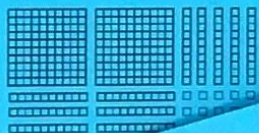


FUN & MEANINGFUL Practice



$$13 \times 25$$



$$\begin{array}{r} 3 \times 5 = 15 \\ 3 \times 20 = 60 \\ 10 \times 5 = 50 \\ 10 \times 20 = 200 \\ \hline 325 \end{array}$$

$10 \times 20 = 200$

$10 \times 5 = 50$

$3 \times 20 = 60$

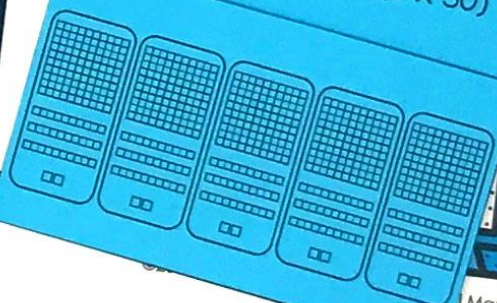
$3 \times 5 = 15$



$$132 \times 5$$

$$\begin{array}{r} 5 \times 100 = 500 \\ 5 \times 30 = 150 \\ 5 \times 2 = 10 \\ \hline 660 \end{array}$$

$$(5 \times 100) + (5 \times 30) + (5 \times 2)$$



HOW CAN I USE THIS?

- **Math Stations**
- **Small Group Lesson**
- **Tutoring**
- **Review**
- **Test Prep**



WHAT'S INCLUDED?

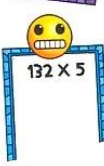
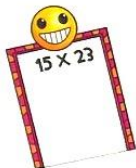
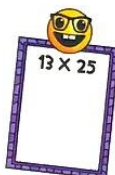
- **6 Activities**
- **Fun Game**
- **6 Emoji Cards & 28 Representation Cards**
to be used with the
Game & Activities
- **Teacher Key**

REPRESENT multiplication 1

Activity

- ★ Put out all of the Emoji Cards.
- ★ Sort the representation cards, placing each on the multiplication problem it represents.
- ★ You may use the Key cards to check your work.

$$(10 \times 23) + (5 \times 23)$$



REPRESENT multiplication 4

Activity

- ★ Use the Key card for either 13×25 or 15×23 .
- ★ Study the area model, array and partial products for the multiplication problem.
- ★ Discuss with a partner the secret connections you discover. How are these 3 representations connected?

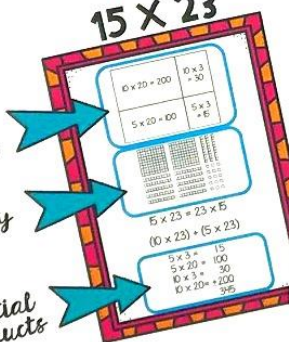
KEY

$$15 \times 23$$

Area Model

Array

Partial Products

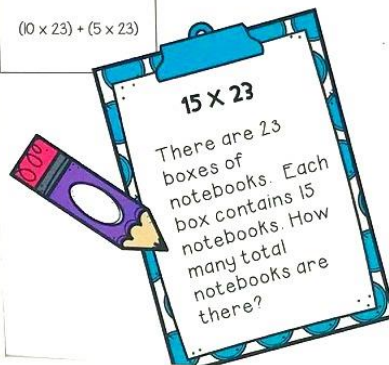


REPRESENT multiplication 2

Activity

- ★ Select a representation card.
- ★ Determine the multiplication problem represented on the card.
- ★ Write a word problem for that multiplication problem.

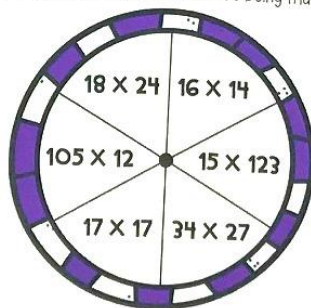
$$(10 \times 23) + (5 \times 23)$$



REPRESENT multiplication 5

Activity

- ★ Spin the spinner to find a multiplication problem.
- ★ Represent the multiplication problem in as many ways as possible: partial products, area model, with equations that show the distributive and commutative properties, with an array (for 18×24 , 16×14 , 17×17 , & 34×27) or a grouping model (for 105×12 & 15×123).
- ★ You may use the Key cards to help you. Find a problem with the same number of digits in the factors (those are the numbers being multiplied).

