



Turn reading time into math learning time! Many picture books have examples of numbers, shapes, sizes, or patterns in the words and pictures. You can help your children learn and talk about these concepts by asking them questions about the math in the story. Here are some suggestions to get you started.

FIND AND TALK ABOUT MATH IN PICTURE BOOKS

When reading a book about **numbers**, notice and talk about objects in the pictures. Ask children to:



Count | How many are there?

Compare | Are there more of this object or more of that object?

Predict | If one animal leaves, how many are left?

When reading a book about **patterns**, notice and talk about patterns that repeat or grow. Ask children to:



Name | What patterns do you see?

Predict | If the pattern continues, what will come next?

When reading a book about **shapes**, notice and talk about examples of shapes and their properties. Ask children to:

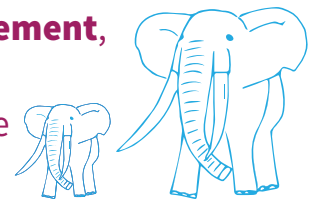


Name | What shape is this? How do you know?

Describe | How many sides does this shape have?

Combine | If we put these two shapes together, what new shape can we make?

When reading a book about **size or measurement**, notice and talk about the height, length, width, and weight of different things in the story. Ask children to:



Describe | What do you notice about the animal's size?

Compare | Which one is the tallest? Which one is the widest?

Notice the math.

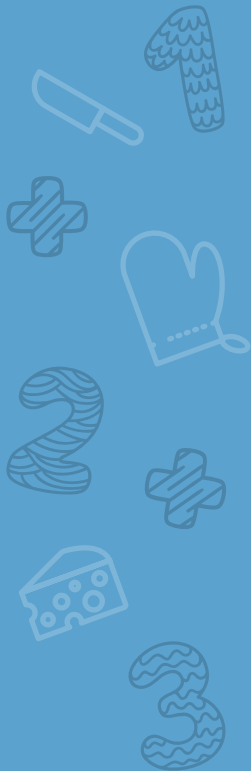
Talk about the math.

Encourage problem solving.

Ask questions.

Try to come up with some of your own questions, too!

Make your own mini-pizzas with whatever toppings you like. The tips included with this recipe will help you to practice some special counting skills, such as counting out the same number of objects as someone else, or counting out exactly five objects.



Adapted from:
<https://www.allrecipes.com/recipe/86649/fast-english-muffin-pizzas/>

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Personal Pizzas for Playing with Numbers

Ingredients

- Enough English muffins or sub rolls for your family
- Pizza or spaghetti sauce
- Shredded mozzarella cheese
- Your favorite pizza toppings, such as pepperoni, black olives, cut-up Canadian bacon, canned sliced pineapple, chopped up bell pepper, or mushrooms

Materials

- Baking sheet

Directions

1. Everybody washes their hands with soap and water while counting to 20 before starting to cook.
2. Preheat oven or toaster oven to 375°F.
3. Use a butter knife to split English muffins (or sub rolls) and place the muffins cut side up on a baking sheet.
4. Spread 2 spoonfuls of pizza or spaghetti sauce onto each of the muffin halves.
5. Top each muffin half with shredded mozzarella cheese and your favorite pizza toppings.
6. Bake for 10 minutes in preheated oven, or until the cheese is melted and browned on the edges.



Math Tips

★ Once you determine how many English muffins are needed, ask your child to count them out of the package. For example, say, “Can you get us six English muffins?”

★ Add toppings to one of the muffin halves and then ask the child to put the same number of toppings on a different muffin half. For example, make a pizza with five pieces of pepperoni but don’t tell them how many pieces you’ve put on. Then ask your child, “Can you put the same number of pieces of pepperoni on your pizza as I have on mine?” They will have to first count your pepperoni and then count their pieces.

★ Have your child count as they add two spoonfuls of sauce to each of the muffin halves. Explain *why* you are measuring. For example, ask, “If we add more or less than two spoons of sauce, what will happen to the way the pizzas look and taste?”

Make your own cookies using our recipe or even with a slice-and-bake dough! The tips included with this recipe will help you to practice some fair sharing skills and have conversations about how to split the cookies equally.



