



Maths

Multiplication and Division

Pieces of Eight



Aim

- I can multiply and divide by 8.

Success Criteria

- I can count in 8s.
- I can recognise multiples of 8 up to 12×8 .
- I can write multiplication sentences for arrays up to 12×8 .
- I can use arrays to find division facts.
- I can use my knowledge of the $8 \times$ table to find division facts.
- I can investigate the multiples of 8, finding patterns in the digits.

Loop Cards



Let's see how long it takes you to complete the loop!

I have... 1	I have... 10	I have... 80	I have... 40	I have... 3	I have... 7	Who has...? 9×8
I have... 0	I have... 24	I have... 11	I have... 9	I have... 32	I have... 72	Who has...? 12×8
I have... 2	I have... 6	I have... 48	I have... 4	I have... 5	I have... 96	Who has...? 11×8
I have... 64	I have... 8	I have... 12	I have... 56	I have... 16	I have... 88	Who has...? $8 \div 8$

We will be trying to beat our score later in this lesson.

Let's Count in 8s!

0

8

16

24

32

40

48

56

64

72

80

88



Pieces of Eight



How many gold coins have the pirates got?



How did you work this out?

Pieces of Eight



There are 8 pirates.



How many coins would each pirate get?

Can you share the treasure equally between them?

Pieces of Eight



Pirate Jake gets seasick and has to go home, now there are only 7 pirates left!



How many gold coins does each pirate get now?

What are the 2 multiplication and 2 division facts that describe this array of coins?

Pieces of Eight



How many gold coins have the pirates got this time?

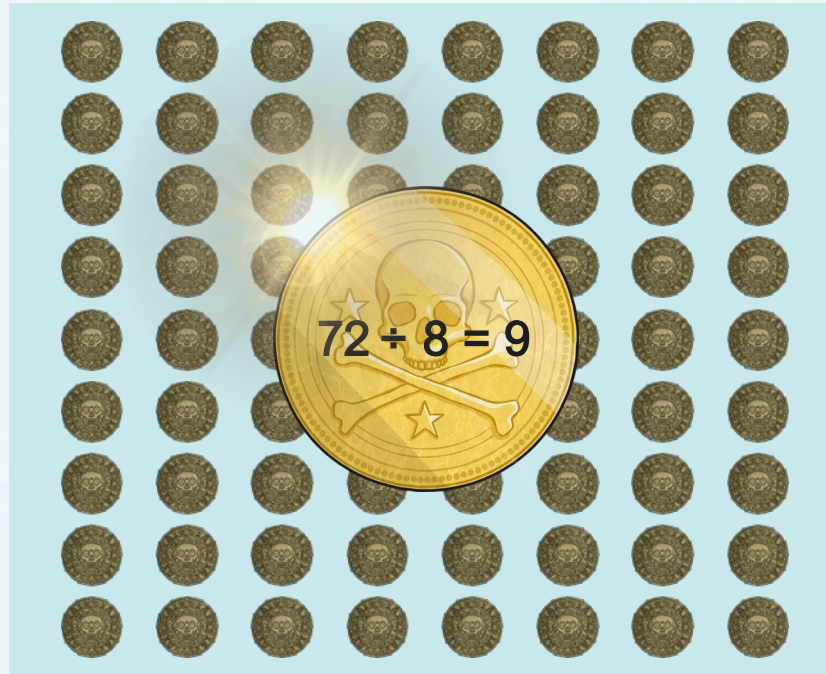


How can you work this out?

Pieces of Eight



Pirate Polly has joined the crew. Now there are **eight** pirates again.



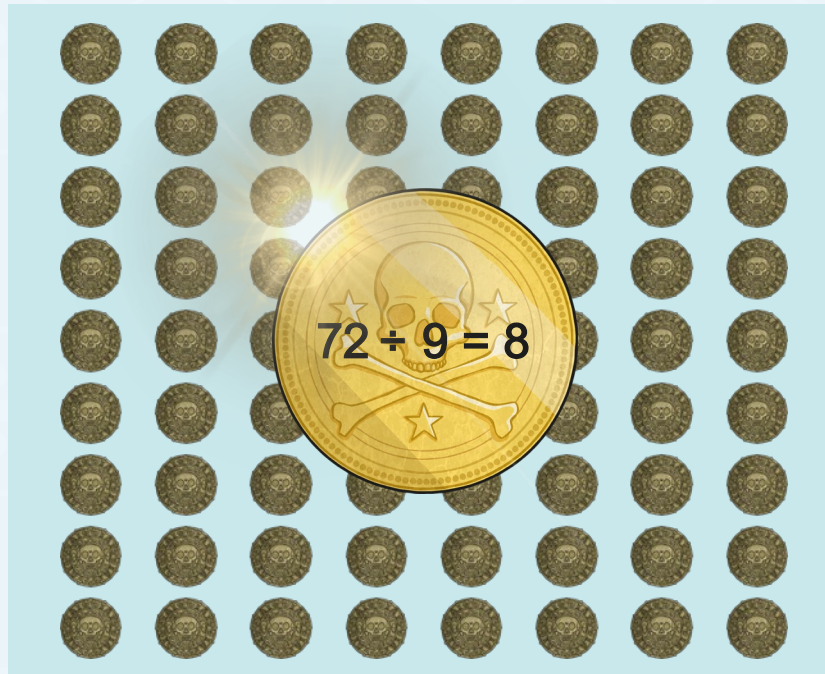
Can you share this treasure fairly between the eight pirates?