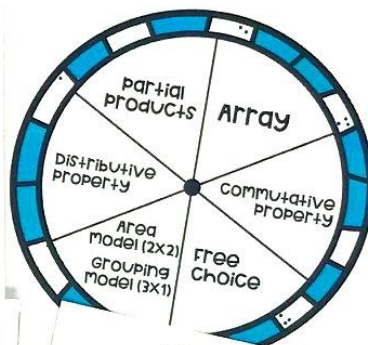


REPRESENT multiplication 3

Activity



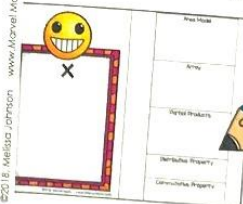
- ★ Select an Emoji Card.
- ★ Spin the spinner below to find a way to represent the problem.
- ★ You may use the Key cards to check your work.



REPRESENT multiplication 6

Activity

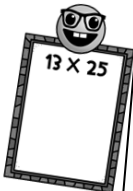
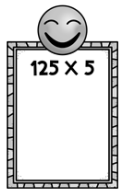
- ★ Select a blank Emoji Card and Representation Card template.
- ★ Create your own 2-digit x 2-digit multiplication problem. Choose wisely and think about the size of numbers you can model in an array.
- ★ Write in the multiplication problem you chose on the emoji card.
- ★ Represent your multiplication problem on the Representation Cards.
- ★ Combine your cards with your group members to make your own game!



Color & BW Included

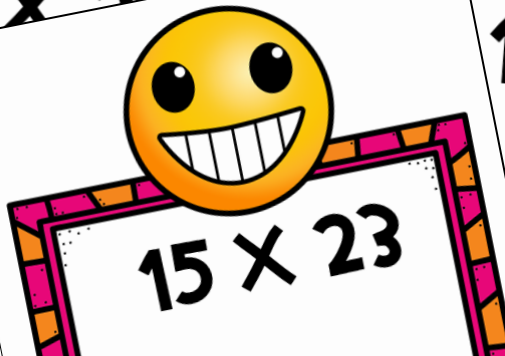
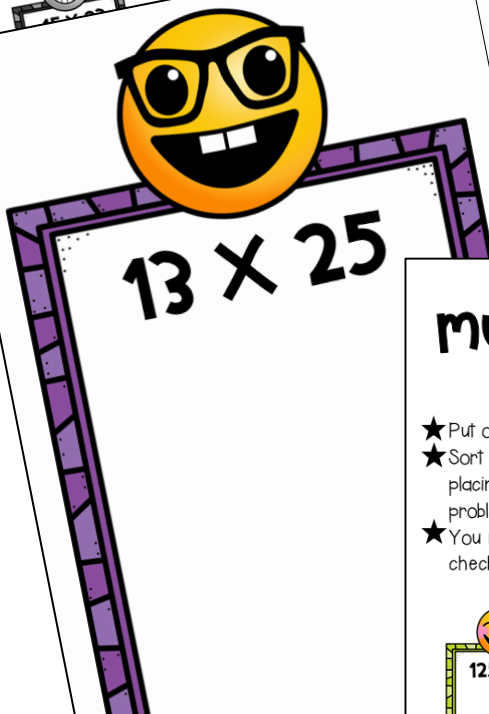
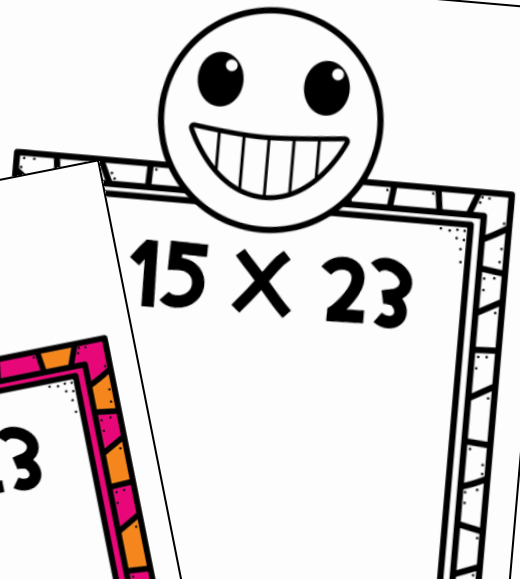
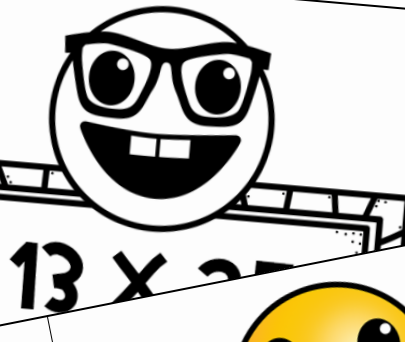
REPRESENT multiplication 1 Activity

- ★ Put out all of the Emoji Cards.
- ★ Sort the representation cards, placing each on the multiplication problem it represents.
- ★ You may use the Key cards to check your work.



