Chapter 3 Lesson 1

Multiply 2-Digit Numbers by Multiples of 10

Grade 4 Teachers

Multiply it by 10s

Learning Objectives:

- I will multiply 2 digit numbers by multiples of 10.

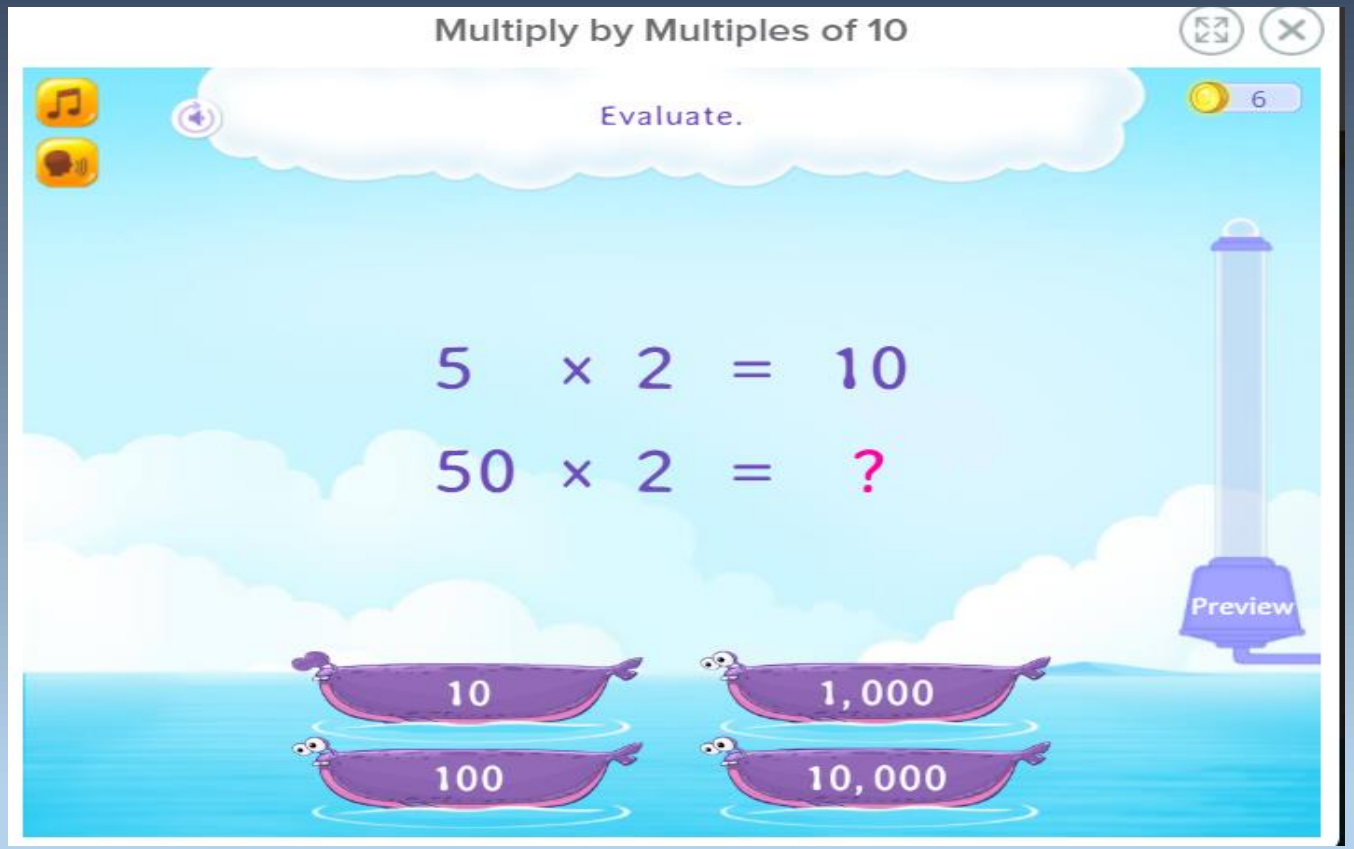
- **Success Criteria:**

I will be successful if I can multiply 2 digit numbers by multiples of 10 into different strategy.

