SUMMER *math fun*
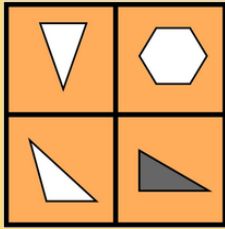
Using the digits 1 to 9 one time each, fill in the boxes to create the closest possible sum to 100.
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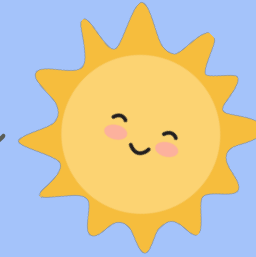
Would you rather $1.50 for every month of your life or a nickle for every day of your life?

There were 60 pigs on a farm. 10 more pigs were born. Then 37 pigs were sold. How many pigs were left on the farm?

Clue #1 The answer is greater than 20.
Clue #2 The answer is less than 41.
Clue #3 The answer is part of this pattern: 22, 24, 26 ...
Clue #4 The answer does not include the digit 3.
Clue #5 The answer is not 24, 26, or 28.

Using the digits 1 to 9 at most one time each, place a digit in the boxes to make a difference that is as close to 329 as possible.
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Would you rather a box of chocolates with 5 rows and 14 columns or 7 rows and 9 columns?

Marcelo has 27 golf balls. Jesse has 14 more golf balls than Marcelo. Ella has 2 more golf balls than Jesse. How many golf balls does Ella have?

9	16
25	43

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Using the digits 2 to 9 at most one time each, place a digit in each box to make a correct equations where the value is as close to 38 as possible.

Would you rather a rectangular bedroom with a length of 20 ft. and a perimeter of 58 ft. or a length of 14 ft. and a perimeter of 56 ft.?

A group of ducks was swimming in a pond. 15 more ducks joined them. Then there were 28 ducks in the pond. How many ducks were in the pond at first?
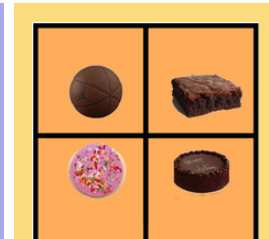
Clue #1 The answer is between 50 and 100, and it is part of this pattern: 51, 53, 55 ...
Clue #2 There is a double clue in the yellow dice on the top. The answer does not include the digit 3.
Clue #3 The answer does not include the digit 7.
Clue #4 The answer isn't 69 or the number that is 16 more than 69.
Clue #5 There are some remaining pairs of numbers that have a difference of 10. Eliminate all those pairs.

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Using the digits 1 to 9 exactly one time each, place a digit in each box to make the sum as close to 1000 as possible.

Would you rather read 12 pages every night in a chapter book with 144 pages or read 50 pages 3 times a week in a chapter book with 132 pages?

Grandma put 4 trays on a table. She put 2 bananas on each tray. Then Nellie ate one of the bananas. How many bananas were left on the trays?

17	26
44	65

Clue #1 The answer is a 2-digit number that is greater than 40.
Clue #2 The answer is a multiple of 6.
Clue #3 The answer is not a multiple of 7 or a multiple of 9.
Clue #4 The answer is not a multiple of 39.
Clue #5 Eliminate the number of seconds in 1 minute and the number of seconds in 1.1 minutes.

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Using the digits 1 to 9 at most one time each, fill in the boxes to make the smallest difference.

Would you rather an 8 pound jug of ice cream for $24.56 or two 3-pound, 11 ounce jugs of ice cream for $23.60?

There are 2 wheels on a bike. There are 3 wheels on a tricycle. There are 4 wheels on a wagon. How many wheels are on 2 bikes, 1 tricycle, and 2 wagons?

Using the digits 0 to 9, one time each, create three different times on the clocks where the span of the times are between 12 noon and 7 pm.

Would you rather 364 jellybeans and give 188 to friends or 281 jellybeans and give 137 to friends?

Kay has 84 seashells. Her sister Angel has 26 fewer shells than Kay. How many seashells do they have altogether?
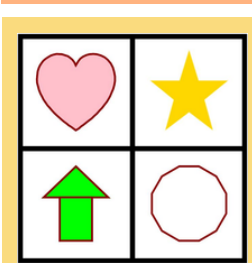
Clue #1 The answer is a 2-digit number that is a multiple of 7.
Clue #2 The answer does not include the digit 5. Also, it's not a multiple of 3.
Clue #3 Eliminate the square number and every number that is less than it.
Clue #4 The answer is not equal to 7 × 11 or 7 × 13.
Clue #5 Triple 28 and eliminate that number.

