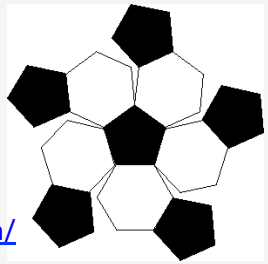
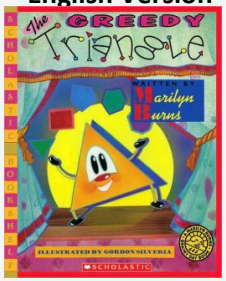
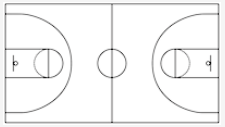
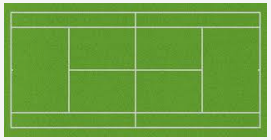
Examples of Books for Grades 4 and Up

Book Information	Overview	Suggested activities to do with your child (By Susana Davidenko)	Book Cover Youtube read aloud when possible
The Greedy Triangle, written by Marilyn Burns and illustrated by Gordon Silveria **Publisher**: Scholastic, Inc. 1994 **Math Ideas For Levels 4th and up** • Shapes, polygons • Geometry in the everyday life • Combining shapes	Bored and dissatisfied with his life, a triangle visits a local *shape shifter* to change his shape. The *shape shifter* adds **another side and another angle** to the **triangle** and ... Poof! He becomes a **quadrilateral**. But then he gets bored and *greedy* being any of the shapes and keeps adding sides and angles until he's completely transformed: He is almost a circle and falls all the time! And then ... He decides to go back to its original shape: a triangle. 	• Children ages 4 to 7 can enjoy the story and then engage in activities that are appropriate for their age. Each page gives opportunities to talk more in detail about items highlighted as a given shape. • For example, when talking about a *pentagon* (a shape with 5 straight sides) the book shows a drawing of the **Pentagon**, the headquarters of the US Department of Defense, Arlington VA. • This is an actual picture of it. When you finish reading the book, you can go back to the Pentagon part. • Have your child find out information about the building and what happens there. You can have your child copy the shape and see what type of polygons make that shape. • Then, have your child look at other buildings and imagine how they look like from a "bird's eye view" – that is, from the air. • Have your child find a map of the town you live in and identify the shapes created by the streets and roads. • Have you ever noticed the shapes that make a soccer ball and how they are connected? Would your child make one?  https://www.pinterest.com/pin/527413806341476146/	**English Version**  http://www.amazon.com/The-Greedy-Triangle-Scholastic-Bookshelf/dp/0545042208  What shapes are shown in this court?  How many rectangles can you find? ****** **https://www.youtube.com/watch?v=kPuI4XyyZUE**

Examples of Books for Grades 4 and Up (cont.)

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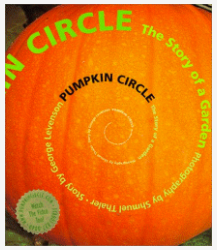
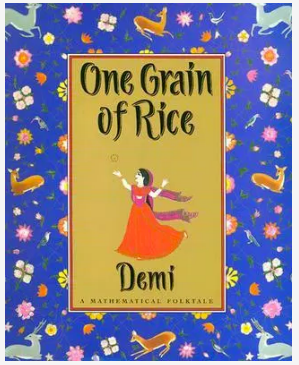
Pumpkin Circle, by George Levenson and photography by Shmuel Thaler **Publisher**: Tricycle Press, 1999 **Math Ideas For Grades 4 and up** • Farming, growing plants and vegetables • Life cycles • Measurement of length and weight; estimation	This book contains more excellent photographs that illustrate **the life cycle of the pumpkin**: From having a seed to planting it, to see it grow and then to harvest the pumpkin. Then, its decay and the seed appears again. That's the life cycle of the pumpkin. **It can be read to children of any age.**	This is a beautiful book that can help engage your child in conversations about plants, growing plants, farming, and life cycles in general. It is a great source for building vocabulary. The mathematical ideas can be related to patterns of change; the children can draw diagrams for the stages of the cycle, label them, include the time each stage lasts, etc. Also, pumpkins are quite like spheres or balls. Getting a pumpkin in the fall and measuring it in many ways could also make your child familiar with the measuring units and estimation. 	**English Version** 

Examples of Books for Grades 4 and Up (cont.)

