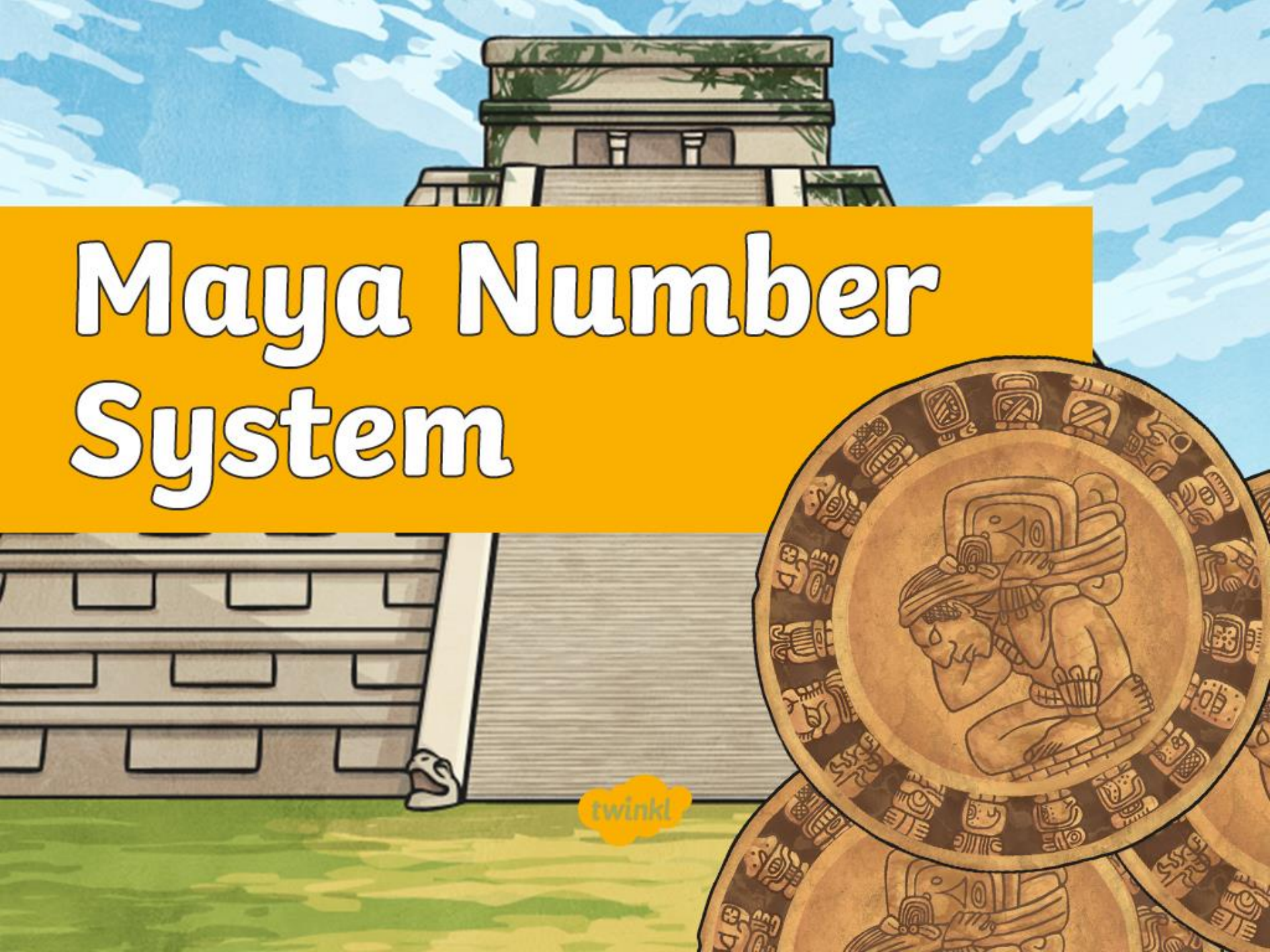


Maya Number System



A stylized illustration of a Maya pyramid with a wide staircase leading to a temple at the top. The pyramid is made of tan stone blocks with green vines growing on its sides. The sky is blue with white clouds, and the foreground is a green and yellow field. A white rectangular box is centered over the middle of the image.

LO: to learn to use the Maya number system

Number System

The numbers 1-19 are formed in a similar way to Roman Numerals.



= 0



= 1



= 5

Different numbers are made by stacking the lines and lining up the circles on top.

