

# MULTIPLICATION

# PROPERTIES

- ✓ GAMES
- ✓ ACTIVITIES
- ✓ WORKSHEETS

Name: Sarah  
**Distributive Property**  
A difficult multiplication fact has been split apart for you to make it easier to solve. Tell what large fact was split and solve to find the answer.

1. $(8 \times 3) \cdot (8 \times 5) =$ $8 \times 8$ $24 + 40 = 64$	4. $(6 \times 3) \cdot (6 \times 3) =$ $6 \times 6$ $18 + 18 = 36$
2. $(9 \times 5) \cdot (9 \times 2) =$ $9 \times 7$ $45 + 18 = 63$	5. $(7 \times 2) \cdot (7 \times 10) =$ $7 \times 12$ $14 + 70 = 84$
3. $(2 \times 6) \cdot (2 \times 2) =$ $4 \times 7$ $16 + 12 = 28$	6. $(4 \times 4) \cdot (4 \times 3) =$ $4 \times 7$ $16 + 12 = 28$

### My Basketball Court

To win, you must have 10 items in your basketball court.

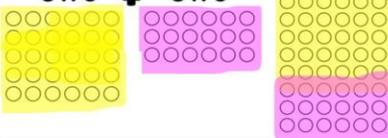
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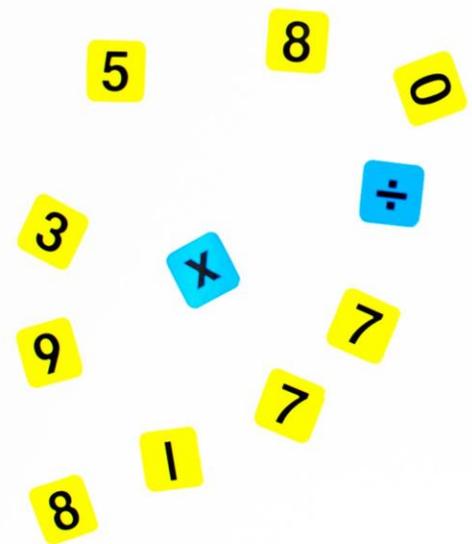
$(11 \times 9) + (11 \times 3)$

Name: Sarah  
**Distributive Property**  
A difficult multiplication fact has been split apart for you to make it easier to solve. Tell what large fact was split and solve to find the answer.

1. $(8 \times 3) \cdot (8 \times 5) =$ $8 \times 8$ $24 + 40 = 64$	4. $8 \times 9 =$ $(6 \times 5) + (8 \times 4)$ $40 + 32$ $= 72$
2. $(9 \times 5) \cdot (9 \times 2) =$ $9 \times 7$ $45 + 18 = 63$	5. $6 \times 6 =$ $(6 \times 5) + (6 \times 2)$ $30 + 12$ $= 42$
3. $(2 \times 6) \cdot (2 \times 2) =$ $4 \times 7$ $16 + 12 = 28$	6. $7 \times 8 =$ $(7 \times 5) + (7 \times 3)$ $35 + 21$ $= 56$

# MINI LESSON

Multiplication Properties	
<u>Identity Property</u> $1 \times 9 = 9$ $5 \times 1 = 5$ $1 \times 492875 = 492,875$	<u>Zero Property</u> $0 \times 4 = 0$ $5 \times 0 = 0$ $0 \times 1000000 = 0$
<u>Commutative Property</u> $8 \times 5 = 5 \times 8$ $4 \times 9 = 9 \times 4$ $8 \times 6 = 6 \times 8$ $2 \times 3 = 3 \times 2$ True or False? $3 \times 8 = 8 \times 24$	<u>Associative Property</u> $(3 \times 4) \times 2 = 12 \times 2 = 24$ $3 \times (4 \times 2) = 3 \times 8 = 24$ $(1 \times 2) \times 3 = 2 \times 3 = 6$ $1 \times (2 \times 3) = 1 \times 6 = 6$ $(6 \times 10) \times 2 = 60 \times 2 = 120$ $6 \times (10 \times 2) = 6 \times 20 = 120$
<u>Distributive Property</u> $(7 \times 9) + (3 \times 9) = 90$ $63 + 27 = 90$ $(7 \times 9) + (3 \times 9) = 90$ $10 \times 9 = 90$	Look at this! $5 \times 6 + 3 \times 6 = 8 \times 6$ 





