

Tips for Teachers and Parents

Do less.

Give children the directions and the flashcards. Give them time to figure out how to study.

When they think they have it down, watch them.

Things to look for.

- **Counting.** If you see counting, encourage children to use strategies and connections in place of counting.
- **Check answer.** Are they turning the card over and looking at the answer?
- **Learning from incorrect answers.** Are children spending time looking at the back of the card.
- **Focus.** It's better to study for three minutes with intensity, than ten minutes without it.

Set an alarm to remind children to practice.

The alarm reminds them so you do not have to.

Right before dinner or right after cleaning up dinner dishes are good times. To make practice a habit, it's best to attach it to something children already do every day, like dinner.

Parents, follow your children progress.

Watch them study on occasions. You can provide feedback, and it shows you are interested. Once a week, test them with their flashcards.

Guided practice at school.

Make flashcards a station during math.

This can also be a whole class activity.

Tip: Have students write their initials in the box on the back of the card. That way if you find a flashcard on the floor, you can reunite it with its owner.

Why 28 facts?

Giving children hundreds of facts to learn can be discouraging. If you include 0s, 1s, 2s, 10s, 11s, and 12s, there are 169 addition and 169 multiplication facts. These are not facts children need to practice. Time spent practicing 4×1 is time *not* spent learning 4×7 .

Children who do not know addition 2s are not ready for addition. They need more work on number fluency.

Children who do not know multiplication 2s are not ready for multiplication. 2s are addition doubles (9×2 is the same as $9 + 9$).

Children do not need to know 10s, 11s or 12s to do more complex math. They are better off learning the essential facts well.

There are just 28 addition and 28 multiplication facts to learn. If children learn these facts well, they will also learn subtraction and division facts in the process. When children see $12 - 7$, they know 5 is missing. When they see $48 \div 6$, they know 8 is missing.

How to Practice with Flashcards

Flashcards can be a powerful learning tool when used correctly. If you learn to use flashcards now, you can use them whenever you need to learn something. Studying does not have to be boring or painful.

#1 Look at the first card.

***Never count when using flashcards.**

- 1) If you know it, answer right away.
 - 2) If you know a rule, strategy, or clue, think it through and answer.
 - 3) If you think you know the fact, but you need time to make the connections, take your time. Each time you answer this fact, you will get a little bit faster. It's how you learn.
- It's OK if you kind of know it, but just can't come up with the answer. Turn the card over. Review strategies and connections.
- 4) If you have no idea, turn the card over and look at the answer. Review strategies and connections.

***Turn the card over and check the answer.**

#2 Confirm or Correct.

If you were correct, confirm. Use self talk: "Yeah. $6 + 7$ is 13 . It's one more than $6 + 6$."

If your answer was not correct, check your strategies and connections. Spend some time thinking about this fact, and how you will remember it next time.

Stay calm and focused. If you get upset by an incorrect answer, you will not learn as well. Good athletes and performers know how to learn from mistakes, and they know how to stay focused.

Use self talk: "I got it now. 4×4 is the butter fact. Four ounces to a stick, four sticks to a pound, or 16 ounces.

#3 Make connections

If you do not know a fact, make connections. Make the fact meaningful to you.

- Use a fact you know to connect to a fact you do not know. Example: You know $4 + 4 = 8$. $4 + 5$ is one more, or 9.

- Use a strategy.

Example: Adding 9. Add nine, take away one. $6 + 9 = (6 + 10) - 1$.

- Use something in your life. Start in your fridge:

12 eggs (dozen) 32 ounces of milk (quart)

16 ounces of butter (pound)

16 ounces of cream (pint)

Six-pack of juice: 8 ounces each.

Six-pack of soda: 12 ounces each.

30 minutes in half an hour.

A nickel is 5 cents. A quarter is 25 cents.

A yard is three feet, or 36 inches.

A six-foot man is 72 inches.

Baseball has nine innings, three outs per inning.

A field goal in football is three points.

There are numbers in sports, history, time, distance, etc. If you can make a connection to a fact, it will help you understand and recall it.

Draw a picture; write a story.

Include connections to things in real life, like time, money, food, etc. Just by making the story, you will be more likely to remember the fact.