Let us review counting by 10s

- https://www.youtube.com/watch?v=uYRTtwZGwj8

Let us multiply by multiples of 10s



https://www.splashlearn.com/math-skills/third-grade/multiplication2/multiply-by-multiples-of-10--g3

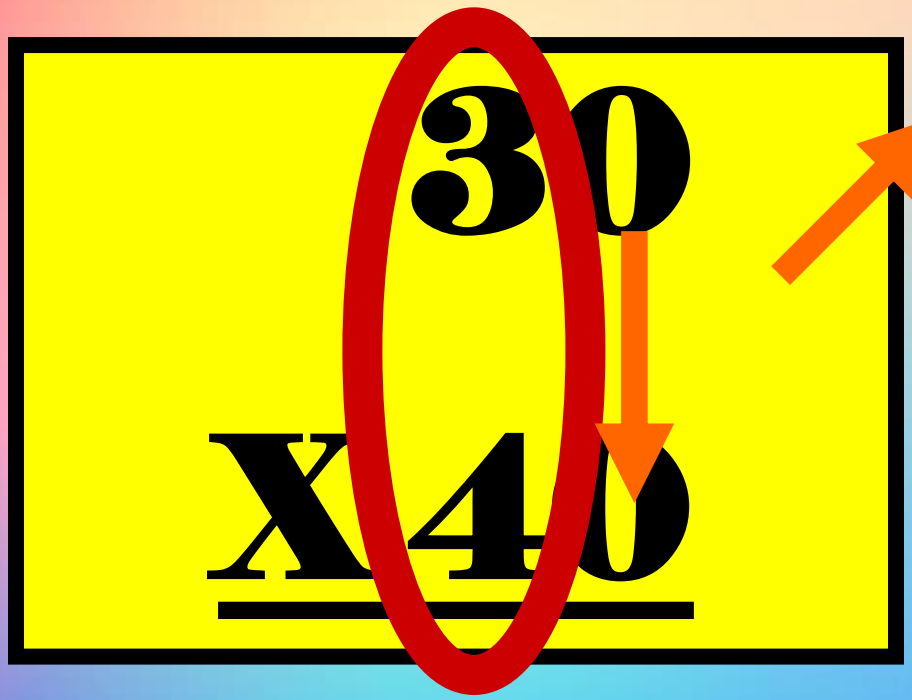
Learn the Process!

https://www-k6.thinkcentral.com/content/hsp/math/gomath/na/gr4/online_interactive_teacher_book_9780544349094_/G4_Chp3_L1/launch.html

Period 1

Place Value Strategy

How can Zero the Hero help you?