# ERROR ANALYSIS

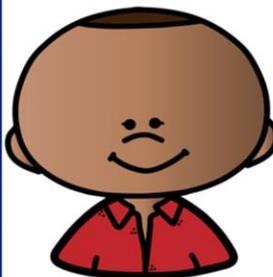
Students decide if each kid solved the problem correctly or incorrectly. They explain their thinking at the bottom.

4 PAGES

Directions: Read the problem below and look at the work the student did. Decide if the work is correct or not.

Fill in the missing number.

$$5 \times 8 = 8 \times \underline{\quad}$$



The student says:

The answer is 40 because  $5 \times 8$  equals 40.

So you put a 40 in the blank.



Explain if they are right or wrong. Put a check or X on their work.

The answer is not 40. The above equation shows the commutative property,  $5 \times 8 = 8 \times 5$ . The answer is 5.

# MATH SORT

Elf Land 27



Elf Land 16



Equal Elf Land



Elf Land 36



Bad Elves!



Elf Land 32



Students sort the elves on top of the correct posters.

# GAME #1

Solve each equation.  
 $(5 \times 3) \cdot (6 \times 3) =$   
A. 15  
B. 18  
C. 33  
D. 43  
# 10

What's the missing number?  
 $5 \times 8 = \_ \times 5$   
A. 5  
B. 25  
C. 40  
D. 8  
# 16

Which is NOT a way to split apart the equation?  
 $9 \times 10$   
A.  $(3 \times 10) \cdot (3 \times 10)$   
B.  $(6 \times 10) \cdot (3 \times 10)$   
C.  $(1 \times 10) \cdot (8 \times 10)$   
D.  $(5 \times 10) \cdot (5 \times 10)$   
# 22

Identify the property.  
 $(6 \times 7) \cdot (1 \times 7) = 7 \times 7$   
A. Identity  
B. Commutative  
C. Distributive  
D. Zero  
# 5

## Fill It Up!

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Solve the equation.  
 $3 \times 5 \times 1$   
A. 15  
B. 16  
C. 9  
D. 8  
# 4

Students try to cover the entire gameboard with their selected game pieces. The person with the most spaces covered at the end wins.



