# Ahoy Me Hearties! 

I can recall and use facts from the $8 \times$ 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.

$8 \div 8=1$


# Ahoy Me Hearties! 

## I can recall and use facts from the $8 \times$ table.

1. Circle the parrots that show multiples of 8 .


## Ahoy Me Hearties!

2. Fill in the missing numbers to show that you know your pirate number facts.
a. $8 \times 8=\square$
b. $72 \div \square=9$
c. $8 \times 2=\square$
d. Eight times one equals $\square$
e. $7 \times 8=\square$
f. The product of eight and eleven is $\square$
g. $32 \div \square=8$
h. $8 \times \square=24$
i. $56 \div \square=8$
j. Twelve groups of eight equal $\square$ altogether.
p. Five times $\square$ equals forty
q. Eight squared equals $\square$
r. Sixteen divided by two equals $\square$
s. $9 \times 8=\square$
t. $24 \div 8=\square$
$\square$
l. $5 \times 8=$ $\square$
m. $48 \div 8=\square$
n. $8 \times 6=\square$
o. $0 \times 8=\square$
$\square$

## Pieces of Eight!

I can recall and use facts from the $8 \times$ table.

Fill in the missing numbers to show that you know your pirate number facts.
a. $8 \times 8=\square$
b. $72 \div \square=9$
c. $8 \times 2=\square$
d. Eight times one equals $\square$
k. Ten multiplied by eight equals $\square$
l. $5 \times 8=\square$
m. $48 \div 8=\square$
n. $8 \times 6=\square$
e. $7 \times 8=\square$
f. The product of eight and eleven is $\square$
o. $0 \times 8=$ $\square$
p. Five times $\square$ equals forty
g. $32 \div \square=8$
h. $8 \times \square=24$
i. $56 \div \square=8$
j. Twelve groups of eight equal $\square$ altogether.
q. Eight squared equals $\square$
r. Sixteen divided by two equals $\square$
s. $9 \times 8=$ $\square$

## 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 $8 \times$ table like the example shown on the left.
Keep going until you get to $12 \times 8=96$

1. Can you see any patterns in the ones digits of the multiples of 8 ? Explain the pattern you found.
2. Can you see any patterns in the tens digits of the multiples of 8 ? Explain the pattern you found.
3. If you continue the 8 times table up to $20 \times 8$ does the pattern continue?

## Ahoy Me Hearties Answers

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.


## Ahoy Me Hearties Answers

1. Circle the parrots that show multiples of 8 .


## Ahoy Me Hearties Answers

Fill in the missing numbers to show that you know your pirate number facts.
a. $8 \times 8=64$
b. $72 \div 8=9$
c. $8 \times 2=16$
d. Eight times one equals $\square$
e. $7 \times 8=56$
f. The product of eight and eleven is

## 88

g. $32 \div 4=8$
h. $8 \times 3=24$
i. $56 \div 7=8$
j. Twelve groups of eight equal

8
$\qquad$
$\qquad$

k. Ten multiplied by eight equals
l. $5 \times 8=40$
m. $48 \div 8=6$
n. $8 \times 6=48$
o. $0 \times 8=0$
p. Five times 8 equals forty
q. Eight squared equals $\quad 64$
r. Sixteen divided by two equals
s. $9 \times 8=72$
t. $24 \div 8=3$
3. Pirates hang out in teams of 8. Last week there were 96 pirates on Treasure Island. How many teams were searching for the treasure?

$$
96 \div 8=12
$$

4. The pirate crew from the Jolly Parrot Pirate Ship are running out of food. They only have 64 ship's biscuits left until they find land. How many biscuits are there for each of the eight pirates?

$$
64 \div 8=8
$$

5. If they can survive on one biscuit each per day how many days can they last before they need to find more food?

$$
8 \text { days }
$$

6. Choose 3 of the number facts from the table above and write your own pirate problem to go with each fact.
Multiple answers possible

## Ahoy Me Hearties Answers

Fill in the missing numbers to show that you know your pirate number facts.
a. $8 \times 8=64$
b. $72 \div 8=9$
c. $8 \times 2=16$
d. Eight times one equals $\square$
e. $7 \times 8=56$
f. The product of eight and eleven is

## 88

g. $32 \div$


8
h. $8 \times 3=24$
i. $56 \div 7=8$
j. Twelve groups of eight equal
k. Ten multiplied by eight equals
l. $5 \times 8=40$
m. $48 \div 8=6$
n. $8 \times 6=48$
o. $0 \times 8=0$
p. Five times 8 equals forty
q. Eight squared equals
r. Sixteen divided by two equals
s. $9 \times 8=72$
t. $24 \div 8=3$

## Investigating Patterns in the Multiples of Eight

Write out your $8 \times$ table
Keep going until you get to $12 \times 8=96$

1. Can you see any patterns in the ones digits of the multiples of 8 ?

Explain the pattern you found.
Within each block of five rows, the ones digit follows a very simple pattern: $8,6,4,2,0$ and this repeats over and over and over.
2. Can you see any patterns in the tens digits of the multiples of 8 ?