2 Zeroes

1200

30 X 40 = 1200

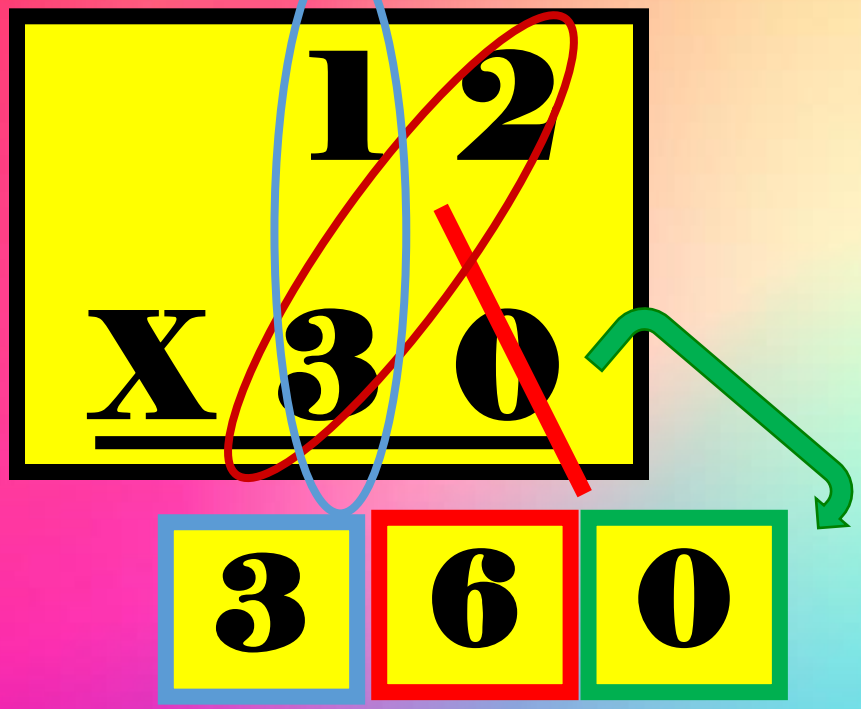
30 x 40

30 x 4 tens

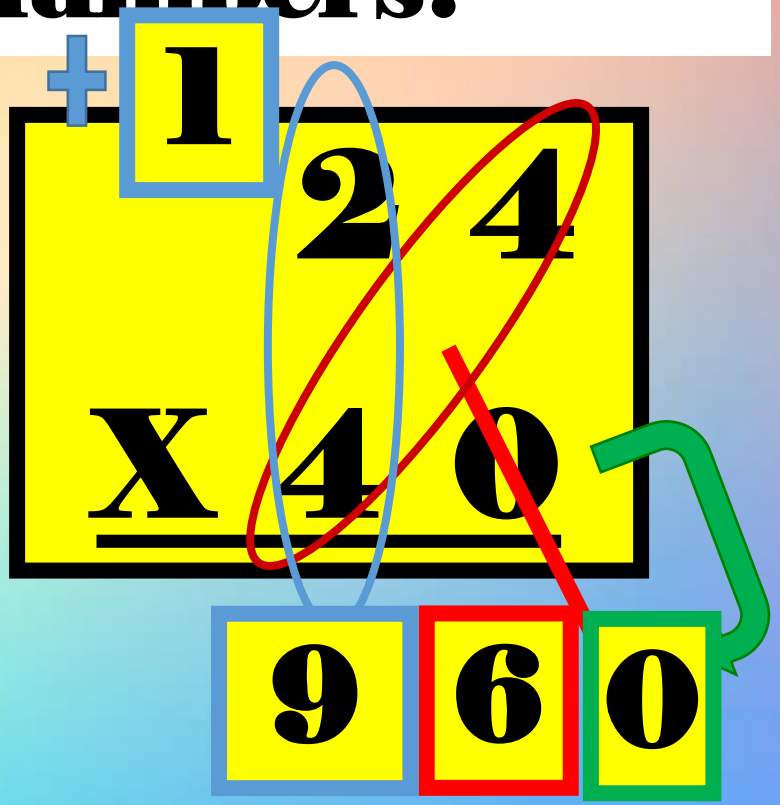
120 tens

=1200

How can Zero the Hero help you if it by 2 digit numbers?