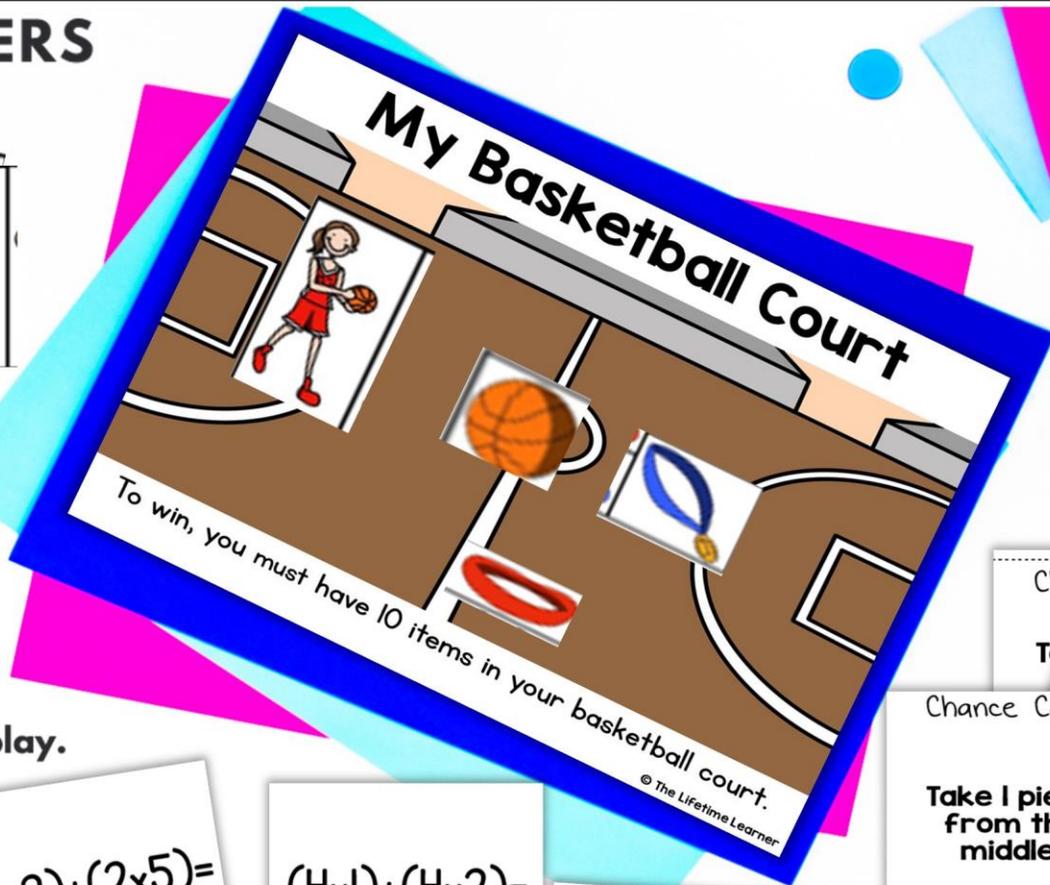
# GAME #2

FOR 2-4 PLAYERS



## HOW TO PLAY:

1. All players receive a game mat.
2. Students answer a question card.
3. If they are correct, they earn an item.
4. The first person to earn 10 items wins.
5. Chance cards included to spice up gameplay.



