the 9 times table and create clues for your partner.

_____ _____

_____ _____

_____ _____

_____ _____

There are ____ lots of ____.

____ × ____ = ____

____ ÷ ____ = ____

9	9	9

There are ____ lots of ____.

____ × ____ = ____

____ ÷ ____ = ____

3	3	3	3	3	3	3	3	3

What's the same about each question? What's different?

_____

_____

08.12.2020

Multiplying by 9

Complete the missing numbers.

9 ____ 27 _____ _____ 54 _____ _____

27 _____ 9 _____ _____ - 18 _____

90 180 270 _____ _____

_____ x 9 = 45 9 x _____ = 81

40 x 90 = _____ 50 x 90 = _____

David says: "I'm not very confident with my 9's but I know my 10's."

Explain how David can use his knowledge of the 10 times table to help him solve his 9's.

_____

_____

_____

_____

_____

Circle the multiples of 9.

54 108 18 24 9 67 72

True or False?

$6 \times 9 = 9 \times 3 \times 2$

$9 \times 6 = 3 \times 9 + 9$

Explain your answer.

_____

_____

_____

Convince me **180** will be in this sequence:

450, 360, 270...

_____

_____

_____

_____

Use your knowledge of the 9 times table to complete the missing values.

$1 \times 9 = \_\_\_$ $\_\_\_ \times 1 = 9$ $1 \times 9 \times \_\_\_ = 90$

$\_\_\_ \times 9 = 90$ $900 = 100 \times \_\_\_$ $9 \times 1 \times 10 = \_\_\_$

$9 \times \_\_\_ = 900$ $4 \times 9 = \_\_\_$ $9 \times 1 \times \_\_\_ = 900$

08.12.2020

Multiplying by 9 - Challenge

Stan counts in multiples of 9 to 81. Sarah counts in multiples of 6 to 72.

What numbers will they both say?

_____

_____

_____

_____

9 x 1 = 9

For each question below, explain how you can use the above fact to help you find the answer.

900 x 1	
9 ÷ 9	
9 x 2	
10 x 90	

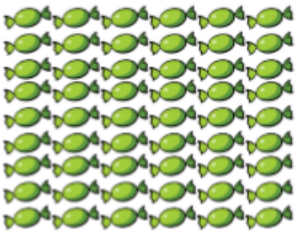
Can you complete the calculations using some of the symbols or numbers in the box?

÷	9	100
10	900	=

___ ÷ ___ = 9

90 = 900 ___ 10

Amir and Whitney both receive some sweets.

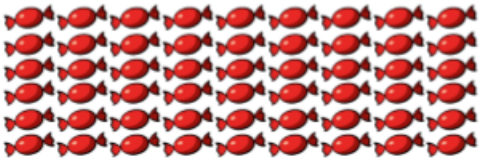


Amir

I have more sweets because I have more rows.

Whitney

I have more sweets because I have more in each row.



Who has more sweets? Explain your reasoning.

_____

_____

_____

_____

_____

_____

09.12.2020

Multiplying by 11

x	1		3	4	5	6	7		9	10	11	
11		22						88				132

Fill in the missing numbers:

11 x _____ = 44

11 x _____ = 770

11 x _____ = 132

121 ÷ _____ = 11

220 ÷ 11 = _____

110 ÷ _____ = 11

Anna says: "I know my 11 times tables so I can do 11 x 40 without using a written method."

