

# MULTIPLICATION

## FACT FLUENCY

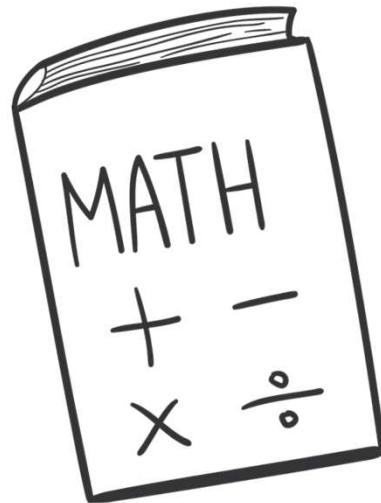
EXPLORE THE 4s TIMES TABLE

# LESSON 6

# TODAY'S OBJECTIVE

Today we will explore the  
4s times table.

# TAKE OUT YOUR **MATH JOURNALS**



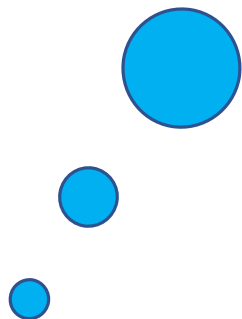


WATCH ME FIRST



**Did you know the 2s facts can  
help you solve the 4s facts?**

**Let's Explore!**





Why would this work?

**2 is half of 4**

**4 is double 2**



## Let's start by talking about related facts.

In this table, I'm going to pair a 2s fact with the related 4s fact by replacing the 4 with 2.

Which 2s fact is related to  $4 \times 2$ ?

2  $\times$  2 is related to 4  $\times$  2

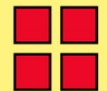
Multiplying by 2s	Multiplying by 4s
$2 \times 1$	$4 \times 1$
$2 \times 2$	$4 \times 2$
$2 \times 3$	$4 \times 3$
$2 \times 4$	$4 \times 4$
$2 \times 5$	$4 \times 5$
$2 \times 6$	$4 \times 6$
$2 \times 7$	$4 \times 7$
$2 \times 8$	$4 \times 8$
$2 \times 9$	$4 \times 9$
$2 \times 10$	$4 \times 10$
$2 \times 11$	$4 \times 11$
$2 \times 12$	$4 \times 12$

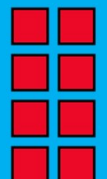
 WATCH ME FIRST

Now that I know the related facts. I'll use the 2s fact to help solve the 4s fact. I want to find the product of **4 x 2**.

I'll start by identifying the related 2s fact.  
2 x 2 is related to 4 x 2.



The product of 2 x 2 is 4.  
 $2 \times 2 = 4$  

Now, I'll double 4 to find the product of 4 x 2.  
 $4 + 4 = 8$  

**4 x 2 = 8.** I found the product of 4 x 2 by doubling the product of 2 x 2.



I just used a 2s fact to find the product of  $4 \times 2$ .

**PRODUCTS**

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	?	?
x4		
x5		
x6		
x7		
x8		
x9		
x10		
x11		
x12		

I wonder if the same thing works with other 4s times table facts.

I'll check it out by finding the product of  $4 \times 3$ , using the same strategy.



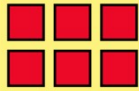


I want to solve  $4 \times 3$ , so I'll start by identifying the related 2s fact.

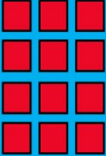
### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	<b>6</b>	<b>12</b>
x4		
x5		
x6		
x7		
x8		
x9		
x10		
x11		
x12		

The related 2s fact is  $2 \times 3$ .

$2 \times 3$  equals 6 

I found the product of  $4 \times 3$  using  $2 \times 3$ .  
The product is 12.