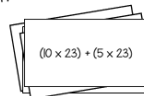
REPRESENT multiplication 2 Activity

- ★ Select a representation card.
- ★ Determine the multiplication problem represented



REPRESENT multiplication 1 Activity

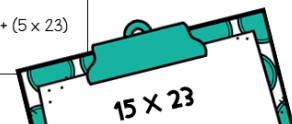
- ★ Put out all of the Emoji Cards.
- ★ Sort the representation cards, placing each on the multiplication problem it represents.
- ★ You may use the Key cards to check your work.



REPRESENT multiplication 2 Activity

- ★ Select a representation card.
- ★ Determine the multiplication problem represented on the card.
- ★ Write a word problem for that multiplication problem.

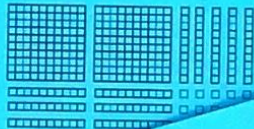
$(10 \times 23) + (5 \times 23)$



ACTIVITY 1



$$13 \times 25$$



$$\begin{array}{r} 3 \times 5 = 15 \\ 3 \times 20 = 60 \\ 10 \times 5 = 50 \\ 10 \times 20 = 200 \\ \hline 325 \end{array}$$

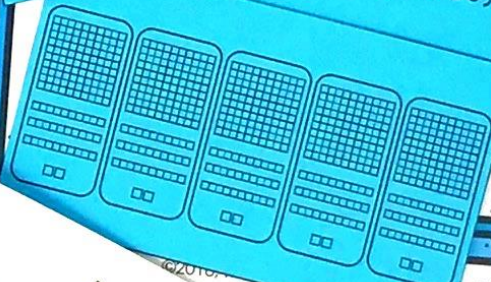
$10 \times 20 = 200$	$10 \times 5 = 50$
$3 \times 20 = 60$	$3 \times 5 = 15$



$$132 \times 5$$

$$\begin{array}{r} 5 \times 100 = 500 \\ 5 \times 30 = 150 \\ 5 \times 2 = 10 \\ \hline 660 \end{array}$$

$$(5 \times 100) + (5 \times 30) + (5 \times 2)$$



REPRESENT multiplication Activity 1

- ★ Put out all of the Emoji Cards.
- ★ Sort the representation cards, placing each on the multiplication problem it represents.
- ★ You may use the key to check your work.

ACTIVITY 2

REPRESENT multiplication² Activity

- ★ Select a representation card.
- ★ Determine the multiplication problem represented on the card.
- ★ Write a word problem for that multiplication problem.

$$(10 \times 23) + (5 \times 23)$$

$$15 \times 23$$

There are 23 boxes of notebooks. Each box contains 15 notebooks. How many total notebooks are there?

$$132 \times 5$$

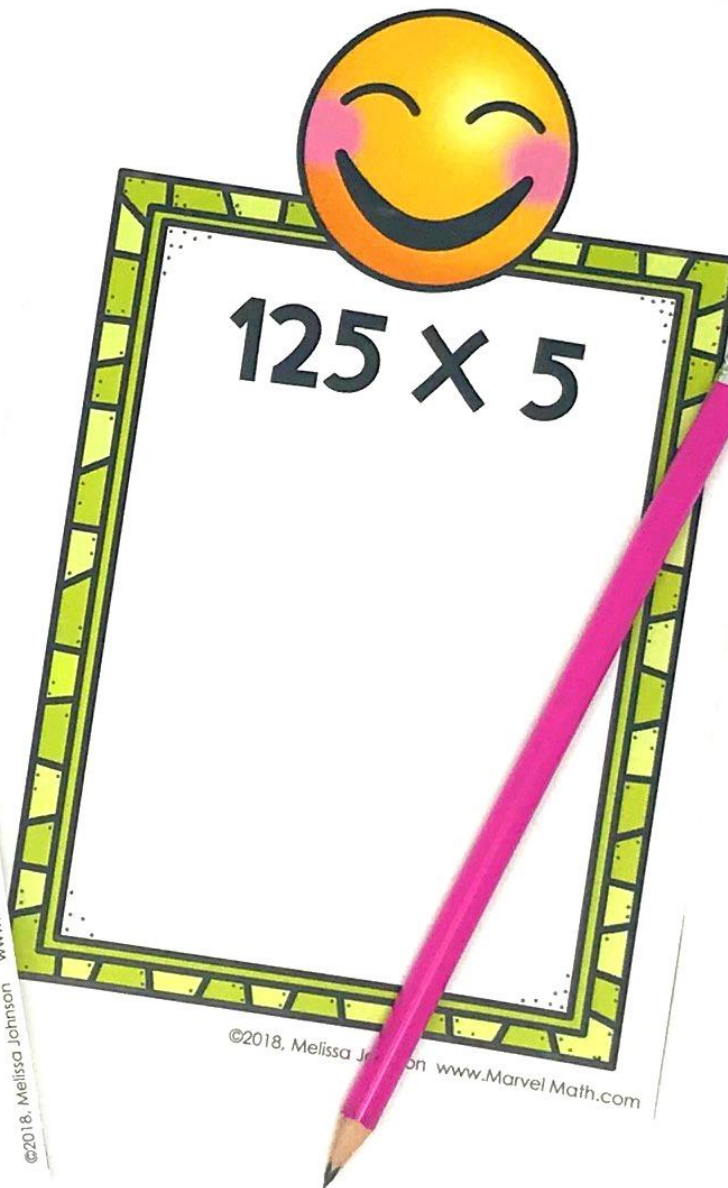
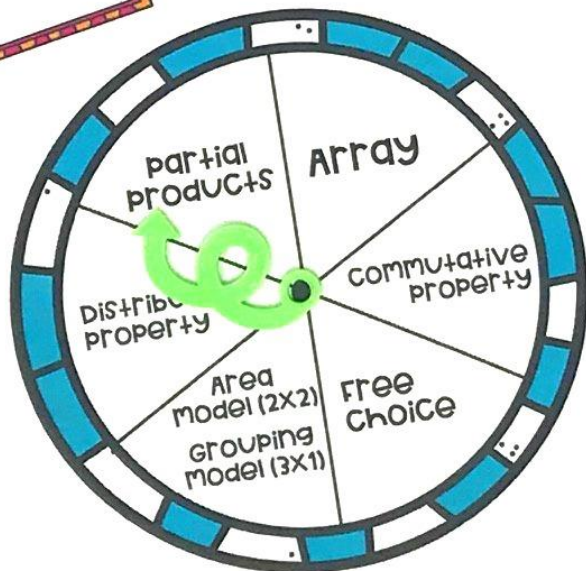
$$\begin{array}{r} 5 \times 100 = 500 \\ 5 \times 30 = 150 \\ 5 \times 2 = 10 \\ \hline 660 \end{array}$$

ACTIVITY 3

REPRESENT multiplication³ Activity



- ★ Select an Emoji Card.
- ★ Spin the spinner below to find a way to represent the problem.
- ★ You may use the Key cards to check your work.



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ACTIVITY 4

13 × 25

15 × 23

REPRESENT multiplication 4 Activity

- ★ Use the Key card for either 13×25 or 15×23 .
- ★ Study the area model, array and partial products for the multiplication problem.
- ★ Discuss with a partner the secret connections you discover. How are these 3 representations connected?

KEY 15 × 23

Area
Model

Array

Partial
Products

$10 \times 20 = 200$	$10 \times 3 = 30$
$5 \times 20 = 100$	$5 \times 3 = 15$



$$5 \times 23 = 23 \times 5$$

$$(10 \times 23) + (5 \times 23)$$

$$\begin{array}{r} 5 \times 3 = 15 \\ 5 \times 20 = 100 \\ 10 \times 3 = 30 \\ 10 \times 20 = 200 \\ \hline 345 \end{array}$$

Area
Model:

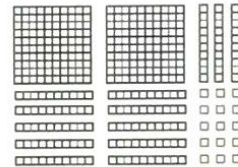
$$10 \times 20 = 200$$

$$10 \times 3 = 30$$

$$5 \times 20 = 100$$

$$5 \times 3 = 15$$

Array:



