

MULTIPLICATION

FACT FLUENCY

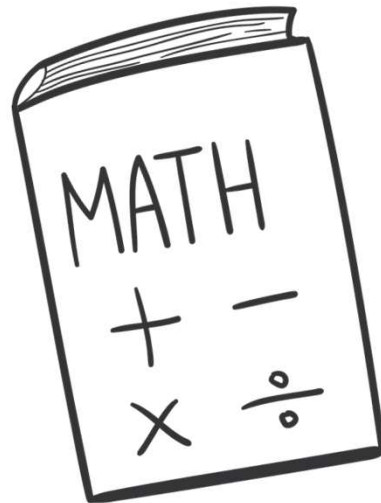
EXPLORE THE 5s AND 10s TIMES TABLES

LESSON 3

TODAY'S OBJECTIVE

Today we will explore the
5s and 10s times tables.

TAKE OUT YOUR **MATH JOURNALS**





WATCH ME FIRST

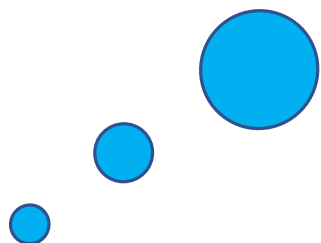


Today we are going to explore the 5s and 10s times tables using coins.

Chloe loves collecting coins. She especially loves collecting nickels and dimes.

She has 12 sets of coins. The dimes and nickels are stored separately.

Let's help her find out the amount of money she has in each collection.





Did you know?

We can find the value of groups of coins (ex. nickels and dimes) by skip counting. Skip counting helps us learn multiplication facts!



Since a nickel has a value of 5 cents, we can skip count by 5s.



Since a dime has a value of 10 cents, we can skip count by 10s.




Now, watch as I help Chloe count her nickel and dime collections.

I'll fill in the chart below to count the coin collections.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total

 WATCH ME FIRST


First, I'll represent the nickel by drawing a model and then I'll record a multiplication fact.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1					





I can show 1 nickel as 1 group of 5 or 1×5 .
I know that equals 5¢.

I'll record that in the chart.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$				



 WATCH ME FIRST

Next, I'll represent the dime by drawing a model and record a multiplication fact.


# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{¢}$		1		


 WATCH ME FIRST

I can write 1 dime as 1 group of 10 or 1×10 equals 10¢.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$		1	 $1 \times 10 = 10 \text{ ¢}$	




In the next example, Chloe has two nickels and two dimes.

# of Nickels	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$	
2		

# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 10 = 10 \text{ ¢}$	
2		

 WATCH ME FIRST




First, I'll represent the nickels with a model. Next, I'll record a multiplication fact.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$		1	 $1 \times 10 = 10 \text{ ¢}$	
2	 $2 \times 5 =$		2		







2 nickels represent 2 groups of 5 or 2×5 .
I know that equals 10¢

Record in your math journals.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$		1	 $1 \times 10 = 10 \text{ ¢}$	
2	 $2 \times 5 = 10 \text{ ¢}$		2		





Now it's time to represent the dimes.

Record in your math journals.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 = 5 \text{ ¢}$		1	 $1 \times 10 = 10 \text{ ¢}$	
2	 $2 \times 5 = 10 \text{ ¢}$		2	 $2 \times 10 = 20 \text{ ¢}$	

 WATCH ME FIRST

I'm starting to see certain patterns.
We'll discuss more later.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
1	 $1 \times 5 =$	5 ¢	1	 $1 \times 10 =$	10 ¢
2	 $2 \times 5 =$	10 ¢	2	 $2 \times 10 =$	20 ¢

Now let's work together to count the next couple of coin collections.






LET'S WORK TOGETHER

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

In the next collection there are 3 nickels and 3 dimes. How can we represent the nickels?

3 nickels is the same as 3 groups of 5 or 3×5 . This equals 15¢

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
3	 $3 \times 5 = 15 \text{ ¢}$				





Use the model to record a multiplication fact.

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

How can we represent the dimes?

3 dimes is the same as 3 groups of 10 or 3×10 . This equals 30¢

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
3	 $3 \times 5 = 15 \text{ ¢}$		3	 $3 \times 10 = 30 \text{ ¢}$	







Use the model to record a multiplication fact.

LET'S DO ONE MORE TOGETHER...



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





The next collection has 4 nickels and 4 dimes.

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
3	 $3 \times 5 = 15 \text{ ¢}$		3	 $3 \times 10 = 30 \text{ ¢}$	
4			4		

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

What multiplication fact can we write to represent the nickels? Record in your journals.