Now, I'll double 6 to find the product of  $4 \times 3$ .  
 $6 + 6 = 12$   
So...  $4 \times 3 = 12$  



# Let's Review!

**We can solve a 4s fact by using the related 2s fact:**

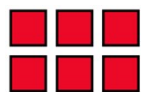
- 1<sup>st</sup> - Identify the related 2s fact (replace the 4 with a 2) and solve.
- 2<sup>nd</sup> - Double the product of the related 2s fact.
- 3<sup>rd</sup> - Solve the related 4s fact.

**EXAMPLE:** Find the product of  $4 \times 3$ .

## STEP 1

2  $\times$  3 is related to 4  $\times$  3

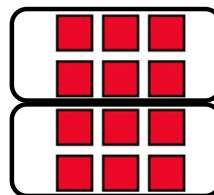
$$2 \times 3 = 6$$



## STEP 2

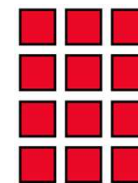
Double 6

$$6 + 6 = 12$$



## STEP 3

The product of  $4 \times 3 = 12$





LET'S WORK TOGETHER

 **Problem #1**  
LET'S WORK TOGETHER

Find the product of  $4 \times 4$ . Which 2s fact is related to  $4 \times 4$ ? Record in your journal.

**PRODUCTS**

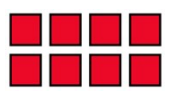
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	<b>8</b>	
x5		
x6		
x7		
x8		
x9		
x10		
x11		
x12		

Remember, our first step is to find the related 2s fact and solve.  
2 x 4 is related to 4 x 4. And  $2 \times 4 = 8$ .

**STEP 1**

2 x 4 is related to 4 x 4

$2 \times 4 = 8$



 **Problem #1**  
LET'S WORK TOGETHER

What can we do next?

**PRODUCTS**

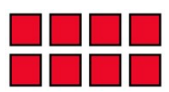
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	<b>8</b>	
x5		
x6		
x7		
x8		
x9		
x10		
x11		
x12		

We can double the product of the related 2s fact.

**STEP 1**

2 x 4 is related to 4 x 4

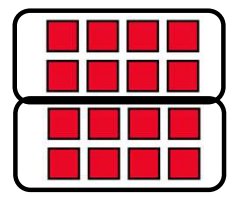
$2 \times 4 = 8$



**STEP 2**

Double 8.

$8 + 8 = 16$



 **Problem #1**  
LET'S WORK TOGETHER

What's the product of  $4 \times 4$ ?  
Explain your answer.

**PRODUCTS**

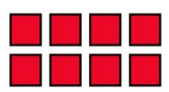
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	<b>8</b>	<b>16</b>
x5		
x6		
x7		
x8		
x9		
x10		
x11		
x12		

The product of 4 x 4 is 16.  
This is double the product of 2 x 4.

**STEP 1**

2 x 4 is related to 4 x 4

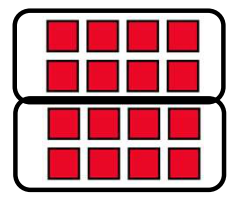
$2 \times 4 = 8$



**STEP 2**

Double 8.

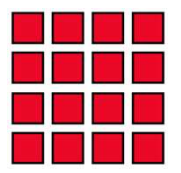
$8 + 8 = 16$



**STEP 3**

The product of

$4 \times 4 = 16$



**LET'S DO ONE MORE TOGETHER...**





Find the product of  $4 \times 5$ .  
What do we do first? Record in your journals.

**PRODUCTS**

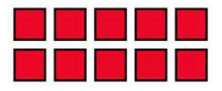
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	<b>10</b>	
x6		
x7		
x8		
x9		
x10		
x11		
x12		

Find the related 2s fact and solve.  
2 x 5 is related to 4 x 5. And  $2 \times 5 = 10$ .

**STEP 1**

2 x 5 is related to 4 x 5

$2 \times 5 = 10$



What do we do next?