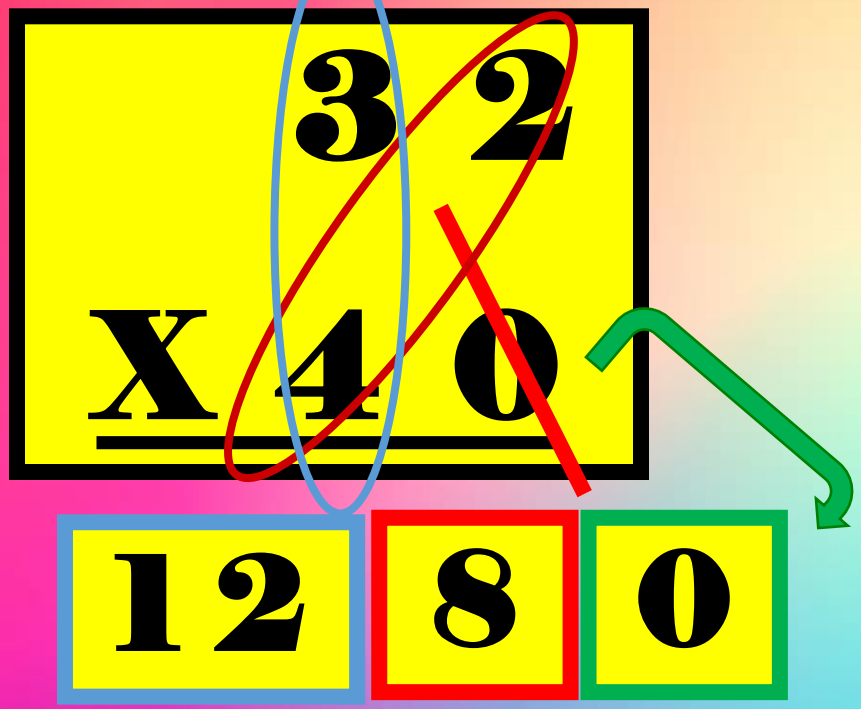


=360

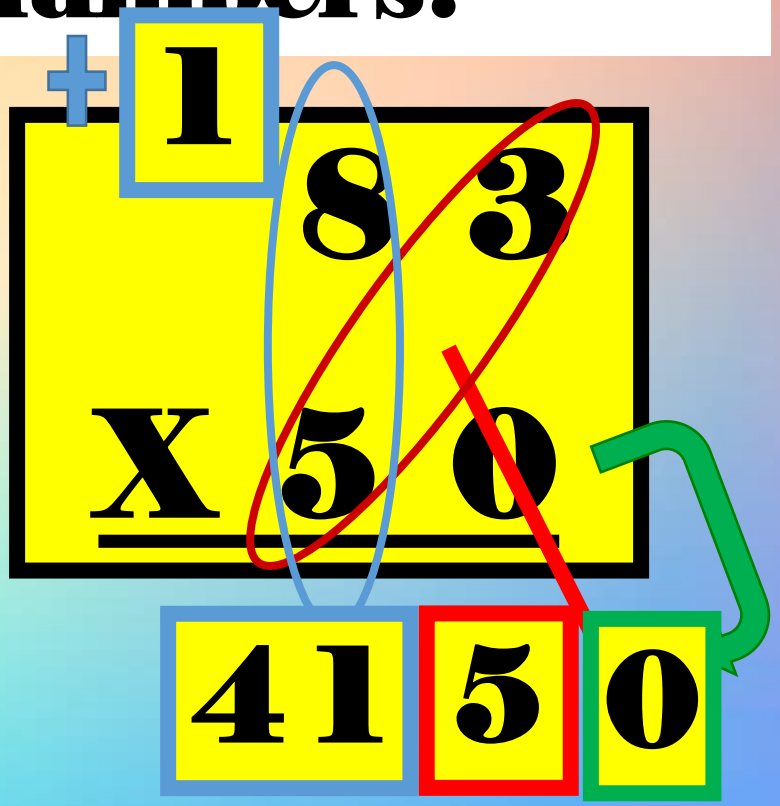


=960

How can Zero the Hero help you if it by 2 digit numbers?



=1,280



=4,150

Try These With Your Groupmates

Challenge 1

$$\begin{array}{r} 40 \\ \times\ 90 \\ \hline \end{array}$$

Challenge 2

$$\begin{array}{r} 60 \\ \times\ 80 \\ \hline \end{array}$$

$$\begin{array}{r} 40 \\ \times\ 24 \\ \hline \end{array}$$

Challenge 3

$$\begin{array}{r} 60 \\ \times\ 30 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ \times\ 36 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ \times\ 48 \\ \hline \end{array}$$

Period 2

Associative Strategy

$$A \times (B \times C) = (A \times B) \times C$$

Remember 30x 40?

A x (B x C)= (A x B) x C

Think of 30 as 3 x 10 or

40 as 4 x 10

$$30 \times 40 = 30 \times (4 \times 10)$$

$$= (30 \times 4) \times 10$$

$$= 120 \times 10$$

$$= 1200$$

Remember 12 x 30?

$A \times (B \times C) = (A \times B) \times C$

Think of 12 as 6 x 2

$$12 \times 30 = (6 \times 2) \times 30$$

$$= 6 \times (2 \times 30)$$

$$= 6 \times (60)$$

$$= 360$$

Remember 24 x 40?