Adapted from:
<https://www.babble.com/best-recipes/4-ingredient-chocolate-chip-cookies/>

Chocolate Chip Cookies for Sharing

Ingredients

- 1 box yellow cake mix
- $\frac{1}{2}$ cup vegetable oil
- 2 eggs
- 2 cups chocolate chips

(Note: These math tips work with any cookie recipe, or with a slice-and-bake roll of prepared cookie dough!)

Materials

- Cups for measuring $\frac{1}{2}$ -cup and 1-cup amounts

Directions

1. Everybody washes their hands with soap and water while counting to 20 before starting to cook.
2. Preheat oven to 350°F.
3. Mix together cake mix, vegetable oil, and eggs in a medium bowl.
4. Stir in the chocolate chips.
5. Spoon tablespoon-sized balls of dough evenly spaced onto baking sheet.
6. Bake for 10-12 minutes or until bottoms and sides of cookies are golden brown.
7. Remove baking sheet from oven. Transfer cookies onto a cooling rack or plate. Allow to cool before eating.
8. Repeat steps 4 through 6 with remaining dough.



Math Tips

Once you've made the cookies, try a couple of ways of sharing them, then count how many cookies each person gets to see if that way is fair (sharing between two people is easiest for young children):

- ★ Make two piles of cookies, one for you and one for your child (or one to eat now and one to eat later). Ask your child to count the piles to make sure you both have the same amount. It's okay if the amounts are different because then your child can help figure out how to make this way of sharing fair.
- ★ Have your child divide the cookies onto two plates, one at a time until the cookies are gone, trying to put equal amounts of cookies on each plate. After they are done, have them count to see if there are equal amounts on each plate.
- ★ If you have an odd number of cookies to share between two people, have a conversation about how to give everyone a fair amount. For example, what happens if you break the last cookie in half?

Math Snacks | Cleaning Up

Quick and easy ideas for finding and talking about math in everyday family routines.

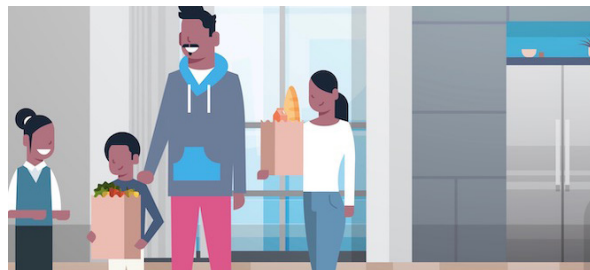


Find the Math:

When washing dishes, sort objects by similarities and differences.

Talk About the Math:

Can you make a group of all the clean spoons and all the clean forks? Which of these clean dishes needs to be put away in the cabinet?



Find the Math:

When putting away groceries, think about where items fit in the cabinet or refrigerator.

Talk About the Math:

Can you put the milk behind the eggs? Will this box of rice fit in this cabinet or is it too tall? Should it go in front of, behind, or on top of something else?

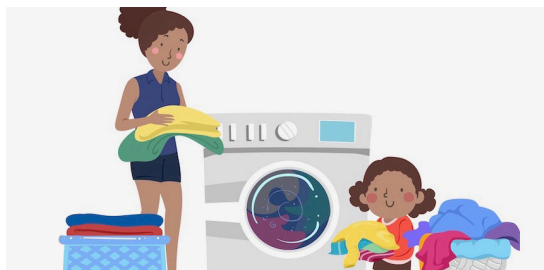


Find the Math:

When putting away groceries, sort objects by similarities and differences.

Talk About the Math:

Can you find all the things that need to go in the refrigerator? Can you find all the cans?



Find the Math:

When doing laundry, sort objects by similarities and differences.

Talk About the Math:

Can you help me sort the clothes into whites, darks, and colors before we wash them?



Find the Math:

When putting away books and toys, use words about where things are in size, shape, and place.

Talk About the Math:

Should we put this book on the top shelf or the bottom shelf? Will the rectangular book fit in the circular bin?



Find the Math:

When matching containers to their lids, think about shape and size.

Talk About the Math:

Can you find me a lid that matches this container? Remember to look for the same shape and size!

Math Snacks | Meal Prep

Quick and easy ideas for finding and talking about math in everyday family routines.



Find the Math:

When following a recipe, count out how many ingredients you need.

Talk About the Math:

We need three eggs. Can you get three eggs for me? We need a cupcake for everyone in the family. How many cupcakes do we need?



Find the Math:

When setting the table, count to see how many items are needed and describe where they go.

