

BASIC MULTIPLICATION FACTS TEACHING SLIDES

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Visual Representations • Flexible Thinking • Connections Between Facts

Strategy

Look at these examples.

10x3 is 30, and one less group of 3 is 27.

Does this strategy make sense to you?

Yes! I understand! (thumbs up) I don't understand yet. (thumbs down) I'm starting to understand. (hand pointing)

Strategy

Or we could think of it like 2 groups of 5, another 2 groups of 5.

10 10

Commutative Property

Imagine that we rotate the array. Now we have 4 rows of 10.

This means that 10x4 and 4x10 have the same **product**.

10x4=40 4x10=40

What's the Fact?

What x9 fact does each model represent?

Problem Solving

Celeste is sorting buttons into 3 piles. There are 5 buttons in each pile. How many buttons did she sort in all?

Buttons: Pile 1 (5), Pile 2 (5), Pile 3 (5)

$3 \times 5 = 15$

How many parts are in this bar model? What does each part represent?

Are you teaching

*basic multiplication
facts?*

We know that deep understanding of multiplication is far more powerful than memorization. But how do we build that understanding?

The monitor displays a strategy card on a blue grid background. The card has a red header labeled "Strategy" and contains two questions: "What do you notice about 10×5 and 9×5 ?" and "Is there a way we could use what we know about 10×5 to solve 9×5 ?". To the right of the card, a 10×5 dot grid is shown with a yellow arrow pointing down to a 9×5 dot grid. The 9×5 grid has one empty cell in the bottom right corner.

Strategy

What do you notice about 10×5 and 9×5 ?

Is there a way we could use what we know about 10×5 to solve 9×5 ?

10×5

9×5

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This package of slides will support your teaching as you teach the multiplication facts for **understanding** and **flexibility**, rather than for rote memorization.

Automaticity is still the ultimate goal, but understanding is the way to get there.

Strategy

Look at these examples.

10x3 is 30, and one less group of 3 is 27.

10 groups of 6 is 60, and one less group of 6 makes 54.

Commutative Property

Imagine that we rotate the array. Now we have 4 rows of 10.

This means that 10x4 and 4x10 have the same **product**.

10x4=40

4x10=40

Strategy

Or we could think of it like 2 groups of 5, another 2 groups of 5, and another two groups of 5.

What's the Fact?

What x9 fact does each model represent?

Problem Solving

Celeste is sorting buttons into 3 piles. There are 5 buttons in each pile. How many buttons did she sort in all?

Draw a bar model to represent your thinking. Once you've finished, uncover the one below to compare!

Buttons

Pile 1 Pile 2 Pile 3

5 5 5

3 x 5 = 15

How many parts are in this bar model? What does each part represent?

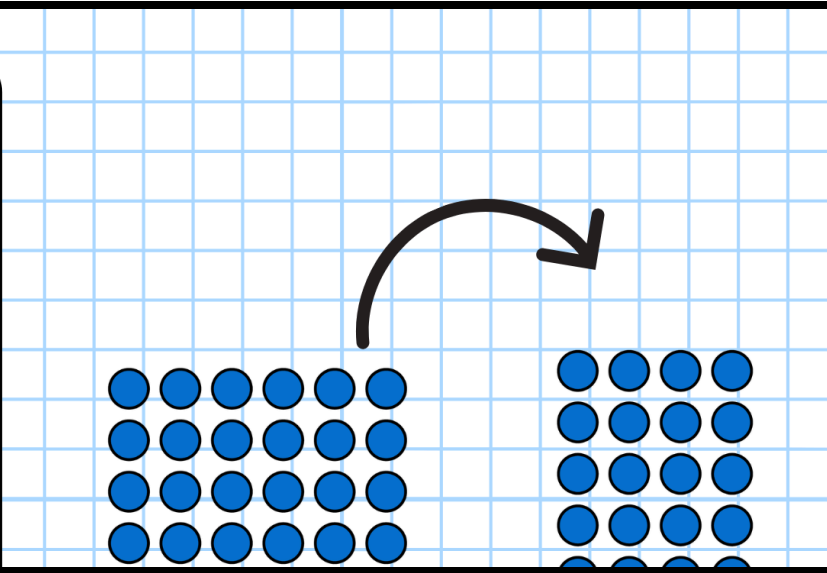
This set of multiplication slides focuses on:

- ✓ mental math strategies for each set of facts
- ✓ flexible thinking so students can solve problems in different ways
- ✓ visuals like arrays, ten frames and bar models so students can visualize multiplication
- ✓ building deep understanding

Commutative Property

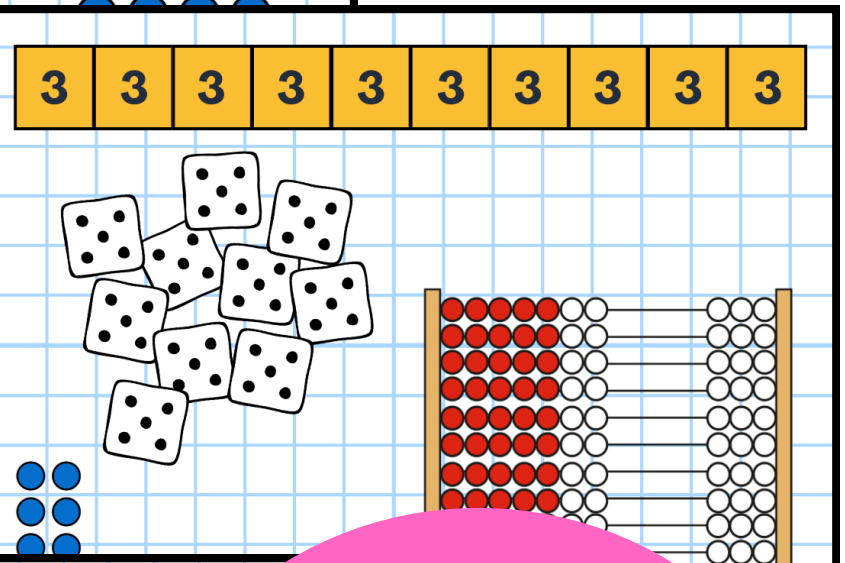
Explain what this diagram is showing.

What equation does each array represent?



What's the Fact?

Which x10 fact does each model represent?

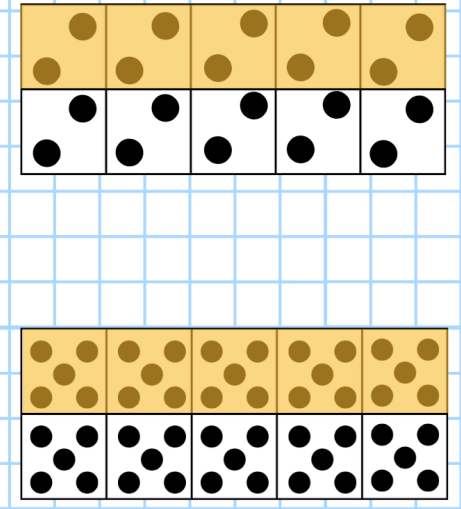


Strategy

Did you notice that 5x2 is half of 10x2?

Did you notice that 5x5 is half of 10x5?

The ten frame makes this easy to visualize.



10x5
5x5=25

10x2
5x2=10

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150 SLIDES

Use these slides:



- ✓ to introduce students to a new set of multiplication facts
- ✓ to teach new mental math strategies
- ✓ as extra reinforcement or to help students see multiplication in a new way
- ✓ to build your own understanding of teaching multiplication