How many coins would each pirate get?

Pieces of Eight



Pirate Jake is feeling better and asks for his share of this treasure. Now there are 9 pirates!

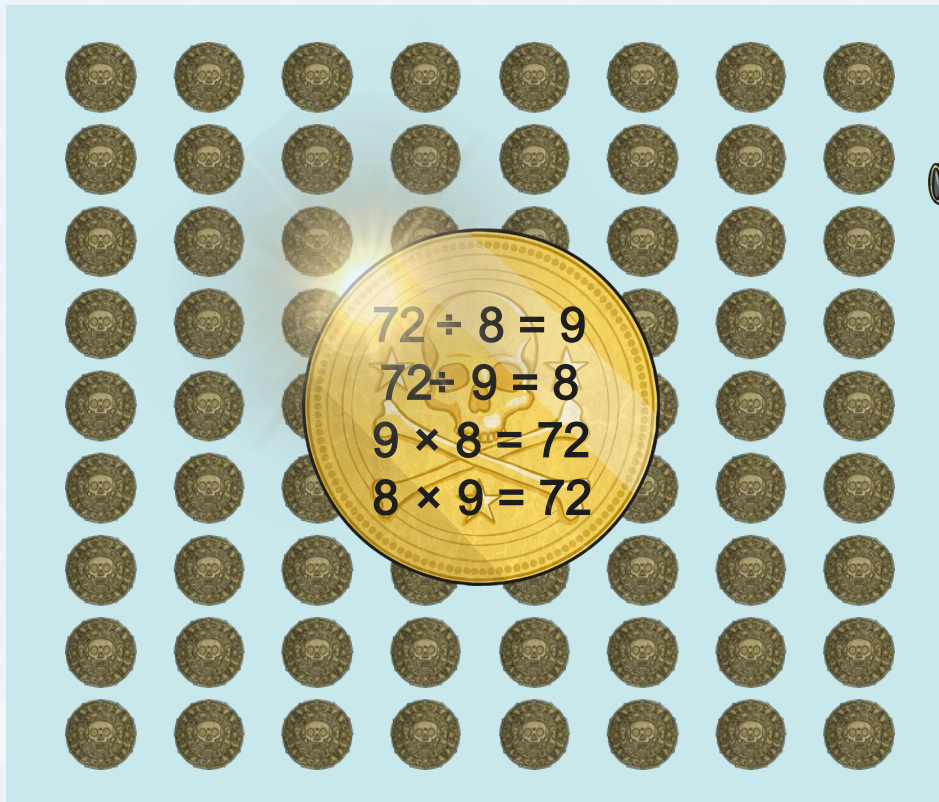


How many gold coins does each pirate get?

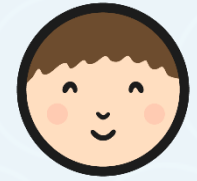
Pieces of Eight



What are the 2 multiplication and 2 division facts that describe this group of coins?



The 8s Activities



Pieces of Eight!

I can recall and use facts from the 8× table.

Fill in the missing numbers to show that you know your pirate number

- | | |
|---|---------------------------|
| a. $8 \times 8 = \square$ | k. Ten multiplied |
| b. $72 \div \square = 9$ | l. $5 \times 8 = \square$ |
| c. $8 \times 2 = \square$ | m. $48 \div 8 = \square$ |
| d. Eight times one equals \square | n. $8 \times 6 = \square$ |
| e. $7 \times 8 = \square$ | o. $0 \times 8 = \square$ |
| f. The product of eight and eleven is \square | p. Five times \square |
| g. $32 \div \square = 8$ | q. Eight squared |
| h. $8 \times \square = 24$ | r. Sixteen divided |
| i. $56 \div \square = 8$ | s. $9 \times 8 = \square$ |
| j. Twelve groups of eight equal \square altogether. | t. $24 \div 8 = \square$ |