Tips

Do not use flashcards if you know the fact already.

Do not practice easy facts like $4 + 0$ or 6×1 .

Study up to eight facts at a time. Fewer is fine.

It's best to practice for a few minutes every day.

Try to study at the same time every day.

FRONT Multiplication 3s

$$3 \times 3$$

$$3 \times 3 = 9$$

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3	3
×	×
3	3
—	—

	1	2	3	4	5	6	7	8	9	10	11	12
1	■	■	■									
2	■	■	■									
3	■	■	■									
4												
5												
6												
7												
8												
9												
10												
11												
12												

FRONT Multiplication 3s

$$3 \times 4$$

$$3 \times 4 = 12$$

© studysmart.com

4	3
×	×
3	4
—	—

	1	2	3	4	5	6	7	8	9	10	11	12
1	■	■	■	■								
2	■	■	■	■								
3	■	■	■	■								
4												
5												
6												
7												
8												
9												
10												
11												
12												

$$4 \times 3$$

FRONT Multiplication 3s

$$3 \times 5$$

$$3 \times 5 = 15$$

© studysmart.com

5	3
×	×
3	5
—	—

	1	2	3	4	5	6	7	8	9	10	11	12
1	■	■	■	■	■							
2	■	■	■	■	■							
3	■	■	■	■	■							
4												
5												
6												
7												
8												
9												
10												
11												
12												

FRONT Multiplication 3s

$$3 \times 6$$

$$3 \times 6 = 18$$

© studysmart.com

6	3
×	×
3	6
—	—

	1	2	3	4	5	6	7	8	9	10	11	12
1	■	■	■	■	■	■						
2	■	■	■	■	■	■						
3	■	■	■	■	■	■						
4												
5												
6												
7												
8												
9												
10												
11												
12												

$$6 \times 3$$

$$5 \times 3$$

FRONT Multiplication 3s

$$3 \times 7$$

$$3 \times 7 = 21$$

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	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

FRONT Multiplication 3s

$$3 \times 8$$

$$3 \times 8 = 24$$

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	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

$$7 \times 3$$

$$8 \times 3$$

FRONT Multiplication 3s

$$3 \times 9$$

$$3 \times 9 = 27$$

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	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

FRONT Multiplication 4s

$$4 \times 4$$

$$4 \times 4 = 16$$

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	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

$$9 \times 3$$

$$4 \times 4$$

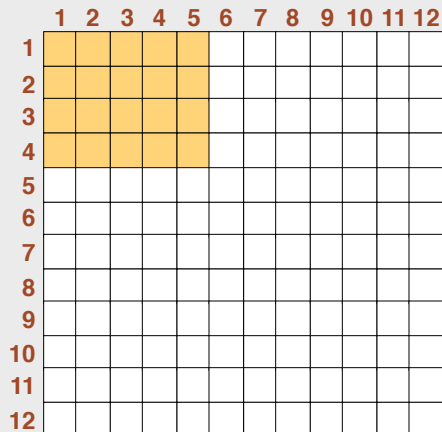
$$4 \times 5$$

$$4 \times 5 = 20$$

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$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$



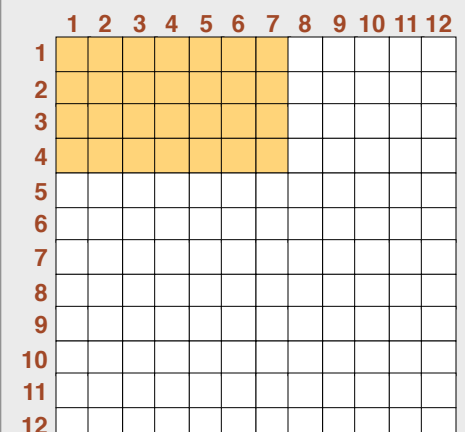
$$4 \times 7$$

$$4 \times 7 = 28$$

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$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$



$$7 \times 4$$

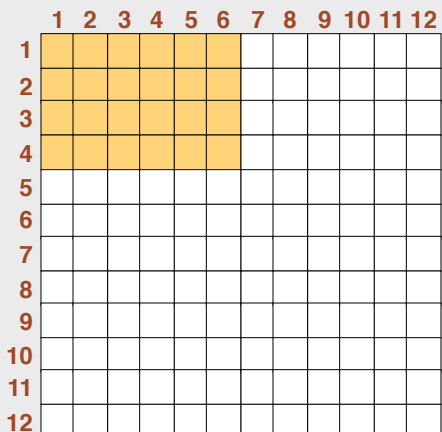
$$4 \times 6$$

$$4 \times 6 = 24$$

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$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$