**PRODUCTS**

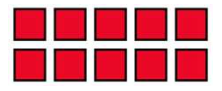
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	<b>10</b>	
x6		
x7		
x8		
x9		
x10		
x11		
x12		

Double the product of the related 2s fact.

**STEP 1**

2 x 5 is related to 4 x 5

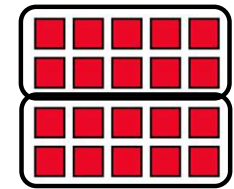
$2 \times 5 = 10$



**STEP 2**

Double 10.

$10 + 10 = 20$



What's the product of  $4 \times 5$ ?  
Explain your answer.

**PRODUCTS**

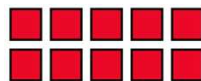
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	<b>10</b>	<b>20</b>
x6		
x7		
x8		
x9		
x10		
x11		
x12		

The product of 4 x 5 is 20.  
This is double the product of 2 x 5.

**STEP 1**

2 x 5 is related to 4 x 5

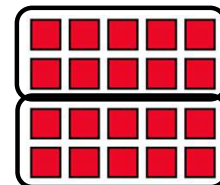
$2 \times 5 = 10$



**STEP 2**

Double 10.

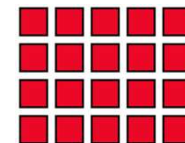
$10 + 10 = 20$



**STEP 3**

The product of

$4 \times 5 = 20$



**It's important to remember that we can use different strategies to solve the same problem.**



 **Problem #2**  
LET'S WORK TOGETHER

**PRODUCTS**

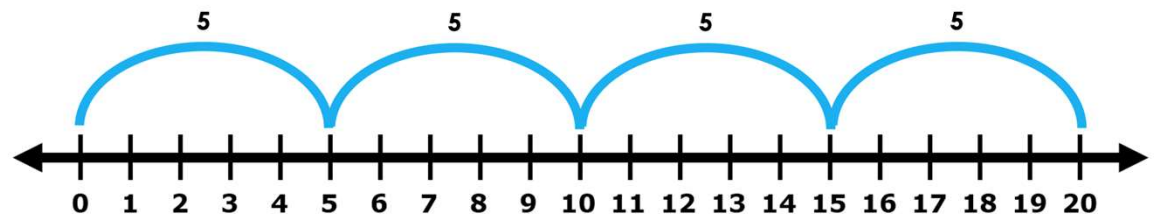
	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	<b>10</b>	<b>20</b>
x6		
x7		
x8		
x9		
x10		
x11		
x12		

Based on earlier lessons, are there other strategies we can use to solve  $4 \times 5$ ? Explain your answer.






We can use our 10s facts and find half of the product.

If  $4 \times 10 = \underline{40}$  then,  $4 \times 5 = \underline{20}$ .

We can also skip count by 5s.



 **Problem #3**  
LET'S WORK TOGETHER

	2s Facts	4s Facts
x1	2 	4
x2	4 	8
x3	6 	12
x4	8 	16
x5	10 	20
x6		
x7		
x8		
x9		
x10		
x11		
x12		

Look at the multiplication chart to see what we've recorded so far. What patterns do you notice between the 2s facts and 4s facts? Record in your journals.

The 2s facts are **half of** the 4s facts.  
The 4s facts are **double** the 2s facts.

# CHECK - IN

- What did you notice?
- Can you make a connection to anything else you already know? How?
- Do you have any questions?