Investigating Patterns in the Multiples of Eight

$0 \times 8 = 0$
$1 \times 8 = 8$
$2 \times 8 = 16$
$3 \times 8 = 24$

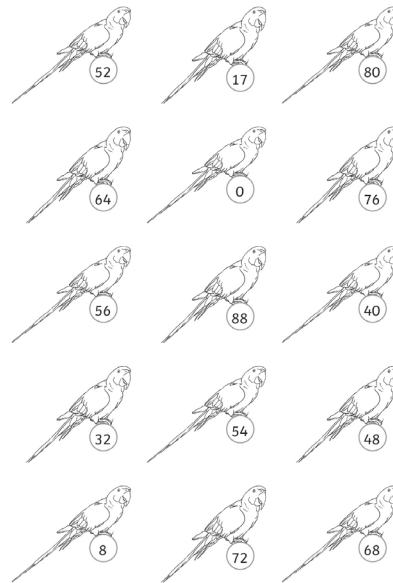
Write out your 8× table like the example shown on the previous page.
Keep going until you get to $12 \times 8 = 96$

- Can you see any patterns in the **ones** digit? Explain the pattern you found.
- Can you see any patterns in the **tens** digit? Explain the pattern you found.
- If you continue the 8 times table up to $20 \times 8 = 160$, what patterns do you see?

Ahoy Me Hearties!

I can recall and use facts from the 8× table.

- Circle the parrots that show multiples of 8.

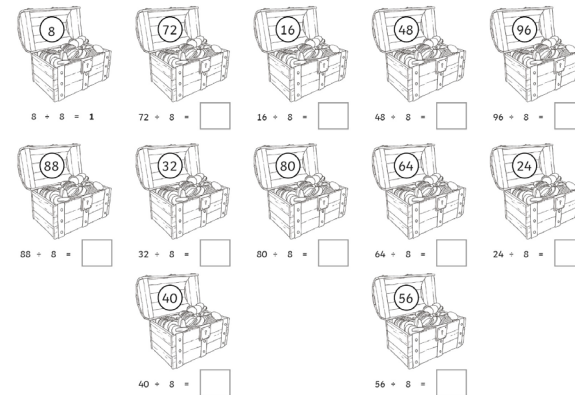


Ahoy Me Hearties!

I can recall and use facts from the 8× table.

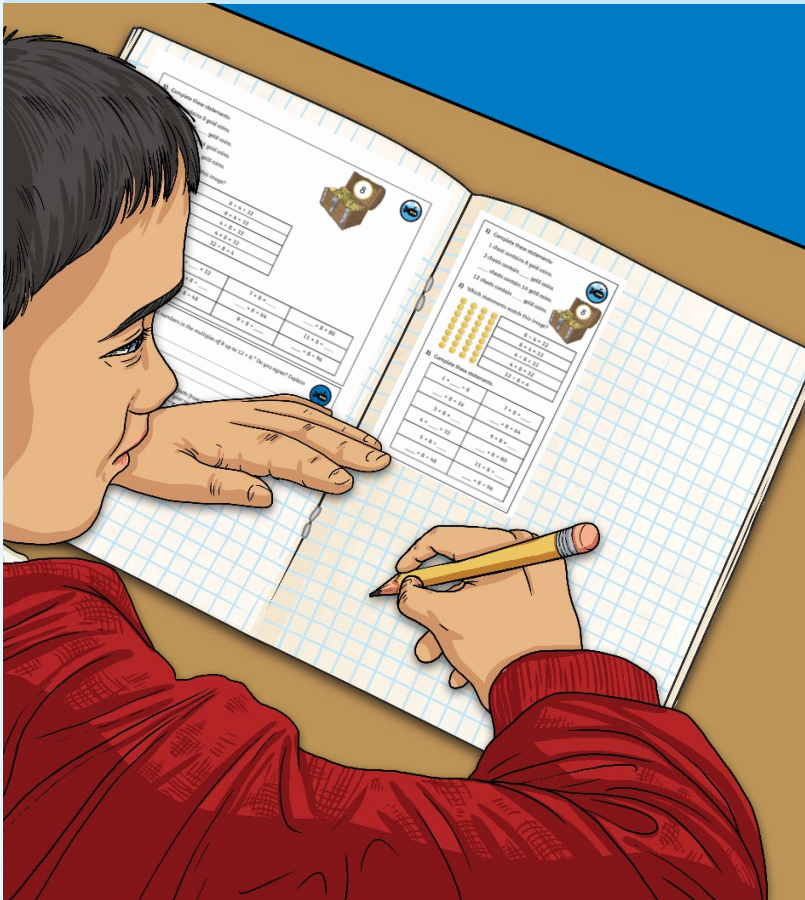
These 8 pirates are trying to work out their share of the treasure and they need your help.