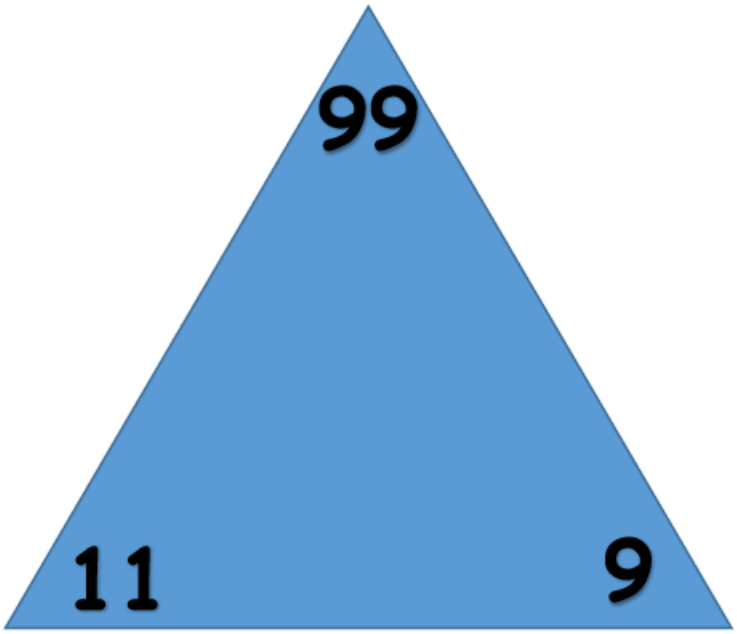
Explain how Anna can do this.

_____

_____

_____

Find all the number facts in the triangle:



Journaling:

09.12.2020

Multiplying by 11 - Challenge

11		33			66

David says "All I need to do when multiplying by 11 is double the number I'm multiplying by e.g. 8 x 11 = 88."

Is David correct? Explain your reasoning.

_____

_____

_____

Henry is buying some new DVDS. He buys 5 DVDs at a cost of £11 each.

Draw a representation of this below before writing out the calculation and finding the answer.

Always, sometimes, never?

"Because 11 is odd, multiples of 11 will also be odd."

Explain your reasoning

_____

_____

_____

_____

Create a selection of word problems that requires you to use the 11 x table on the next page.

10.12.2020

Multiplying by 1 and 0

Complete the sentences.

There are ____ plates. There is ____ banana on each plate.
Altogether there are ____ bananas.
____ × ____ = ____

Use <, > or = to complete the following:

8 ÷ 1 ◯ 7 ÷ 1

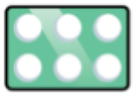
6 ÷ 6 ◯ 5 ÷ 5

4 ÷ 4 ◯ 4 ÷ 1

Complete the calculation shown by the number pieces.

There are ____ ones.

____ × ____ = ____



There is ____ six.

____ × ____ = ____

Circle the incorrect calculations and write them correctly.

5 × 0 = 50

19 × 1 = 19

7 × 0 = 7

1 × 1 = 2

0 × 35 = 0

0 × 0 = 1

1 × 8 = 9

Choose one calculation and create a drawing to show it.

Journaling:

10.12.2020

Multiplying by 1 and 0 - Challenge

$4 \times \_\_\_ = 4$ $\quad\quad$ $\_\_\_ = 1 \times 7$ $\quad\quad$ $0 = \_\_\_ \times 42$

$63 \times 1 = \_\_\_$ $\quad\quad$ $\_\_\_ \times 27 = 0$ $\quad\quad$ $50 \times \_\_\_ = 50$

Mo says,

25 divided by 1 is equal to 1 divided by 25

Do you agree?

Explain your answer.

Which answer could be the odd one out?
What makes it the odd one out?

$3 + 0 = \_\_\_$

$3 - 0 = \_\_\_$

$3 \times 0 = \_\_\_$

Explain why the answer is different.

Draw a bar model for each question to help you work out the answer.

- Tommy baked 7 cookies and shared them equally between his 7 friends. How many cookies did each friend receive?
- There are 5 sweets. Children line up and take 5 sweets at a time. How many children have 5 sweets?

Complete your journaling on the next page.

11.12.2020

Solving multiplication problems

Times Table Shift

The numbers in the five times table are:
5, 10, 15, 20, 25 ...

I could shift these numbers up by 3 and they would become:
8, 13, 18, 23, 28 ...

In this activity, the computer chooses a times table and shifts it.
Can you work out the table and the shift each time?

Levels 1 and 3 include tables up to 10.
Levels 2 and 4 include tables up to 20.
On levels 1 and 2, the numbers will always be the first five numbers in the times table.
On levels 3 and 4, the numbers could be any five numbers from the shifted times table.

Journal your answers on the next page.

Can you explain *how* you worked out the table and shift each time, and why your method will always work?