A x (B x C)= (A x B) x C

Think of 24 as 4 x 6

$$24 \times 40 = (4 \times 6) \times 40$$

$$= 4 \times (6 \times 40)$$

$$= 4 \times 240$$

$$= 960$$

Show the Associative Property Way

Challenge 1

$$40 \times 90$$

Challenge 2

$$60 \times 80$$

$$40 \times 24$$

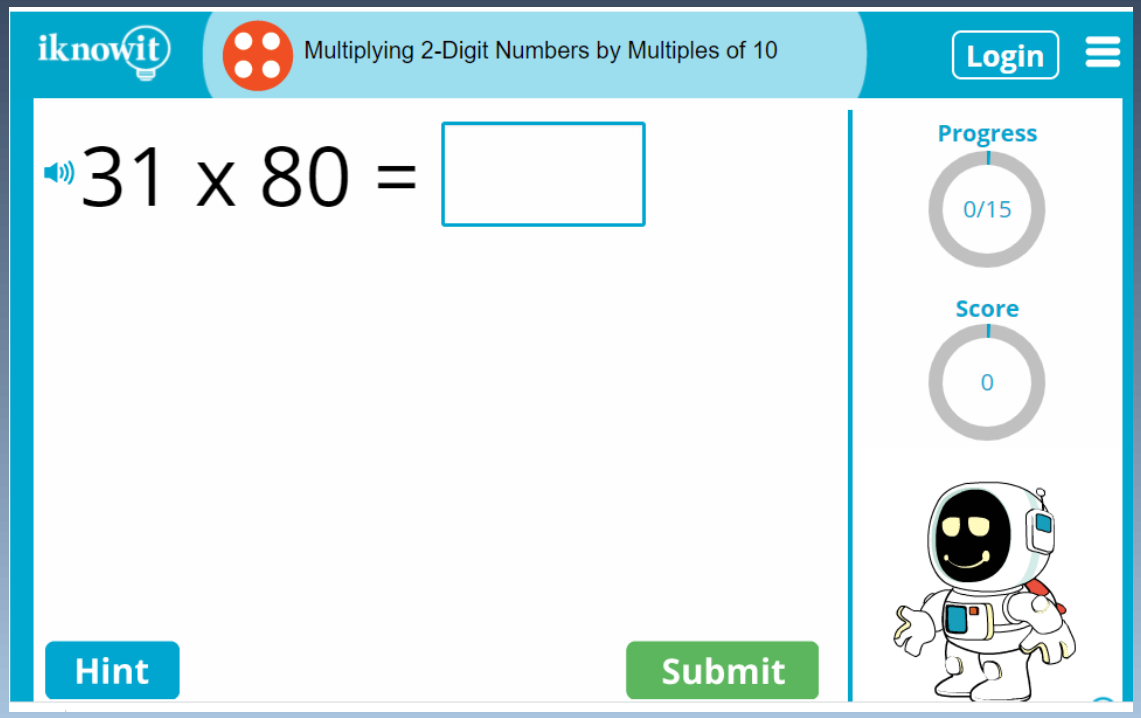
Challenge 3

$$60 \times 30$$

$$90 \times 36$$

$$70 \times 48$$

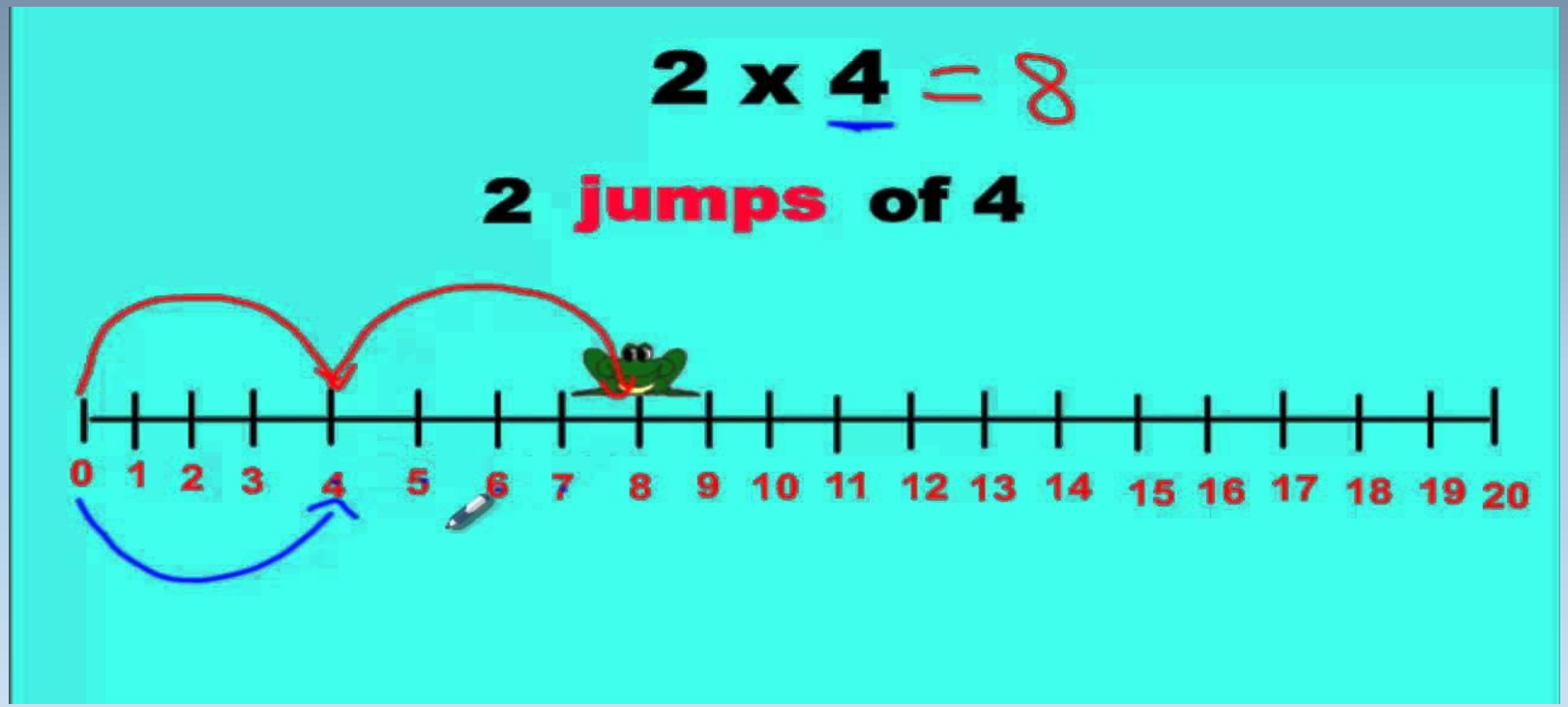
HAVE SOME BREAK!