IT'S YOUR TURN



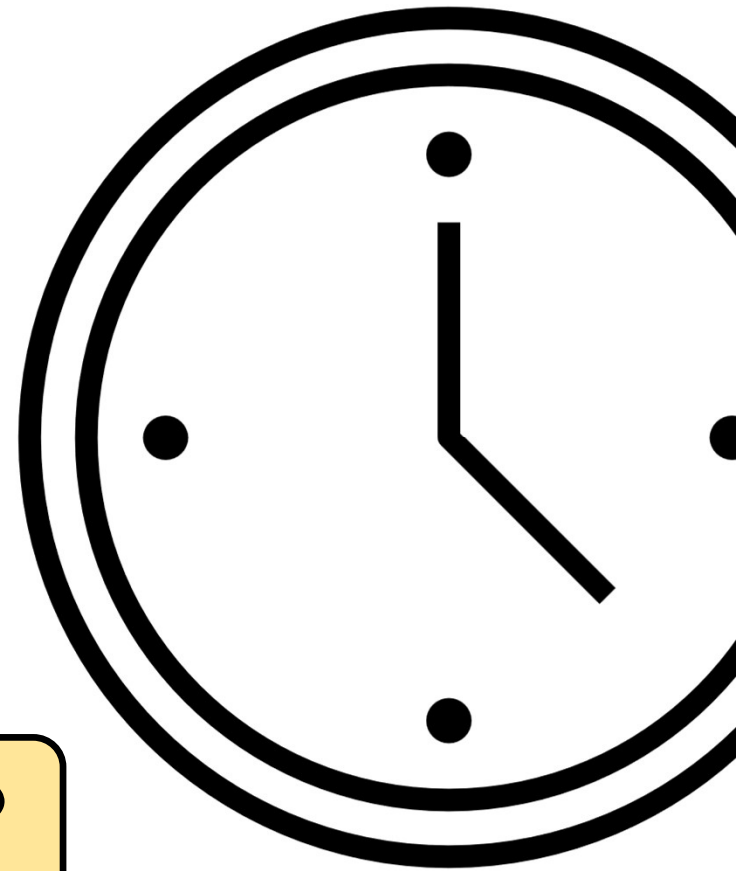


Now It's **“YOUR TURN”** to Solve



**Don't forget to show your work!**

# Time to **Discuss** and **Check** Your Answers



**How did you solve it?**



## Problem #1

YOUR TURN

**Find the product of  $4 \times 6$ . Fill in the chart.**





# Problem #1

YOUR TURN

## Find the product of $4 \times 6$ . Fill in the chart.

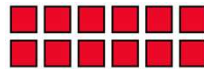
### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	<b>12</b>	<b>24</b>
x7		
x8		
x9		
x10		
x11		
x12		

#### STEP 1

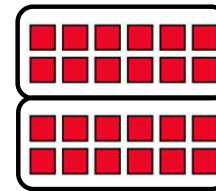
$2 \times 6$  is related to  $4 \times 6$

$$2 \times 6 = 12$$



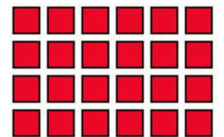
#### STEP 2

Double 12  
 $12 + 12 = 24$



#### STEP 3

The product of  
 $4 \times 6 = 24$





## Problem #2

YOUR TURN

**Find the product of  $4 \times 7$ . Fill in the chart.**





## Problem #2

YOUR TURN

Find the product of  $4 \times 7$ . Fill in the chart.

### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	<b>14</b>	<b>28</b>
x8		
x9		
x10		
x11		
x12		

#### STEP 1

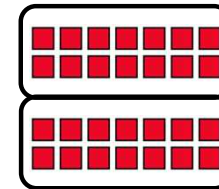
$2 \times 7$  is related to  $4 \times 7$

$$2 \times 7 = 14$$



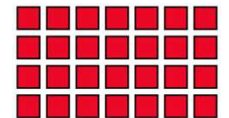
#### STEP 2

Double 14  
 $14 + 14 = 28$



#### STEP 3

The product of  
 $4 \times 7 = 28$





## Problem #3

YOUR TURN

**Find the product of  $4 \times 8$ . Fill in the chart.**





# Problem #3

YOUR TURN

## Find the product of $4 \times 8$ . Fill in the chart.

### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	14	28
x8	<b>16</b>	<b>32</b>
x9		
x10		
x11		
x12		

