

Math Matters

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What's That Word?

Letters that stand for numbers and can be used to +, -, x, or ÷ are **VARIABLES**

CONSERVATION OF NUMBER is understanding that the number of objects remains the same even when rearranged

SORTING is creating collections of objects that share a common attribute

An **EXPONENT** tells how many times a base number is to be multiplied.
($10^3 = 10 \times 10 \times 10 = 1,000$)

Click It!

Check out these websites:

- ◆ [Parent Support from Eureka!](#) and [Greatminds.org](#)

A variety of resources to help keep parents informed and involved in supporting students using Eureka Math.

- ◆ [Frontrowed.com](#)

Practice fact fluency and adaptive problems that align directly with the standards. Students at TCS can log in using their teacher's classroom code.

Building Flexibility with Numbers

How would you solve $49 + 37$?

- Use the standard algorithm (write it vertically and regroup)?
- Combine the 40 and 30 and then the 9 and 7?
- Would you do $50 + 37$ and take 1 away?
- Take one from the 37 to make 50 and then add 50 and 36?
- Add 49 and 30 and then 7 more?
- Add 50 and 40 and take away the extra 4?



Throughout grades K-6 the standards call for students to develop fluency with multiple procedural and calculation skills. But what does fluency mean? By the word fluent itself we might associate it with flowing naturally and quickly. While those associations make sense, mathematical fluency has a clear definition provided by the National Council for Teachers of Mathematics,

“**fluency** is the ability to apply procedures accurately, efficiently, and flexibly; to transfer procedures to different problems and contexts; to build or modify procedures from other procedures; and to recognize when one strategy or procedure is more appropriate to apply than another.”

Yes we want our students to be quick, but we want so much more than that! We want them to think about numbers flexibly and adjust their strategies to find one that is most efficient to them for varying problems. Think of the power we give students when they have an entire toolbox of strategies for calculating and are able to choose what works best!

How can we help our students develop this necessary flexibility? By challenging them to think about, analyze, and compare multiple strategies. Look at the strategies above. Is there one you hadn't thought of? Is there one you like best? Can you think of a different way to solve it? Ask yourself these questions and then try it with your child. Give them a grade appropriate calculation and talk about all the ways you might solve it. Maybe they'll even come up with one you haven't thought of!

Build Flexibility by talking with your child about these problems:

K:   How many dots?
  How do you know?

1st: $4 + 7$

4th: $134 - 51$

2nd: $12 + 9$

5th: 8×32

3rd: $38 + 37$

6th: 72×15

Did you know?

This summer 63% of students entering 1st through 5th grade participated in the Summer Math Passport program!

Many of those problems had multiple solutions or strategies that could be used! If you worked on those with your child you were helping build flexible thinking!



Recommended Reading

Place Value (grades 4 and 5):

Place Value

by David A. Alder

Measurement (grades 4 and 5):

Millions to Measure

by David M. Schwartz

Number Sense (grades pre-K-1):

Ten Black Dots

by Donald Crews

Subtraction (grade 1-3):

Subtraction Action

by Loreen Leedy

Figure It Out Together!

Play It:

(K-2) 1 through 10 (Garbage)

Materials: Standard Deck of Cards

Directions: Deal ten cards to each player, face down, in two rows of five. Flip over the top card and the first player can choose that card or draw from the stack. Players place the card they draw in the correct position. "1" (ace) is the top left position, "6" is the bottom left position, "10" is the bottom right position (similar to placing objects sequentially in a ten frame.) As you place a card, flip over the card that was in that position. Either place it in its correct position or discard it and your turn is over. The next player can take the discarded card or one the stack. Face cards are considered garbage cards and must be discarded. A round stops when a player places all ten cards in the correct position. In the next round, the winner gets one less card dealt. The game ends when one player no longer has any cards.

(3-5) Place Value Riddles

Materials: standard deck of cards

Directions: Use the cards Ace through Nine of a suit. Imagine someone has a secret 3-digit number. Use these clues to find the secret number! The hundreds digit is half the ones digit. The sum of the tens digit and the ones digit is nine. Use the cards Ace through Nine of a suit. Imagine someone has a secret 4-digit number. Use these clues to find the secret number! The sum of the hundreds digit and ten digits is 10. The hundred digit is 2 times greater than the ones digit. The sum of all 4 digits in the number is 18. Make up your own place value card puzzle. Record your problem and answer. And share with a friend!

Math Jokes, Riddles, and Tips!

Why did two fours skip lunch?

Answer: They already 8 lunch!

Here's an interesting occurrence when Multiplying by five!

5 times an even number: halve the even number and write it in the tens place with zero ones. Example: 5×6 , half of 6 is 3, put 3 in the tens place for an answer of 30.

5 times an odd number: subtract one from the odd number, then halve that number and place the resulting number in the tens place with a 5 in the ones place. Example: 5×7 : -1 from 7 is 6, half of 6 is 3, place the 3 in the tens place and a 5 in the ones place for an answer of 35.

Can you figure out why this happens?



There's an App for That

3 Great Math Apps by NCTM:

KenKen (free)

Deep Sea Duel (Free)

Okta's Rescue (Free)

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Have a great math riddle, tip, trick, website or book to share? Have questions, comments, or concerns? Contact us by email at:



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