$(2 \times 2) + (2 \times 5) =$

#1

$(3 \times 4) + (3 \times 3) =$

12 + 9

21

#4

$(4 \times 1) + (4 \times 2) =$

$(5 \times 7) + (5 \times 3) =$

#2

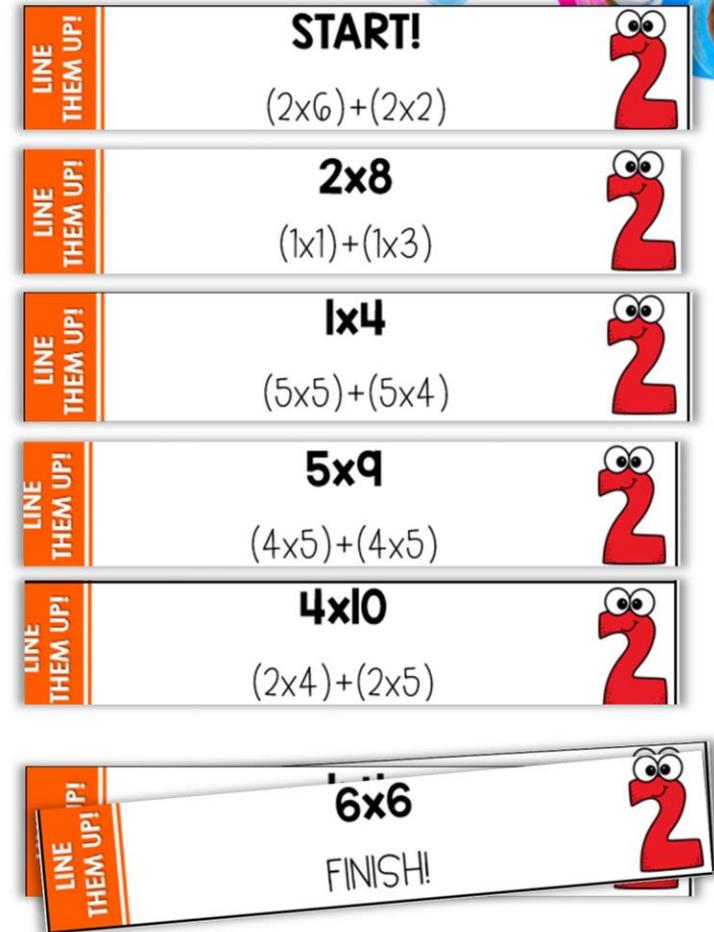
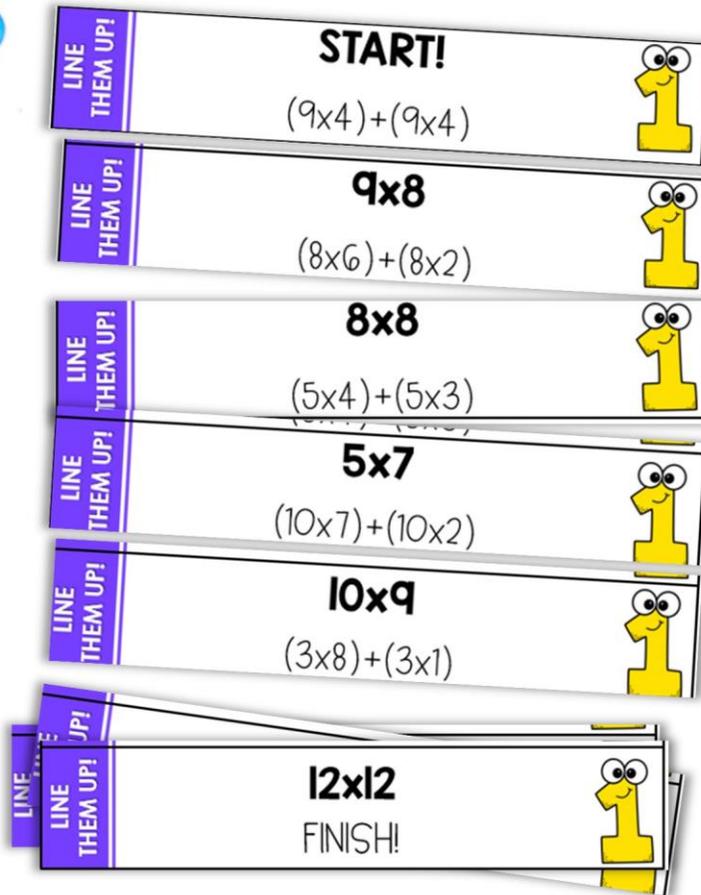
Chance Card!  
To

Chance Card!  
Take 1 piece from the middle.

Chance Card!  
Take a piece from the middle and give it to another player.