#### STEP 1

$2 \times 8$  is related to  $4 \times 8$

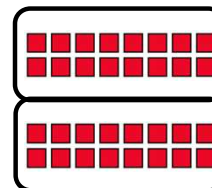
$$2 \times 8 = 16$$



#### STEP 2

Double 16

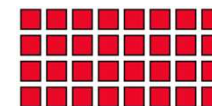
$$16 + 16 = 32$$



#### STEP 3

The product of

$$4 \times 8 = 32$$







## Problem #4

YOUR TURN

**Find the product of  $4 \times 9$ . Fill in the chart.**





## Problem #4

YOUR TURN

# Find the product of $4 \times 9$ . Fill in the chart.

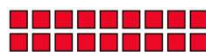
### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	14	28
x8	16	32
x9	<b>18</b>	<b>36</b>
x10		
x11		
x12		

#### STEP 1

$2 \times 9$  is related to  $4 \times 9$

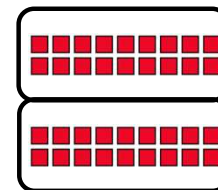
$$2 \times 9 = 18$$



#### STEP 2

Double 18

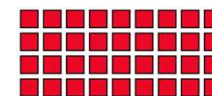
$$18 + 18 = 36$$



#### STEP 3

The product of

$$4 \times 9 = 36$$





## Problem #5

YOUR TURN

**Find the product of  $4 \times 10$ . Fill in the chart.**





# Problem #5

YOUR TURN

## Find the product of $4 \times 10$ . Fill in the chart.

### PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	14	28
x8	16	32
x9	18	36
x10	<b>20</b>	<b>40</b>
x11		
x12		

#### STEP 1

$2 \times 10$  is related to  $4 \times 10$

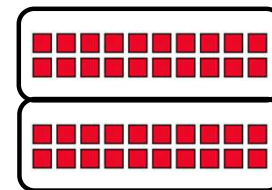
$$2 \times 10 = 20$$



#### STEP 2

Double 20

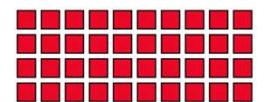
$$20 + 20 = 40$$



#### STEP 3

The product of

$$4 \times 10 = 40$$





**Problem #6**  
YOUR TURN

**Find the product of  $4 \times 11$ . Fill in the chart.**





# Problem #6

YOUR TURN

Find the product of  $4 \times 11$ . Fill in the chart.

## PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	14	28
x8	16	32
x9	18	36
x10	20	40
x11	<b>22</b>	<b>44</b>
x12		

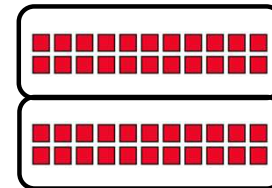
### STEP 1

$2 \times 11$  is related to  $4 \times 11$   
 $2 \times 11 = 22$



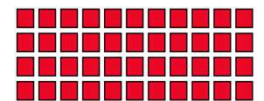
### STEP 2

Double 22  
 $22 + 22 = 44$



### STEP 3

The product of  
 $4 \times 11 = 44$





## Problem #7

YOUR TURN

**Find the product of  $4 \times 12$ . Fill in the chart.**





# Problem #7

YOUR TURN

Find the product of  $4 \times 12$ . Fill in the chart.

## PRODUCTS

	2s Facts	4s Facts
x1	2	4
x2	4	8
x3	6	12
x4	8	16
x5	10	20
x6	12	24
x7	14	28
x8	16	32
x9	18	36
x10	20	40
x11	22	44
x12	<b>24</b>	<b>48</b>