A _____ is a _____ but not a _____.
A _____ is a _____ but not a _____.
Use the terms square, rhombus, kite, parallelogram, trapezoid, rectangle, irregular quadrilateral at most one time each to complete two sentences.

Would you rather share a 15x15 cake with 8 friends or a 12x17 cake with 6 friends?

🔵 **OPEN MIDDLE** 🔴 **WOULD YOU RATHER?** 🟣 **RISE PROBLEM SOLVING** 🟡 **WHICH ONE DOESN'T BELONG?** 🟠 **ESTI-MYSTERIES**

ENRICHMENT SUGGESTIONS *from Mrs. Larkin*

Open Middle

In 1904, Clever Hans, a horse, was reported to perform arithmetic tasks and demonstrate an understanding of number sense. It was such a phenomenon that the German government formed the Hans Commission to study this amazing creature.

After much research and testing, it turns out that Hans only got the correct answer if the person questioning him knew the correct answer. The Clever Hans effect was named for the danger of unintentionally cueing desired behavior.

Robert Kaplinsky, a renowned author and cofounder of OpenMiddle.com, challenges math teachers to "Never ask a question that a horse can answer".

On Kaplinsky's Open Middle website, questions are searchable by grade level, standards, anchors, the depth of knowledge level.

Challenge your child today... Check out **OPEN MIDDLE**!

Would You Rather?

Would You Rather (WYR) tasks engage students in math-based conversations and encourage students to use mathematical reasoning to justify a claim. On his website, John Stevens, provides *Would You Rather* Math tasks for grades K-2, 3-5, 6-8 and 9-12 offering thought provoking questions which span a variety of mathematical skills and concepts.

When completing WYR tasks, students are encouraged to use problem solving strategies to make comparisons and ultimately state a justified claim. Students need to be able to use appropriate mathematical language to give reasons for the particular approach used to solve a problem. In higher level mathematics, any time that a student produces a 'solution' in an attempt to solve a problem, that 'solution' needs to be justified. Each prompt is designed to elicit conversation so you are encouraged to engage with your child and set aside time to

John Stevens is an instructional math and technology coach for Chaffey Joint Union High School District in Southern California who has also taught secondary mathematics since 2006.

RISE Problem Solving

RISE is a problem solving strategy which supports the process of tackling word problems and strengthens every student's ability to be able to explain mathematical thinking and processes in writing! RISE is a 4-step process. Here are the steps:

REREAD
Understand what is being asked.
ILLUSTRATE
Draw out the problem.
SOLVE
Show and check your work.
EXPLAIN
Use words to explain your strategy and thinking.

Encourage your child to RISE in their ability to not only solve but explain their mathematical thinking!

Click HERE to check out a list of 120 math word problems, categorized by skill spanning grades K-8 shared by Prodigy to spark ideas and curiosity!

Which One Doesn't Belong?

Which One Doesn't Belong? is a website dedicated to providing thought-provoking puzzles for math teachers and students alike. This website was created by Mary Bourassa but grows through the submission of ideas from teachers around the world. Her inspiration came from Christopher Danielson and his children's picture book, Which One Doesn't Belong?: A Shapes Book. There are no answers provided as there are many different, correct ways of choosing which one doesn't belong. Students must justify their claim and learn to give and receive feedback. ***Ready for a challenge? Justify a claim for each of the 4 different choices!***

The potential learning intentions inspired by this routine are:
- Engages students in problem solving
- Encourages the use of mathematical and academic vocabulary
- Facilitates academic discourse
- Promotes student thinking
- Constructing viable arguments and critique the reasoning of others

Esti-Mysteries

Esti-Mysteries, by Steve Wyborney, model the importance of allowing the opportunity for students to revise their thinking when learning mathematics. Estimation tasks, with the opportunity to revise your thinking, create a safe space for students and encourage students to take risks. These tasks also helps foster a positive math identity and build confidence.

During this task, students record their estimation after looking at the image. After each clue, students are encouraged to revise their thinking which helps to propel rich math talk and thought and also build anticipation for the next clue.

Steve Wyborney is an award-winning teacher and instructional coach from Oregon. He is well known for his use of instructional technology and his work with mathematics and his passionate belief in the exceptional potential of every student. In 2005, Steve was named the Oregon Teacher of the Year.

NOTE: Esti-Mystery images on the Summer Math Fun sheet are linked to Google Slide presentations. They are designed to present one clue at a time!