Explain the pattern you found.
Up to five, eight times something starts with one less than the something. Eight times 1 starts with 0 , eight times 2 starts with 1, eight times 3 starts with 2, eight times 4 starts with 3, and eight times 5 starts with 4. For numbers in the range 6 to 10, eight times the number starts with two less than the number. Eight times 6 starts with 4, eight times 7 starts with 5, eight times 8 starts with 6, eight times 9 starts with 7 , and eight times 10 starts with 8 . The next block of 5 rows has, again, a similar pattern. Eight times 11 starts with 8, eight times 12 starts with 9, eight times 13 starts with 10, eight times 14 starts with 11, and eight times 15 starts with 12.
3. If you continue the 8 times table up to $20 \times 8$ does the pattern continue?

Yes is does, in blocks of 5 .

1) 1 chest contains 8 gold coins.

3 chests contain 24 gold coins.
$\geq$ chests contain 56 gold coins.
12 chests contain 96 gold coins.
2)

| $8 \div 4=32$ |
| :---: |
| $8 \times 4=32$ |
| $4 \div 8=32$ |
| $4 \times 8=32$ |
| $32 \div 8=4$ |

3) 

| $1 \times \underline{8}=8$ | $4 \times \underline{8}=32$ | $7 \times 8=\underline{56}$ | $\underline{10} \times 8=80$ |
| :---: | :---: | :---: | :---: |
| $2 \times 8=16$ | $5 \times 8=40$ | $\underline{8} \times 8=64$ | $11 \times 8=88$ |
| $3 \times 8=24$ | $\underline{6} \times 8=48$ | $9 \times 8=\underline{72}$ | $\underline{12} \times 8=96$ |

1) The facts in the four times table increase by 8 each time. Eight is an even number. If you add two even numbers, you will get an even number. As you are always adding an even number, the pattern will continue to be even numbers.
2) 

| This model correctly shows $3 \times 8=24$. | Pippa has made a mistake. The towers do not contain <br> equal shares of the 32 cubes. |
| :---: | :---: |
| This model is incorrect. The answer should be 40. | This model correctly shows $8 \times 8=64$. |$|$| The model is incorrect. To show $5 \times 8=40$ there should |
| :---: |
| be 8 parts of 5 or 5 parts of 8. |

1) 

| Possible multiples of 8 | 8 | 16 | 24 | 32 | 40 | 48 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Number left if divided into groups of 5 | 3 | 1 | 4 | 2 | 0 | 3 |

Pepe could have 8 or 48 coins.
2) $41,46,51,56,61,66,71,76,81,86$ or 91 coins

1) Complete these statements:

1 chest contains 8 gold coins.
3 chests contain $\qquad$ gold coins.
$\qquad$ chests contain 56 gold coins.

12 chests contain $\qquad$ gold coins.

2) Which statements match this image?

| $8 \div 4=32$ |
| :--- |
| $8 \times 4=32$ |
| $4 \div 8=32$ |
| $4 \times 8=32$ |
| $32 \div 8=4$ |

3) Complete these statements.

| $1 \times \ldots=8$ | $4 \times \ldots=32$ | $7 \times 8=$ | $\ldots \times 8=80$ |
| :---: | :---: | :---: | :---: |
| $\ldots \times 8=16$ | $5 \times 8=$ | $\ldots \times 8=64$ | $11 \times 8=$ |
| $3 \times 8=$ | $\ldots \times 8=48$ | $9 \times 8=$ | $\ldots \times 8=96$ |

1) Pirate Paulo says, "There are no odd numbers in the multiples of 8 up to $12 \times 8$." Do you agree? Explain why.
$\qquad$
$\qquad$
$\qquad$
2) Pirate Pippa 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.

3) Pirate Pepe is sorting his gold coins into bags. He has fewer than 50 coins in total.

If he sorts the coins into bags of eight, he has none left over.
If he sorts the coins into bags of five, he has three left over.
How many coins does Pepe have? Find all the possibilities.

| Possible Multiples of 8 | Number Left If Divided into Groups of 5 |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Pepe could have $\qquad$ coins.