Use counters, cubes or coins to find out how many gold coins each pirate should get. Fill in the number sentence to go with your calculation.



Diving into Mastery

Dive in by completing your own activity!



1) Complete these statements:
 1 chest contains 8 gold coins.
 3 chests contain ___ gold coins.
 ___ chests contain 56 gold coins.
 12 chests contain ___ gold coins.



2) Which statements match this image?

<input type="checkbox"/>	$8 + 4 = 32$
<input type="checkbox"/>	$8 \times 4 = 32$
<input type="checkbox"/>	$4 + 8 = 32$
<input type="checkbox"/>	$4 \times 8 = 32$
<input type="checkbox"/>	$32 \div 8 = 4$

3) Complete these statements.

$1 \times \underline{\quad} = 8$	$7 \times 8 = \underline{\quad}$
$\underline{\quad} \times 8 = 16$	$\underline{\quad} \times 8 = 64$
$3 \times 8 = \underline{\quad}$	$9 \times 8 = \underline{\quad}$
$4 \times \underline{\quad} = 32$	$\underline{\quad} \times 8 = 80$
$5 \times 8 = \underline{\quad}$	$11 \times 8 = \underline{\quad}$
$\underline{\quad} \times 8 = 48$	$\underline{\quad} \times 8 = 96$

1) Pirate Paulo says, "There are no odd numbers in the multiples of 8 up to 12×8 ." Do you agree? Explain why.

2) Pirate Pippo has used different models to represent some facts from the eight times table. Pirate Paulo says she has made some mistakes. Do you agree with Paulo? Explain your reasons.

24 8 8 8	
$5 \times 2 \times 2 = 80$	64 5 8 3 8
$8 + 8 + 8 + 8 = 48$	40 5 5 5 5 5

1) Complete these statements:
 1 chest contains 8 gold coins.
 3 chests contain ___ gold coins.
 ___ chests contain 56 gold coins.
 12 chests contain ___ gold coins.



2) Which statements match this image?

<input type="checkbox"/>	$8 + 4 = 32$
<input type="checkbox"/>	$8 \times 4 = 32$
<input type="checkbox"/>	$4 + 8 = 32$
<input type="checkbox"/>	$4 \times 8 = 32$
<input type="checkbox"/>	$32 \div 8 = 4$

3) Complete these statements.

$1 \times \underline{\quad} = 8$	$7 \times 8 = \underline{\quad}$
$\underline{\quad} \times 8 = 16$	$\underline{\quad} \times 8 = 64$
$3 \times 8 = \underline{\quad}$	$9 \times 8 = \underline{\quad}$
$4 \times \underline{\quad} = 32$	$\underline{\quad} \times 8 = 80$
$5 \times 8 = \underline{\quad}$	$11 \times 8 = \underline{\quad}$
$\underline{\quad} \times 8 = 48$	$\underline{\quad} \times 8 = 96$

1) Pirate Paulo says, "There are no odd numbers in the multiples of 8 up to 12×8 ." Do you agree? Explain why.

2) Pirate Pippo has used different models to represent some facts from the eight times table. Pirate Paulo says she has made some mistakes. Do you agree with Paulo? Explain your reasons.

24 8 8 8	
$5 \times 2 \times 2 = 80$	64 5 8 3 8
$8 + 8 + 8 + 8 = 48$	40 5 5 5 5 5



___ \times 8 = 80
 11 \times 8 = ___
 ___ \times 8 = 96

Do you agree? Explain

es table. Pirate Paulo says she has

40
5 5 5 5

Loop Cards



I have... 1	I have... 10	I have... 80	I have... 40	I have... 3	I have... 7	Who has...? 9×8
I have... 0	I have... 24	I have... 11	I have... 9	I have... 32	I have... 72	Who has...? 12×8
I have... 2	I have... 6	I have... 48	I have... 4	I have... 5	I have... 96	Who has...? 11×8
I have... 64	I have... 8	I have... 12	I have... 56	I have... 16	I have... 88	Who has...? $8 \div 8$

Now you are expert pirates. Let's see if you can beat your score!



Aim



- I can multiply and divide by 8.

Success Criteria

- I can count in 8s.
- I can recognise multiples of 8 up to 12×8 .
- I can write multiplication sentences for arrays up to 12×8 .
- I can use arrays to find division facts.
- I can use my knowledge of the $8 \times$ table to find division facts.
- I can investigate the multiples of 8, finding patterns in the digits.