# GAME #3



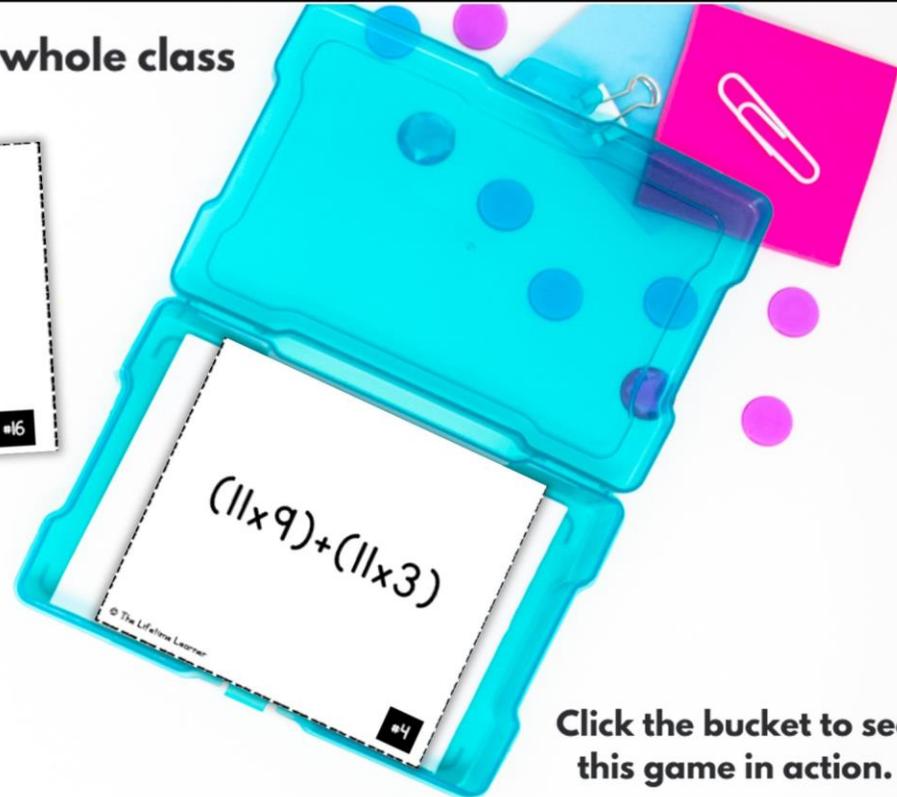
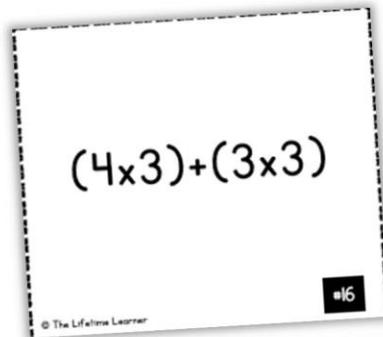
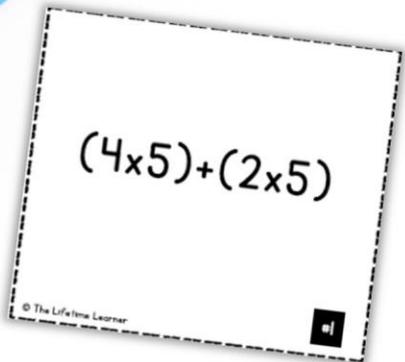
## HOW TO PLAY:

- Students pair up in teams.
- Students race to line up their cards in order before the other team.



# GAME #4

the perfect game to play with the whole class



Click the bucket to see this game in action.

## HOW TO PLAY:

1. Students answer task cards.
2. If they get it right, they drop it in the bucket.
3. Students play for a set amount of time.
4. At the end of gameplay, the teacher draws task cards out of the bucket.
5. Any student whose task card gets pulled out gets a small prize.



# BUY THE BUNDLE AND SAVE BIG!

## 3RD GRADE MATH BUNDLE

**Name:** Lindsay **The Beach**  
Write the number of the matching word problem on each bucket to show which sandcastle goes with each word problem.

5 A #6 3 B #5 9 C #2  
12 D #4 10 E #1 6 F #3

- There are 2 sharks. Each one has 5 teeth. How many teeth do the teeth have combined?  $2 \times 5 = 10$
- There are 54 fish in the water. They are split between 6 small pools equally. How many fish are in each pool of water?  $54 \div 6 = 9$
- There are 36 umbrellas for sale on the beach. 6 umbrellas are sold each hour. How many hours did it take to sell all of the umbrellas?  $36 \div 6 = 6$
- There are 3 fences facing the beach. There are four seagulls sitting on each one. How many seagulls are there total?  $3 \times 4 = 12$
- There are 12 surfers out in the water. They are chatting in groups of 4. How many groups are chatting?  $12 \div 4 = 3$
- There are 50 seals out in the ocean. They are sitting in groups of 10. How many groups of seals are there?  $50 \div 10 = 5$

**My Castle**

To win, you must have 10 items in your castle.

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 156 WORKSHEETS

**GRAB IT! 29 MATH GAMES**

**3RD GRADE**

GRAB IT!									
50	9	0	4	50	9	0	4	50	
GRAB IT!									
7	24	15	6	7	24	15	48	7	
GRAB IT!									
81	3	18	48	81	3	18	6	81	

GRAB IT!  $\_ \div 3 = 2$

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