Explain to a friend how you worked out your answers.
2) Pepe has some silver coins to sort into bags of eight or three coins. He has made 12 bags of coins altogether. Some have three coins in and some have eight coins in. How many coins could he have had in total? Find all the possibilities.

| Bags of 3 | Bags of 8 | Total Number of Coins |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1) Complete these statements:

1 chest contains 8 gold coins.
3 chests contain $\qquad$ gold coins.
$\qquad$ chests contain 56 gold coins.

12 chests contain $\qquad$ gold coins.
2) Which statements match this image?


| $8 \div 4=32$ |
| :--- |
| $8 \times 4=32$ |
| $4 \div 8=32$ |
| $4 \times 8=32$ |
| $32 \div 8=4$ |

3) Complete these statements.

| $1 \times \ldots=8$ | $7 \times 8=$ |
| :---: | :---: |
| $\ldots \times 8=16$ | $\ldots \times 8=64$ |
| $3 \times 8=$ | $9 \times 8=$ |
| $4 \times \ldots=32$ | $\ldots \times 8=80$ |
| $5 \times 8=$ | $11 \times 8=$ |
| $\ldots \times 8=48$ | $\ldots \times 8=96$ |

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

2) Pirate Pippa 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.

3) Complete these statements:

1 chest contains 8 gold coins.
3 chests contain $\qquad$ gold coins.
chests contain 56 gold coins.
12 chests contain $\qquad$ gold coins.
2) Which statements match this image?

| $8 \div 4=32$ |
| :--- |
| $8 \times 4=32$ |
| $4 \div 8=32$ |
| $4 \times 8=32$ |
| $32 \div 8=4$ |

3) Complete these statements.

| $1 \times \ldots=8$ | $7 \times 8=$ |
| :---: | :---: |
| $\ldots \times 8=16$ | $\ldots \times 8=64$ |
| $3 \times 8=$ | $9 \times 8=$ |
| $4 \times \ldots=32$ | $\ldots \times 8=80$ |
| $5 \times 8=$ | $11 \times 8=$ |
| $\ldots \times 8=48$ | $\ldots \times 8=96$ |

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

2) Pirate Pippa 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 |  |  |  |  |  |
| $5 \times 2 \times 2 \times 2=80$ |  |  |  |  |  |  |  |
| $8+8+8+8=48$ |  |  | 40 |  |  |  |  |
|  |  |  | 5 | 5 | 5 | 5 | 5 |

1) Pirate Pepe is sorting his gold coins into bags. He has fewer than 50 coins in total. If he sorts the coins into bags of eight, he
 has none left over.
If he sorts the coins into bags of five, he has three left over.
How many coins does Pepe have? Find all the possibilities.
Explain to a friend how you worked out your answers.

You could make a table showing possible multiples of 8 and how many would be left if that number was divided into groups of 5 .
2) Pepe has some silver coins to sort into bags of eight or three coins. He has made 12 bags of coins altogether. Some have three coins in and some have eight coins in. How many coins could he have had in total? Find all the possibilities.

1) Pirate Pepe is sorting his gold coins into bags. He has fewer than 50 coins in total. If he sorts the coins into bags of eight, he has none left over.
If he sorts the coins into bags of five, he has three left over.
How many coins does Pepe have? Find all the possibilities.
Explain to a friend how you worked out your answers.

You could make a table showing possible multiples of 8 and how many would be left if that number was divided into groups of 5 .
2) Pepe has some silver coins to sort into bags of eight or three coins. He has made 12 bags of coins altogether. Some have three coins in and some have eight coins in. How many coins could he have had in total? Find all the possibilities.

I have...
Who has...?

## $0 \times 8$

I have...
Who has...?
$16 \div 8$

I have...
Who has...?
$8 \times 8$

I have...
Who has...?
64

I have...
Who has...?

## 10

## $3 \times 8$

I have...
Who has...?

## 24

I have...
Who has...?
$1 \times 8$

I have...
Who has...?

I have...

## 80

## $88 \div 8$

I have...
Who has...?
$6 \times 8$

I have...
Who has...?

48
$96 \div 8$

I have...
Who has...?

## 12

I have...
Who has...?

40
$72 \div 8$

I have...
Who has...?

$$
32 \div 8
$$

Who has...?

$$
7 \times 8
$$

I have...

Who has...?

## 56

$24 \div 8$

I have...
Who has...?
$4 \times 8$

I have...
Who has...?

## 32

## $40 \div 8$

I have...
Who has...?
$2 \times 8$

I have...
Who has...?
$56 \div 8$

I have...
Who has...?
$9 \times 8$

I have...
Who has...?

## 72

$12 \times 8$

I have...
Who has...?
96
$11 \times 8$

I have...
Who has...?

## 88

$8 \div 8$

## Multiplication Square

| $\times$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |