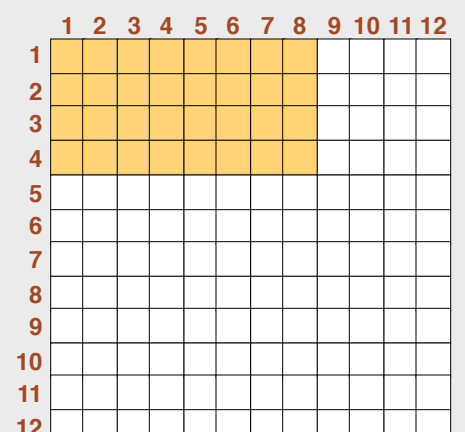
$$4 \times 8$$

$$4 \times 8 = 32$$

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$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$



$$8 \times 4$$

$$6 \times 4$$

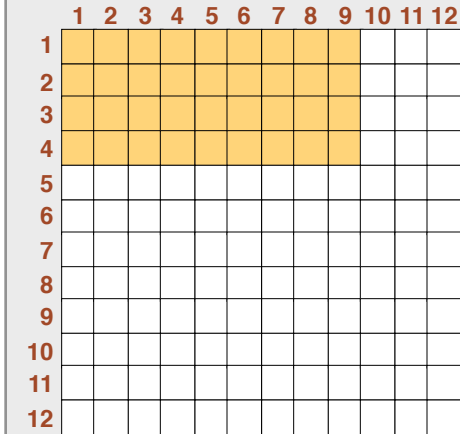
FRONT Multiplication 4s

$$4 \times 9$$

$$4 \times 9 = 36$$

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	9		4
×	4	×	9
<hr/>			

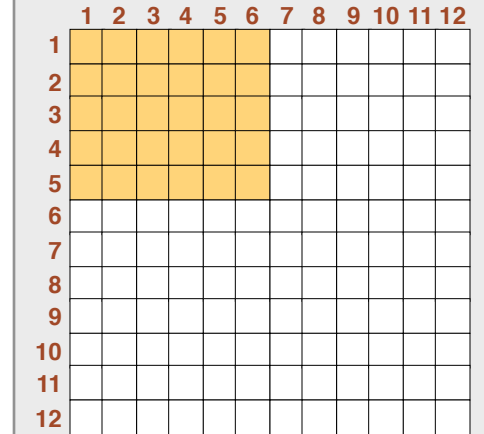


$$9 \times 4$$

$$5 \times 6$$

$$5 \times 6 = 30$$

	6		5
×	5	×	6
<hr/>			



$$6 \times 5$$

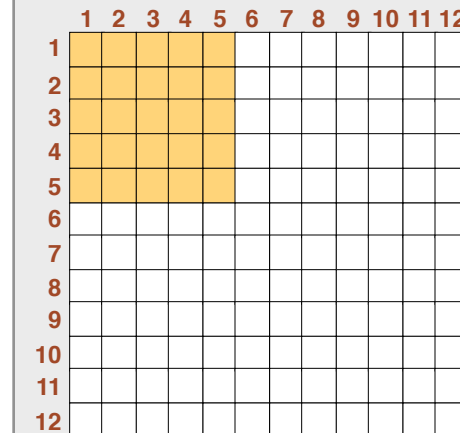
FRONT Multiplication 5s

$$5 \times 5$$

$$5 \times 5 = 25$$

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	5		5
×	5	×	5
<hr/>			



$$5 \times 5$$

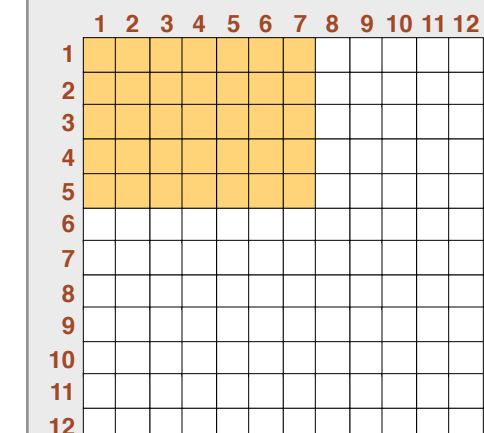
FRONT Multiplication 5s

$$5 \times 7$$

$$5 \times 7 = 35$$

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	7		5
×	5	×	7
<hr/>			



$$7 \times 5$$

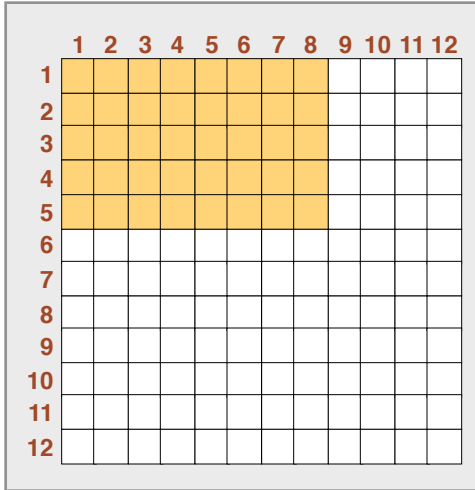
FRONT Multiplication 5s

$$5 \times 8$$

$$5 \times 8 = 40$$

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	8		5
×	5	×	8
<hr/>			

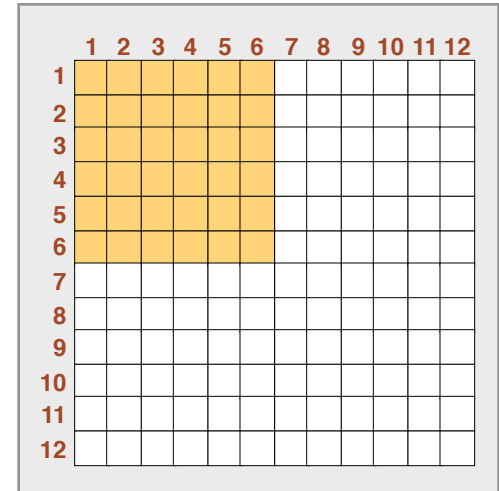


FRONT Multiplication 6s

$$6 \times 6$$

$$6 \times 6 = 36$$

	6		6
×	6	×	6
<hr/>			



$$6 \times 6$$

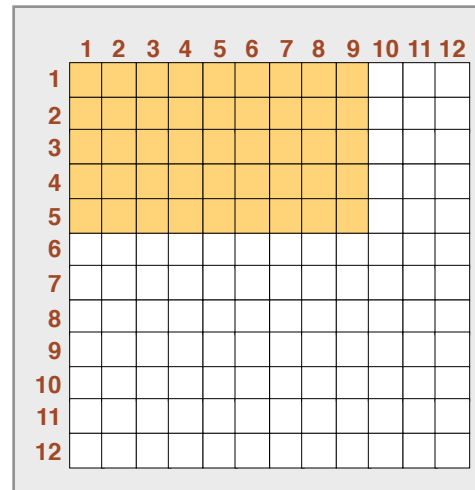
FRONT Multiplication 5s

$$5 \times 9$$

$$5 \times 9 = 45$$

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	9		5
×	5	×	9
<hr/>			



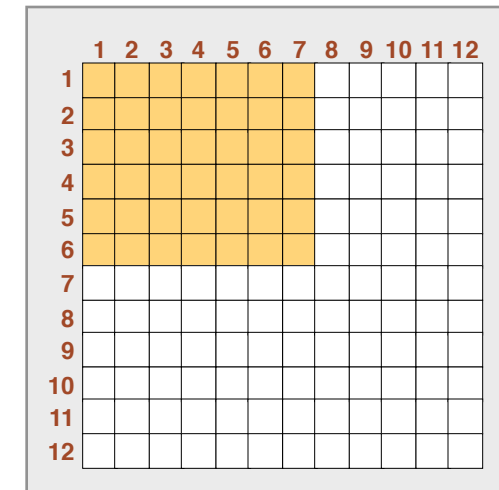
FRONT Multiplication 6s

$$6 \times 7$$

$$6 \times 7 = 42$$

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	7		6
×	6	×	7
<hr/>			



$$7 \times 6$$

$$9 \times 5$$

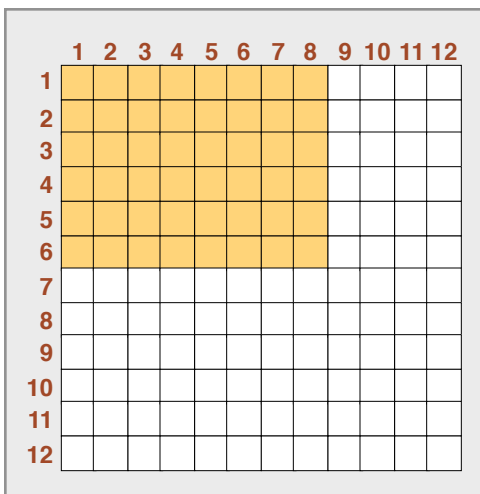
FRONT Multiplication 6s

$$6 \times 8$$

$$6 \times 8 = 48$$

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	8	6
\times	6	\times 8
<hr/>		



$$8 \times 6$$

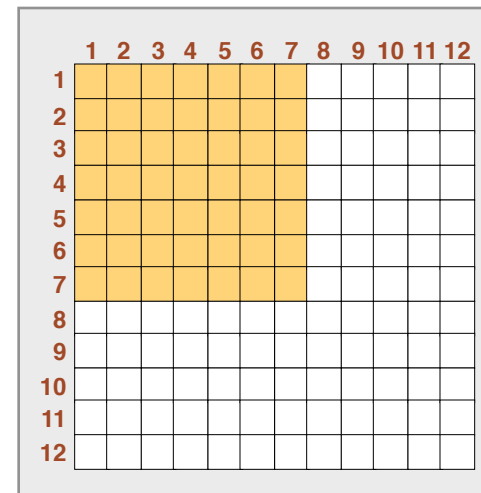
FRONT Multiplication 7s

$$7 \times 7$$

$$7 \times 7 = 49$$

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	7	7
\times	7	\times 7
<hr/>		



$$7 \times 7$$

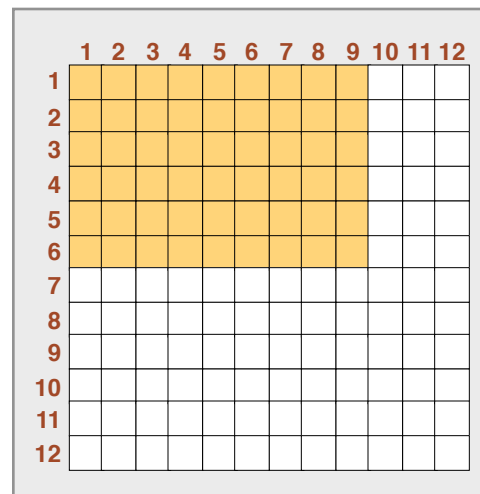
FRONT Multiplication 6s

$$6 \times 9$$

$$6 \times 9 = 54$$

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	9	6
\times	6	\times 9
<hr/>		



$$9 \times 6$$

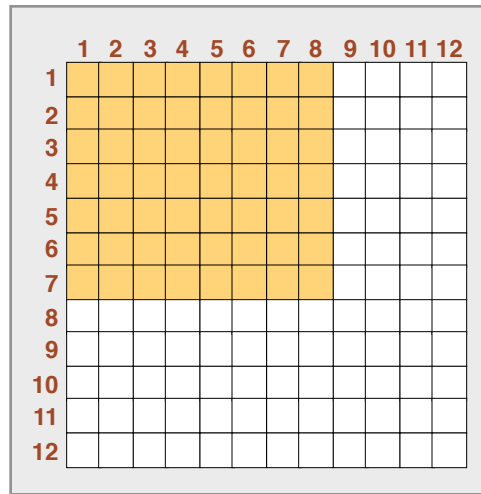
FRONT Multiplication 7s

$$7 \times 8$$

$$7 \times 8 = 56$$

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	8	7
\times	7	\times 8
<hr/>		