Distributive
Property:

$$(10 \times 23) + (5 \times 23)$$

Commutative
Property:

$$15 \times 23 = 23 \times 15$$

$$5 \times 3 = 15$$

$$5 \times 20 = 100$$

$$10 \times 3 = 30$$

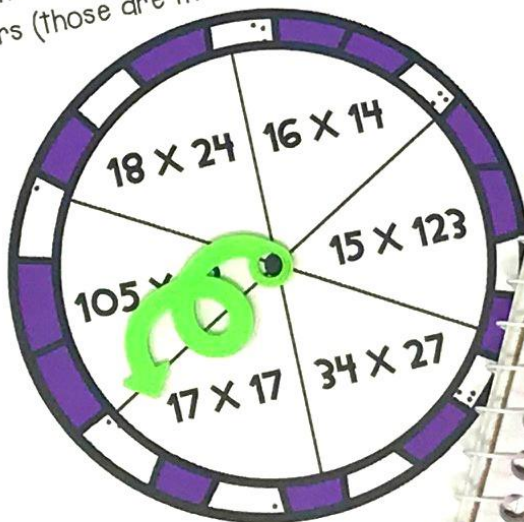
$$10 \times 20 = 200$$

$$345$$

ACTIVITY 5

REPRESENT multiplication 5 Activity

- ★ Spin the spinner to find a multiplication problem.
- ★ Represent the multiplication problem in as many ways as possible: partial products, area model, with equations that show the distributive and commutative properties, with an array (for 18×24 , 16×14 , 17×17 , & 34×27) or a grouping model (for 105×12 & 15×123).
- ★ You may use the Key cards to help you. Find a problem with the same number of digits in the factors (those are the numbers being multiplied).



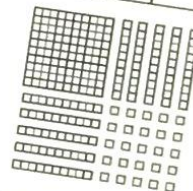
KEY

15 X 15

Area Model:

$10 \times 10 = 100$	$10 \times 5 = 50$
$5 \times 10 = 50$	$5 \times 5 = 25$

Array:



Distributive Property:

$$(15 \times 10) + (15 \times 5)$$

Isn't really used for perfect
could look like

ACTIVITY 6



X

REPRESENT multiplication 6 Activity

- ★ Select a blank Emoji Card and Representation Card template.
- ★ Create your own 2-digit x 2-digit multiplication problem. Choose wisely and think about the size of numbers you can model in an array.
- ★ Write in the multiplication problem you chose on the emoji card.
- ★ Represent your multiplication problem on the Representation Cards.
- ★ Combine your cards with your group members to make your own game!

Area Model

Array

Partial Products

Distributive Property

Commutative Property

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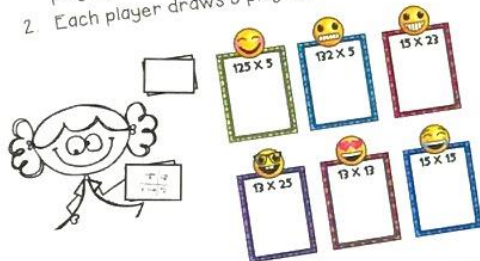
©2019

GAME

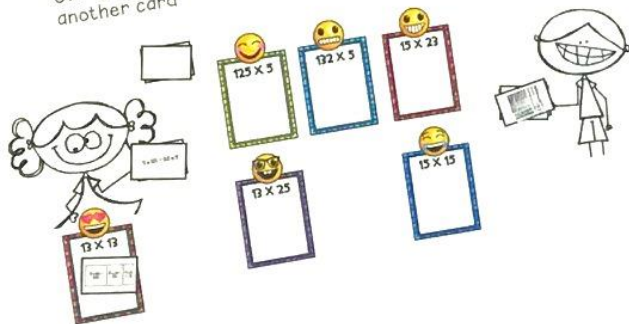
REPRESENT multiplication EMOJI SLIDERS Game

Directions:

1. Lay out all of the emoji cards (6 cards for this game). Each emoji card shows a multiplication problem. Shuffle the playing cards and place them in a stack face down.
2. Each player draws 3 playing cards.



3. The first player may lay down one playing card onto the emoji that has the matching multiplication problem. When you lay a card down on an emoji, you take that emoji and every card on it and slide it in front of you. Then draw another card.



4. The next player takes a turn and lays down a playing card on an emoji. You can also lay a card on a card already on the table, which allows you to slide the cards on it in front of you.



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