https://www.iknowit.com/lessons/d-multiplying-2-digit-numbers-by-multiples-of-10.html

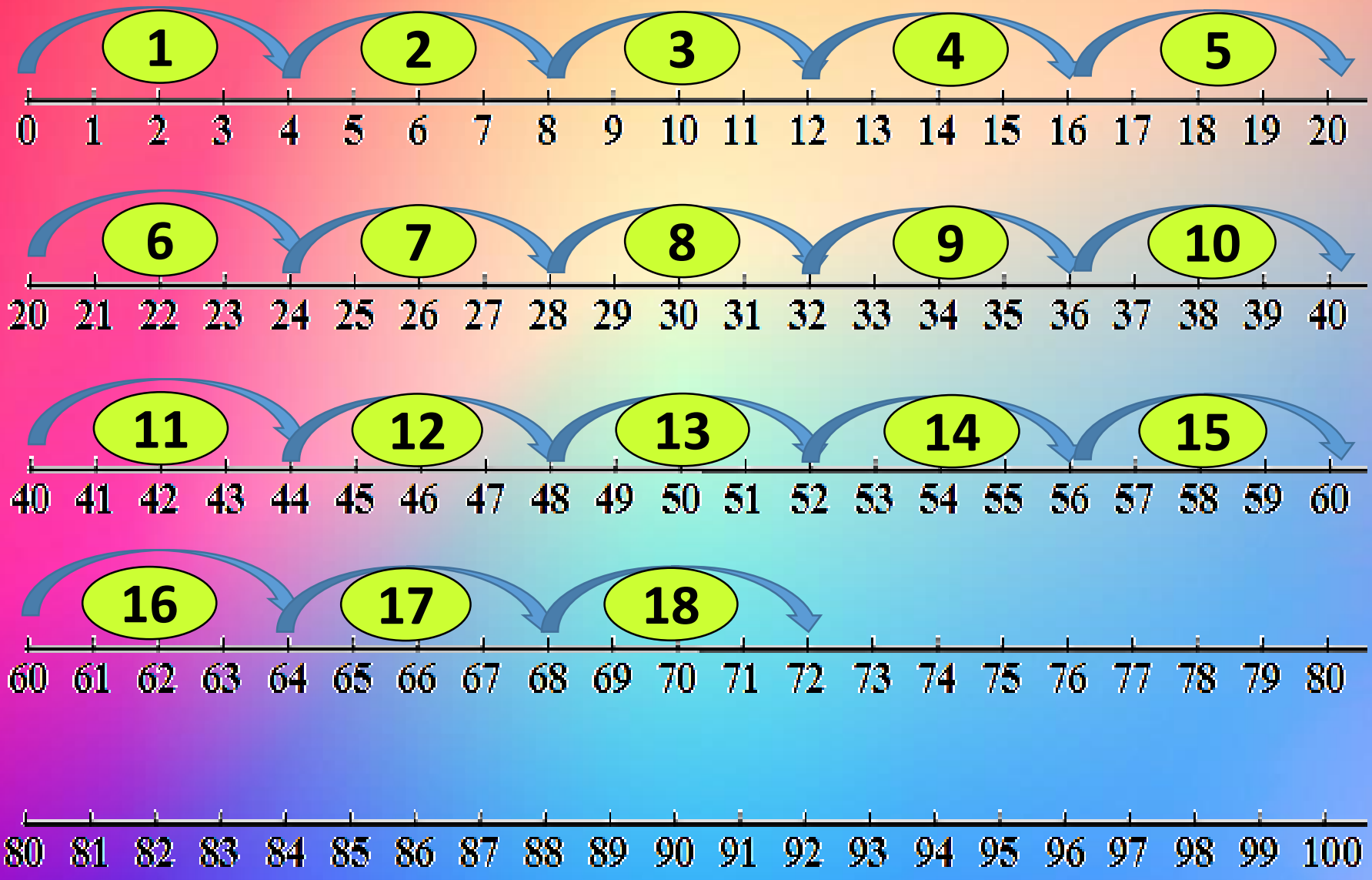
Period 3

Number Line Strategy



$18 \times 4 = 72$

$18 \times 40 = 720$