$$8 \times 7$$

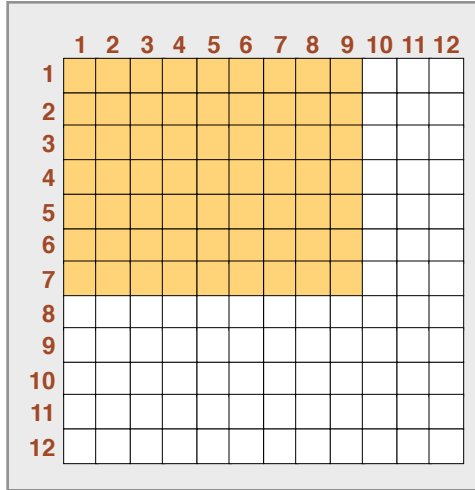
FRONT Multiplication 7s

$$7 \times 9$$

$$7 \times 9 = 63$$

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9	7
\times 7	\times 9
_____	_____



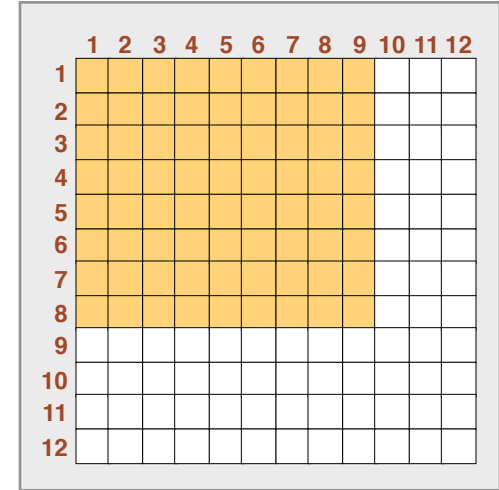
FRONT Multiplication 8s

$$8 \times 9$$

$$8 \times 9 = 72$$

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9	8
\times 8	\times 9
_____	_____



$$9 \times 7$$

$$9 \times 8$$

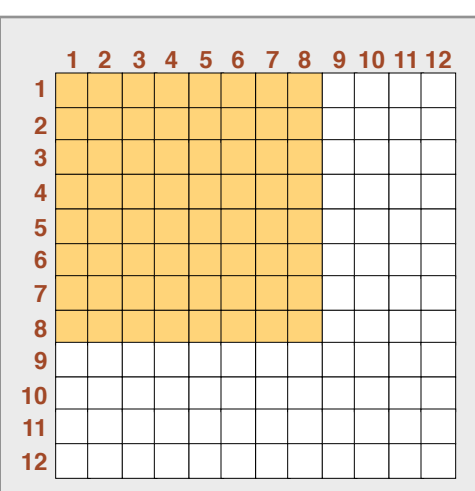
FRONT Multiplication 8s

$$8 \times 8$$

$$8 \times 8 = 64$$

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8	8
\times 8	\times 8
_____	_____



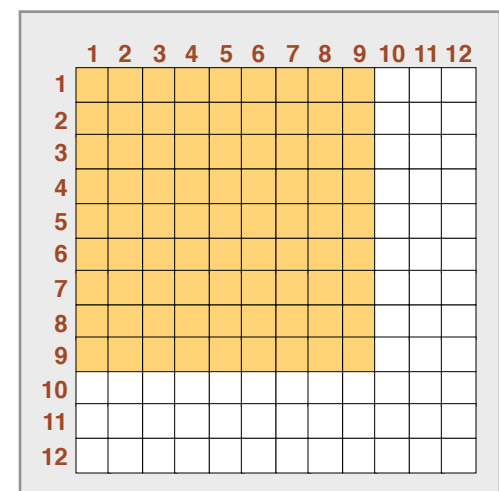
FRONT Multiplication 9s

$$9 \times 9$$

$$9 \times 9 = 81$$

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9	9
\times 9	\times 9
_____	_____



$$8 \times 8$$

$$9 \times 9$$