4 nickels is the same as 4 groups of 5 or 4×5 . This equals 20¢

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
3	 $3 \times 5 = 15 \text{ ¢}$		3	 $3 \times 10 = 30 \text{ ¢}$	
4	 $4 \times 5 = 20 \text{ ¢}$		4	 	

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

What multiplication fact can we write to represent the dimes? Record in your journals.









4 dimes is the same as 4 groups of 10 or 4×10 . This equals 40¢

# of Nickels	Create a Model and Write a Multiplication Fact	Total	# of Dimes	Create a Model and Write a Multiplication Fact	Total
3	 $3 \times 5 = 15 \text{ ¢}$		3	 $3 \times 10 = 30 \text{ ¢}$	
4	 $4 \times 5 = 20 \text{ ¢}$		4	 $4 \times 10 = 40 \text{ ¢}$	

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

Look at your math journals to see what we've recorded so far. What patterns do you see?

We are skip counting by 5s with nickels.
And we are skip counting by 10s with dimes.

# of Nickels	Model and Multiplication Fact	Total Amount of Money	# of Dimes	Model and Multiplication Fact	Total Amount of Money
1	 $1 \times 5 =$	5 ¢	1	 $1 \times 10 =$	10 ¢
	 $2 \times 5 =$	10 ¢	2	 $2 \times 10 =$	20 ¢
3	 $3 \times 5 =$	15 ¢	3	 $3 \times 10 =$	30 ¢
4	 $4 \times 5 =$	20 ¢	4	 $4 \times 10 =$	40 ¢

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

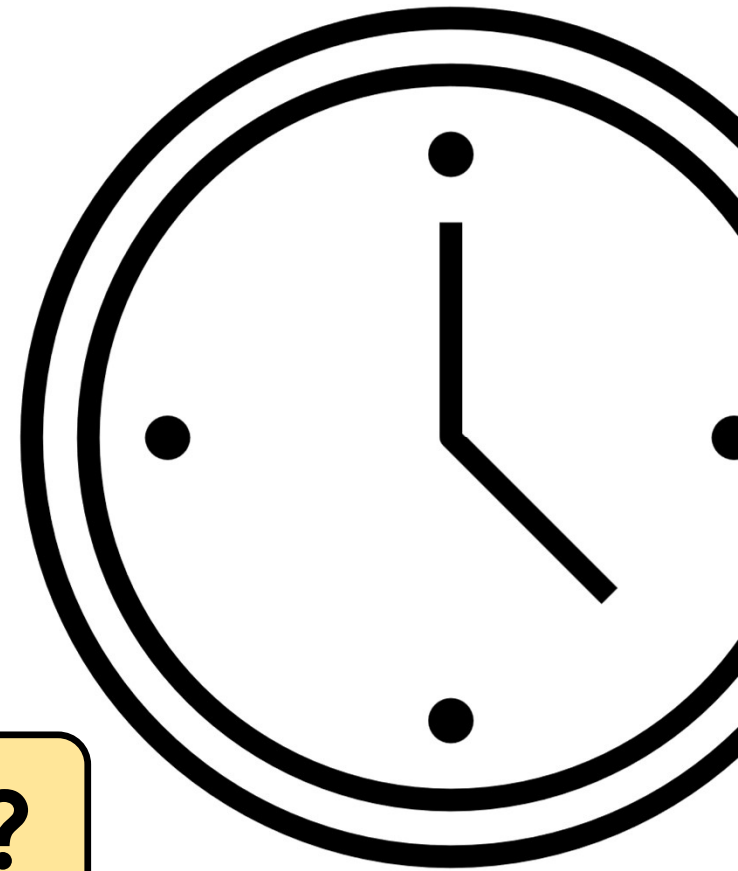


Now It's **“YOUR TURN”** to Solve



Don't forget to show your work!

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



How did you solve it?



Problems #5

YOUR TURN

There are 5 nickels and 5 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.



Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5				



Problems #5

YOUR TURN

There are 5 nickels and 5 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.



Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$



Problems #6

YOUR TURN

There are 6 nickels and 6 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.





Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6				



Problems #6

YOUR TURN

There are 6 nickels and 6 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.





Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$



Problems #7

YOUR TURN

There are 7 nickels and 7 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.







Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7				



Problems #7

YOUR TURN

There are 7 nickels and 7 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.







Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7		$7 \times 5 = 35 \text{ ¢}$		$7 \times 10 = 70 \text{ ¢}$



Problems #8

YOUR TURN

There are 8 nickels and 8 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.









Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7		$7 \times 5 = 35 \text{ ¢}$		$7 \times 10 = 70 \text{ ¢}$
8				



Problems #8

YOUR TURN

There are 8 nickels and 8 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.









Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7		$7 \times 5 = 35 \text{ ¢}$		$7 \times 10 = 70 \text{ ¢}$
8		$8 \times 5 = 40 \text{ ¢}$		$8 \times 10 = 80 \text{ ¢}$



Problems #9

YOUR TURN

There are 9 nickels and 9 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.











Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7		$7 \times 5 = 35 \text{ ¢}$		$7 \times 10 = 70 \text{ ¢}$
8		$8 \times 5 = 40 \text{ ¢}$		$8 \times 10 = 80 \text{ ¢}$
9				



Problems #9

YOUR TURN

There are 9 nickels and 9 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.

Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
5		$5 \times 5 = 25 \text{ ¢}$		$5 \times 10 = 50 \text{ ¢}$
6		$6 \times 5 = 30 \text{ ¢}$		$6 \times 10 = 60 \text{ ¢}$
7		$7 \times 5 = 35 \text{ ¢}$		$7 \times 10 = 70 \text{ ¢}$
8		$8 \times 5 = 40 \text{ ¢}$		$8 \times 10 = 80 \text{ ¢}$
9		$9 \times 5 = 45 \text{ ¢}$		$9 \times 10 = 90 \text{ ¢}$



Problems #10

YOUR TURN

There are 10 nickels and 10 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.



Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10				



Problems #10

YOUR TURN

There are 10 nickels and 10 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.



Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10		$10 \times 5 = 50 \text{ ¢}$		$10 \times 10 = \$1.00$



Problems #11

YOUR TURN

There are 11 nickels and 11 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.





Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10		$10 \times 5 = 50 \text{ ¢}$		$10 \times 10 = \$1.00$
11				



Problems #11

YOUR TURN

There are 11 nickels and 11 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.





Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10		$10 \times 5 = 50 \text{ ¢}$		$10 \times 10 = \$1.00$
11		$11 \times 5 = 55 \text{ ¢}$		$11 \times 10 = \$1.10$



Problems #12

YOUR TURN

There are 12 nickels and 12 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.







Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10		$10 \times 5 = 50 \text{ ¢}$		$10 \times 10 = \$1.00$
11		$11 \times 5 = 55 \text{ ¢}$		$11 \times 10 = \$1.10$
12				



Problems #12

YOUR TURN

There are 12 nickels and 12 dimes. Cut out the coins and glue them inside the chart. Write matching multiplication facts.

Number of Coins	Create a Model and Write a Multiplication Fact	Total	Create a Model and Write a Multiplication Fact	Total
10		$10 \times 5 = 50 \text{ ¢}$		$10 \times 10 = \$1.00$
11		$11 \times 5 = 55 \text{ ¢}$		$11 \times 10 = \$1.10$
12		$12 \times 5 = 60 \text{ ¢}$		$12 \times 10 = \$1.20$



Problem #13

YOUR TURN

What patterns do you notice when multiplying by 5s?





Problem #3

YOUR TURN

What patterns do you notice when multiplying by 5s?

Answers will vary:

- When multiplying by 5s the digit in the ones place is always a 0 or 5.
- The products switch between odd and even numbers.





Problem #14

YOUR TURN

What patterns do you notice when multiplying by 10s?





Problem #14

YOUR TURN

What patterns do you notice when multiplying by 10s?

Answers will vary:

- When multiplying by 10s the digit in the ones place is always 0.
- The products are all even.





Problem #15

YOUR TURN

What's the relationship between the numbers 5 and 10? How does this relate to multiplication?





Problem #15

YOUR TURN

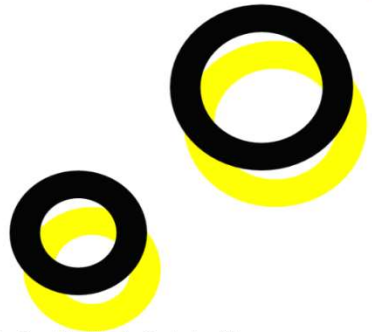
What's the relationship between the numbers 5 and 10? How does this relate to multiplication?

Answers will vary:

- 5 is half of 10 and 10 is twice as much as 5
- You can figure out the 5s facts by using the 10s facts (divide by half)
- You can figure out the 10s facts by using the 5s facts (double them)



 **Let's Reflect**



It's reflection time!