Talk About the Math:

How many plates do we need for everyone who is eating? Can you put a fork on one side of the plate and a spoon on the other? Can you put a napkin under the fork?



Find the Math:

When setting the table, gather information and make decisions.

Talk About the Math:

Can you find out what everyone wants to drink? Let's count how many people want milk and how many people want water.

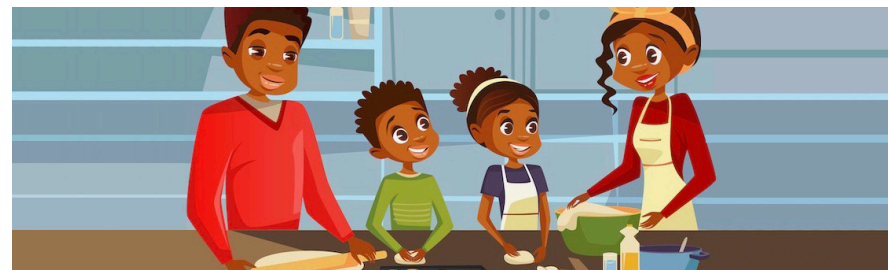


Find the Math:

When serving food, think about how to make sure everyone gets a fair share.

Talk About the Math:

We have nine empanadas and three people. How many does each person get so it's fair?



Find the Math:

When cooking, use measurement tools to prepare a meal.

Talk About the Math:

I need two cups of shredded cheese. Can you help me put the cheese in the measuring cup? I need two teaspoons of vanilla extract. Count how many times I fill up the teaspoon.

Math Snacks | Storytime



Find the Math:

When reading books, notice and talk about examples of different sizes in the illustrations.

Talk About the Math:

Which one is taller, shorter, thinner, etc.? How do you know? Can you think of something even taller, shorter, thinner, etc. than this?



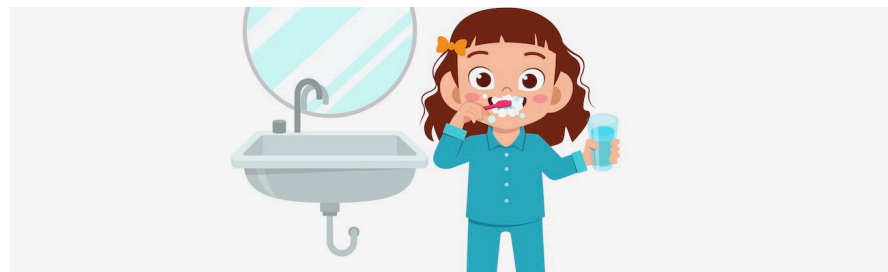
Find the Math:

When reading books, notice and talk about examples of shapes in the pictures.

Talk About the Math:

What shape is this? How do you know? How many sides does it have? How is that different from or similar to this other shape?

Math Snacks | Bedtime

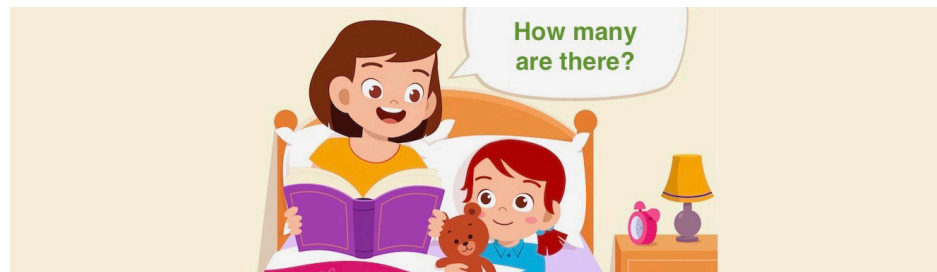


Find the Math:

Use vocabulary for what happens first, second, and third to show that things happen in order.

Talk About the Math:

First, change into your pajamas. Second, brush your teeth. Then third, we get to read a story together!



Find the Math:

When reading books, count how many objects are in the pictures.

Talk About the Math:

How many flowers do you see? How many are there altogether? Can you find that number written on the page?

Family Card Games

for Building Young Children's Math Skills



Materials: A deck of regular playing cards

Count the Highest

Setup

- Take out all face cards. Aces count as 1.
- Be sure to shuffle the cards.
- Pass out all the cards in deck so that each player has an equal number.

How to Play

How a turn begins. Players say "1,2,3" and then turn over one card from their pile. Each player wants to have the highest numbered card.