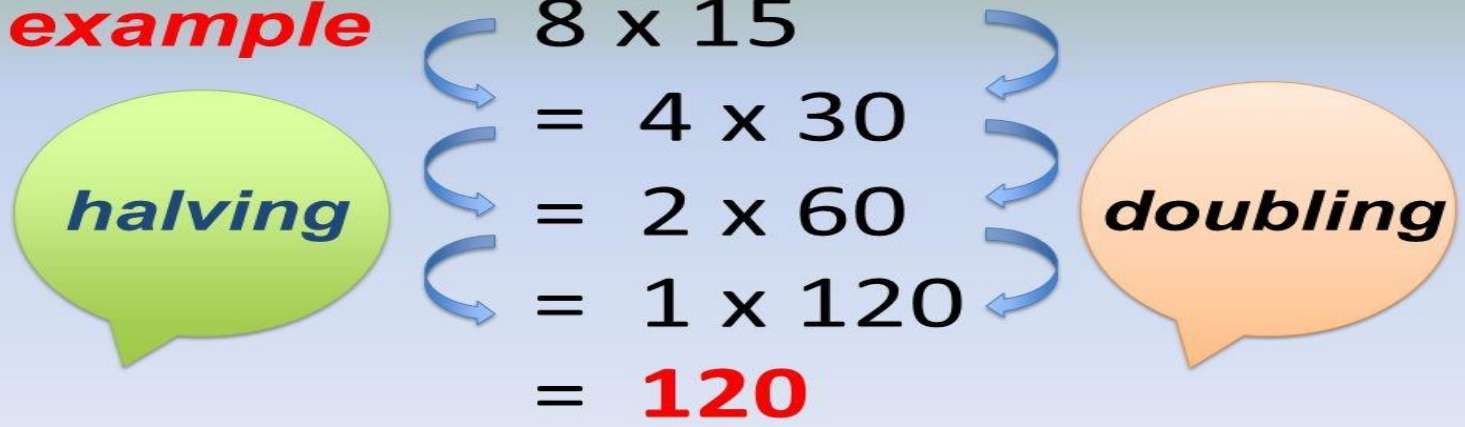
Period 4

Halving and Doubling Strategy

An effective strategy for **multiplication**

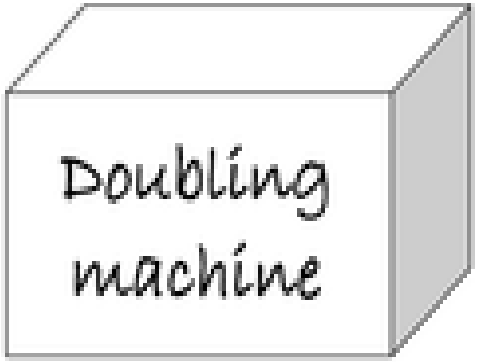
halving and doubling

example



Let us master the concept!