5 circles = a new line.

Numbers 1-19

1	●
2	●●
3	●●●
4	●●●●
5	—
6	● —
7	●● —
8	●●● —
9	●●●● —
10	==

11	● ==
12	●● ==
13	●●● ==
14	●●●● ==
15	===
16	● ===
17	●● ===
18	●●● ===
19	●●●● ===

Remember:

$$\bullet = 1$$

$$\text{—} = 5$$

Can you work out what these numbers would be?

$$\begin{array}{c} \bullet \bullet \\ \hline \end{array} = 7$$

$$\begin{array}{c} \bullet \bullet \\ \hline \hline \end{array} = 12$$

$$\begin{array}{c} \bullet \\ \hline \hline \end{array} = 11$$

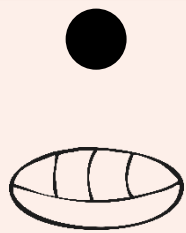
$$\begin{array}{c} \bullet \\ \hline \hline \hline \end{array} = 16$$

$$\begin{array}{c} \bullet \bullet \bullet \\ \hline \hline \hline \end{array} = 18$$

$$\begin{array}{c} \bullet \bullet \bullet \\ \hline \end{array} = 8$$

After 19 it gets a little more tricky. After 19 numbers were written **vertically** with **multiples of 20** above the bottom number.

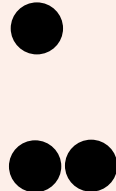
20



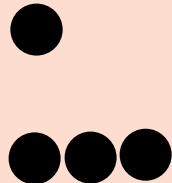
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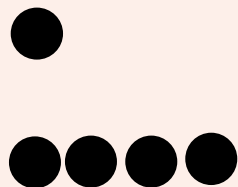
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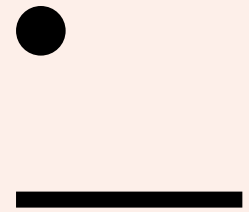
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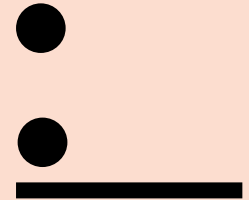
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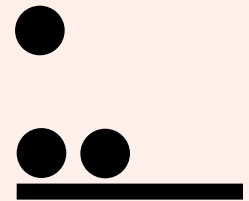
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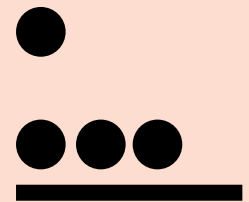
26



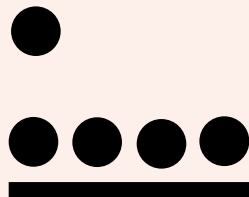
27



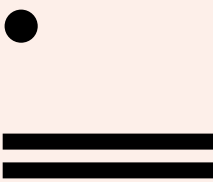
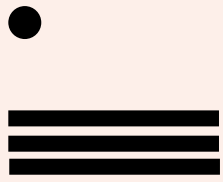
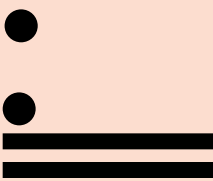
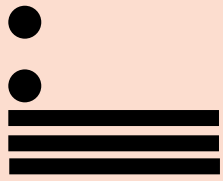
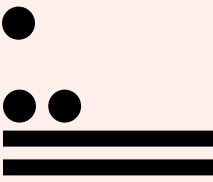
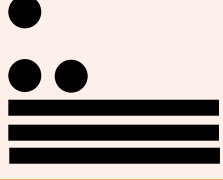
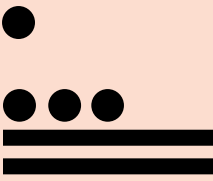
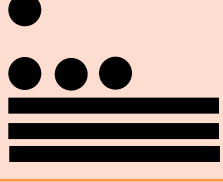
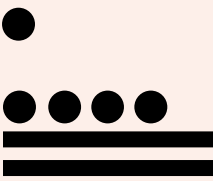
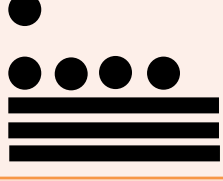

28



29



After 19 it gets a little more tricky. After 19 numbers were written **vertically** with **multiples of 20** above the bottom number.