How a turn ends. The player with the highest card wins all the cards, and puts the cards in their own saved pile of cards. If two players have the same card, they play another round. The person who wins gets all the cards.

How the game ends. Play until the players have no cards left. The winner is the one with the most cards in their own saved pile.

Variations

Make it easier. Remove some of the higher numbers from the deck. You can play the game using only the numbers 1 through 5 or 1 through 7. When the child knows the lower numbers well you can begin to put one or more of the higher numbers back in the deck for the games.

Make it harder. Each player puts out 2 cards, and the player with the highest number out of the 4, wins all 4 cards.



Line Them Up

Setup

- Take out all face cards. Aces count as 1.
- Be sure to shuffle the cards.
- Pass out all the cards in deck so that each player has an equal number.
- Imagine a number line going left to right from 1 to 10. The two players sit side by side so the number line they make together faces the same way for both players.

How to Play

How a turn begins. Players take turns. On each turn, they take a card from the top of their own deck and put it where it would belong on a number line that goes from 1 to 10. The cards go in order with the lowest number (1) on the left and the highest number (10) on the right.

How a turn ends. Each player in turn places their card in the correct spot on the same number line. If they draw a card that is already in the line-up, they place it on top of the card that is already in the correct spot.

How the game ends. The game is over when the number line from 1 to 10 is completed. The person who puts down the final card to finish the number line wins.

Variations

Make it easier. Make a short number line using only numbers 1 to 5, and remove the higher numbers from the deck.

Make it harder. If this game is too easy, you may want to go to the harder ordering game called Sneeze Orders the Cards.



Family Card Games

for Building Young Children's Math Skills



Materials: A deck of regular playing cards

Sneeze Orders the Cards

Setup

- Take out all face cards. Aces count as 1.
- Be sure to shuffle the cards.
- Players get 10 cards.
- Players put the cards face-down in 2 rows with 5 cards in each row. The game goal is to replace each face-down card with the correct number card so the top row has ace, 2, 3, 4, 5, and the bottom row has 6, 7, 8, 9, 10.
- The rest of the deck is put in a pile in the center.
- Turn over 1 card and put it in a discard pile next to the center pile.

How to Play

How a turn begins. Players can pick a card either from the center pile OR from the discard pile. The player puts this card, number-side-up, in the correct spot. Place the cards as if they were ordered from 1 (Ace) to 10. For example, if the player picks up a 6, the player puts that card in the 6-spot. Next, the face-down card already in the 6-spot is flipped over. Then move that card to the spot where it belongs. Continue flipping over and placing cards in the correct space until a turn ends.

How a turn ends. A turn ends when a player flips over a card that is already in the correct spot. They should discard that card. For example, a player turns over a 2. But there is already a 2 in the 2 space. They then discard the 2, and their turn ends.

How the game ends.

The first person to make a number line from 1 to 10 wins.

Variations

Make it easier.

Remove the cards from 6 to 10 from the deck. Then it will be changed to a 1-5 ordering game.



Number Neighbors

Setup

- Take out all face cards. Aces count as 1.
- Be sure to shuffle the cards.
- Players get 4 cards each.
- Players put their cards in a row with numbers showing.
- The rest of the deck is put in a pile in the center.

How to Play

How a turn begins. Choose who goes first. The first player turns over the top card in the center pile, and places it, number-side-up, next to the center pile. The player then looks at their row of cards to see if they have a "Number Neighbor," a card that is either 1 lower or 1 higher than the comparison card in the center. If the player has a "Number Neighbor," they say "1 MORE" or "1 LESS," and place both the center comparison card and the "Number Neighbor" from their row face-down in a pile next to them.

How a turn ends. If a player has a "Number Neighbor," their turn ends by drawing a card from the center pile so that they once again have 4 cards in their row. And, a new center comparison card is turned number-side-up for the next player's turn. If a player cannot find a "Number Neighbor," they say "PASS" and leave all of the cards in place.

How the game ends. The game continues until the center pile is out of cards or no more plays can be made. The player with more saved cards wins.

Variations

Make it easier. Remove the cards from 6 to 10 from the deck. Then it will be changed to a 1-5 card game.

Make it harder. On each turn, players can put more than 1 card in their saved pile. Any card in the row that is 1 more or 1 less than the comparison card can go in the saved pile.