### STEP 1

$2 \times 12$  is related to  $4 \times 12$

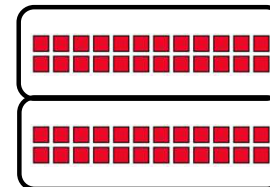
$$2 \times 12 = 24$$



### STEP 2

Double 24

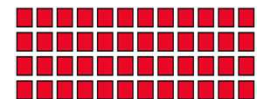
$$24 + 24 = 48$$



### STEP 3

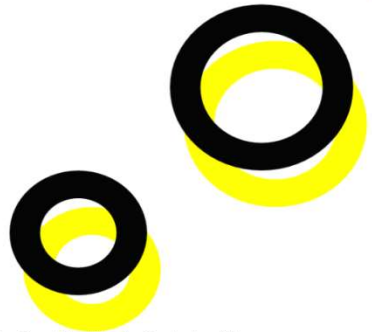
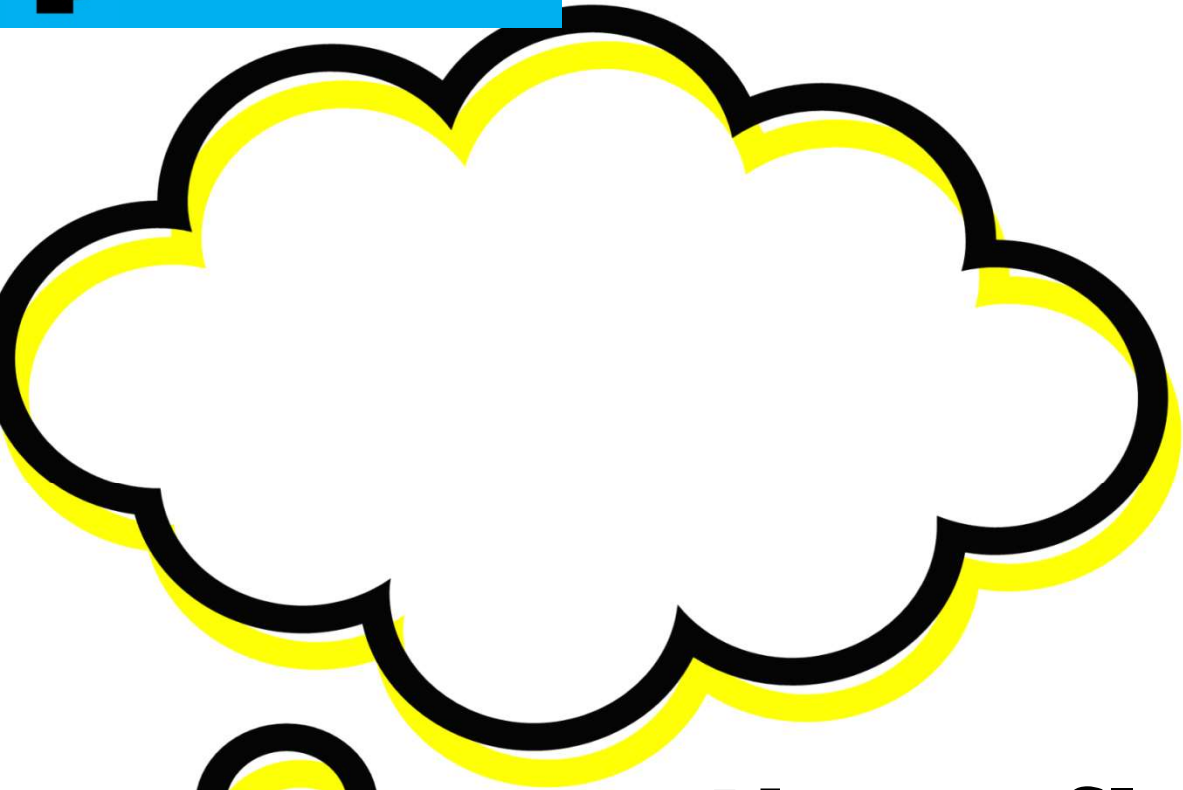
The product of

$$4 \times 12 = 48$$





 **Let's Reflect**



**It's reflection time!**