30		35	
31		36	
32		37	
33		38	
34		39	
		40	

Remember:

If you have a multiple of 20, the zero is used as a place holder, much like we do today.



$$= 2 \times 20$$



$$= 0$$

$$40 + 0 = 40$$

Numbers Above 10

If you have a multiple of 20, the zero is used as a place holder, much like we do today.



$$= 1 \times 20$$



$$= 12$$

$$20 + 12 = 32$$



$$= 2 \times 20$$





$$= 8$$

$$40 + 8 = 48$$



Once we get above 40 it might be easier to see it in a table:

Number of 20s	● ● ● ●	$4 \times 20 = 80$	93
Number of 1s and 5s	● ● ● =====	$= 13$	

Number of 20s		$8 \times 20 = 160$	167
Number of 1s and 5s		$= 7$	

Can you work out what these numbers would be?

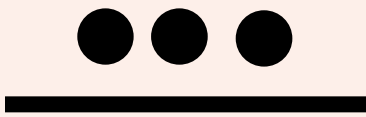
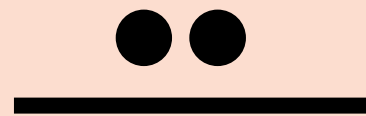
Use the grid to remind you how the system works.

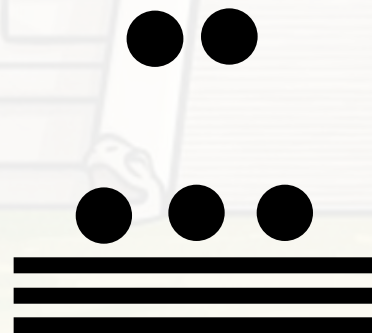
Number of 20s		$8 \times 20 = 160$	167
Number of 1s and 5s		$= 7$	

$$\begin{array}{r} \bullet \\ \bullet \\ \hline \end{array} \quad \begin{array}{r} 20 \\ 6 \end{array} = 26$$

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of 20s		$8 \times 20 = 160$	167
Number of 1s and 5s		$= 7$	





40

18

= 58

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of 20s		$8 \times 20 = 160$	167
Number of 1s and 5s		$= 7$	



200





18

= 218

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of 20s		$8 \times 20 = 160$	167
Number of 1s and 5s		$= 7$	



320



18

$= 338$

Can you work out what these numbers would be?

Use the grid to remind you how the system works.



$$19 \times 20 = 380$$



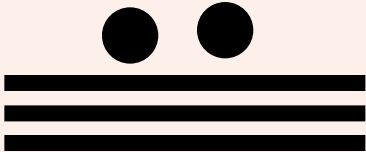
$$= 399$$



$$19$$

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of 400s		$2 \times 400 = 800$	937
Number of 20s		$6 \times 20 = 120$	
Number of 1s and 5s		$= 17$	

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of
400s



800

Number of
20s



120

= 928

Number of
1s and 5s



8

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of
400s



4000

Number of
20s



140

= 4153

Number of
1s and 5s



13

Can you work out what these numbers would be?

Use the grid to remind you how the system works.

Number of
400s



2000

Number of
20s



0

= 2012

Number of
1s and 5s



12

A cartoon illustration of a Maya pyramid with a wide staircase and a smaller structure on top, set against a blue sky with white clouds. A yellow pencil is positioned diagonally on the right side of the image.

Individual Task A

Complete your 'Maya Number System **0 - 19**'
worksheets!

A cartoon illustration of a Maya pyramid with a wide staircase and a temple on top, set against a blue sky with white clouds. A yellow pencil is positioned diagonally on the right side of the image.

Individual Task B

Complete your 'Maya Number System **0 - 399**'
worksheets!

The background of the slide is a cartoon illustration of a Maya pyramid. The pyramid is made of brown stone blocks and has a wide staircase leading up to a temple at the top. The temple has a flat roof with green vines growing on it. The sky is blue with white clouds. A yellow pencil with a black eraser and a sharp lead tip is positioned diagonally on the right side of the slide. A large, semi-transparent white rectangle is centered over the pyramid, containing the text.

Individual Task C

Complete your 'Maya Number System **0 - 7999**'
worksheets!

Plenary

Work with a partner to write down the following numbers using the Maya system.

7

126

16

427

34

3065

Plenary

Why do you think the Maya chose five and twenty as the bases of their numerical system?



Maybe the Maya chose five and twenty as the two bases of their system as there are five fingers on one hand, and twenty fingers and toes on one person.