Book Information	Overview	Suggested activities to do with your child (By Susana Davidenko)	Book Cover
One Grain of Rice: A Mathematical Folktale By Demi, author and illustrator **Publisher:** Scholastic, Inc. 1994 **Math Ideas For Levels 3rd and up** • Patterns • Multiplication, doubling, exponential growth • Functions • Real life connections • Fairness, sharing, common good, kindness, social responsibility	From https://floweringminds.wordpress.com/2012/06/08/one-grain-of-rice/ The story tells us that long ago there was a **raja** (king) in India who kept for himself almost all the rice that was grown to feed the people. People became hungry and and something had to be done. **Rani**, a girl in the village, was rewarded by the raja for her help. She could ask for anything. What this girl asked was: "just one grain of rice, doubled everyday for thirty days." The raja accepted Rani's request. But … He did not realize that after the 30 days he had to give **Rani and the people more than one billion (1,000,000,000) grains of rice!** This story will surprise the reader as the exponential growth of numbers is very fast! Also, the story brings up ideas of fairness, sharing one's possessions, and the clever use of mathematical ideas.	Parents can read the book stopping when necessary to clarify the vocabulary specific to the context of the story (a kingdom in India). In the first reading or when a parent is reading, the child can use rice or little pieces of paper to reproduce the amounts of rice obtained the first days. Children can complete a chart where they can record the number of the day (1 to 30) and the number of grains of rice that Rani was accumulating each day. For example: **Day** **# of Grains** **Pieces of paper/rice** 1st 1 2nd 2 … 8th 128 … Discuss with your child the way the numbers increase so quickly. Compare with having three times as much rice every day instead of 2. **Relate units of capacity** Have your child get some sense of size and large quantities. First, find out about **how many grains of rice would a teaspoon holds.** Then, have your child calculate **how many grains of rice would be in a tablespoon** (3 teaspoons) and **in a cup** (16 tablespoons.) Then, compare with the number of grains of rice included in the story and the volume they take.	**English Version**  ****** https://www.youtube.com/watch?v=ikZ7rTnvwgA A teaspoon, a tablespoon and a cup of rice

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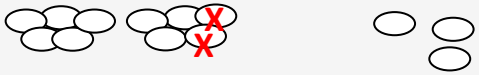
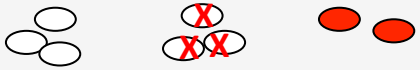
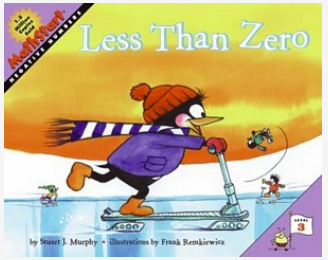
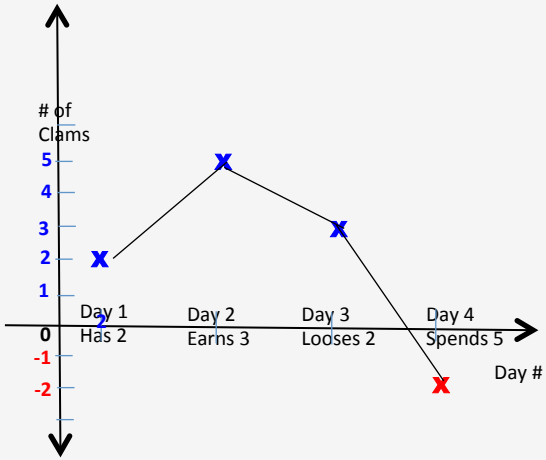
Book Information	Overview	Suggested activities to do with your child (By Susana Davidenko)	Book Cover Youtube read aloud when possible
Less than Zero, by Stuart J. Murphy **Publisher**: HarperCollins, 2003 **Math Ideas For Levels 4th and up** • Sequence of addition and subtractions of integers (that is, positive and negative whole numbers and 0.) • Charts • Graph in all quadrants	Perry the Penguin needs 9 clams to buy an ice scooter -- but he's not very good at saving. As Perry earns, spends, finds, loses, and borrow s clams, a simple line graph demonstrates the concept of negative numbers (from website included in the right column)	When reading this book to your child, you can use any small objects to represent clams. You can even use little pieces of paper. But, use only objects of two colors. Let's say, white and red. "Pretend clams" When Perry earns money, your child gets white papers. When Perry loses or spends money, your child returns the white papers to a pile. Here are some examples: **Perry has 2 clams and earns 3; then he ends up with 5 clams.** 2 + 3 = 5 **Perry has 5 clams and uses 2; then he ends up with 3**  5 - 2 = 3 **BUT**, what happens if Perry **spends MORE** clams than the ones he has? Let's say, he has 3 "clams" and spends 5. **Perry has 3 clams and spends 5. So, he uses the 3 he has and needs to borrow 2. He ends up owing 2 OR, "having" negative 2 clams (-2)**  3 - 5 (3 – 3 – 2) = -2 Ends up owing 2. He has "*negative 2" clams*	**English Version**  **http://www.barnesandnoble.com/w/less-than-zero-stuart-j-murphy/1111455003?ean=9780060001261**