Doubling and halving



IN	6	3	5	8	4	10	12	15	20	24	30	32
OUT	12											

IN	4	10	8	20	16	12	18	24	14	40	44	100
OUT	2											

Doubling & Halving multiple of 10

12 x 40

half

12 ÷ 2 = 6

6 x 40 = 240

double

240 x 2 = 480

Doubling & Halving multiple of 10

12 x 40

half ↓ ↓ double

12 ÷ 2 = 6 | **2 x 40 = 80**

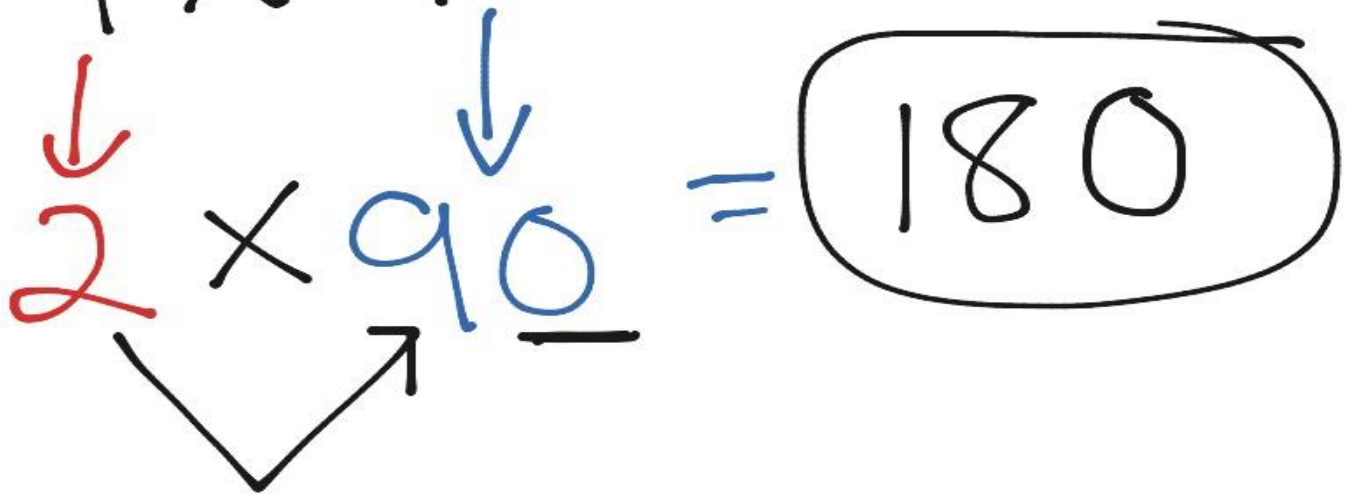
half ↓ ↓ double

6 ÷ 2 = 3 | **2 x 80 = 160**

3 x 160 = 480 | **12 x 40 = 480**

Doubling and Halving strategy

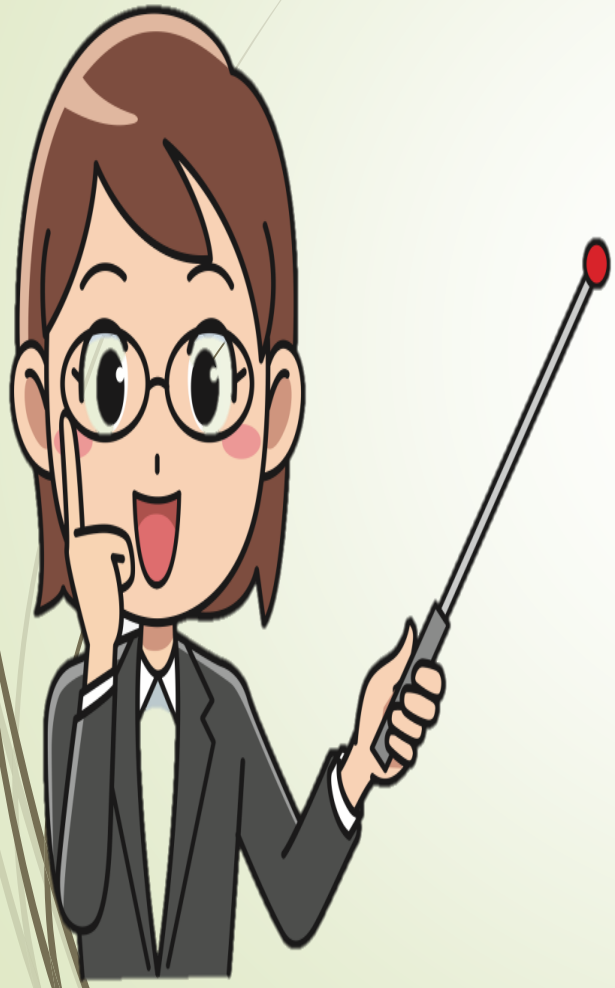
$4 \times 45 =$



Plenary

QUICK FIRE CALCULATION

https://www.studyzone.tv/game86-code3dc5617c60ff2ca509aabc60944162d1



THANKYOU