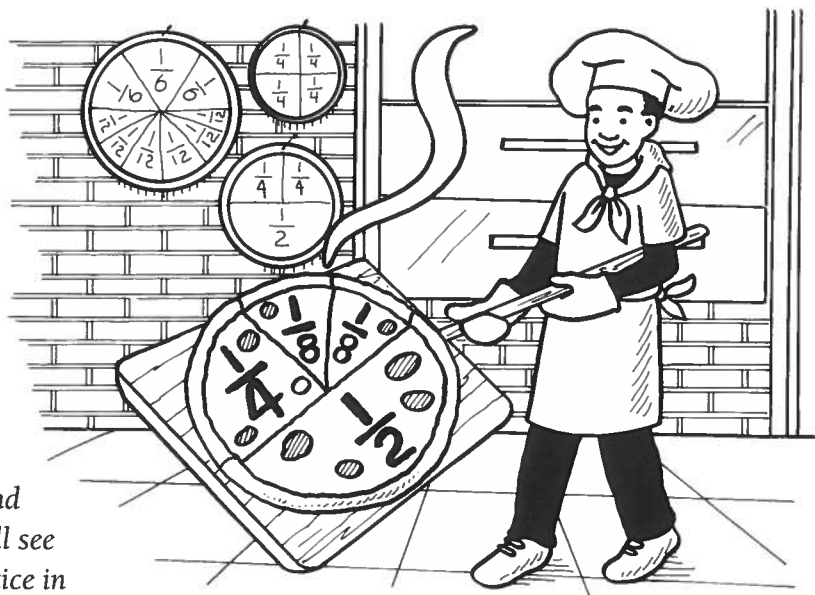


# Exploring Fractions & Decimals



What does eating a snack, taking a car trip, or reading the newspaper have to do with fractions and decimals? With these activities, your youngster will see the connections to his everyday life—and get practice in using numbers that represent parts of a whole.

## Play with pizzas

“I’d like a pizza with  $\frac{1}{8}$  sausage,  $\frac{1}{8}$  mushroom, and  $\frac{2}{3}$  pepperoni!” Your child can use pretend pizzas to create and add equivalent fractions.

Get eight paper plates, and have him draw a different pizza topping (pepperoni, green pepper, pineapple) on each one. Let him use a ruler to draw lines dividing each pizza into a different number of equal pieces—halves, thirds, fourths, fifths, sixths, eighths, and twelfths. He can cut on the lines to make slices and label the backs with the correct fractions. So for the pizza with 6 slices, he would label each piece “ $\frac{1}{6}$ .”

Then, ask your youngster to mix and match the different fractions to make whole pizzas. For instance, he could put together one pizza with two  $\frac{1}{6}$  pieces and two  $\frac{1}{3}$  pieces ( $\frac{2}{6} = \frac{1}{3}$ , and  $\frac{2}{3} + \frac{1}{3} = 1$ ). How many combinations can he come up with? Suggest that he keep track by writing addition sentences with the fractions that equal 1 (example:  $\frac{1}{2}$  cheese +  $\frac{1}{4}$  sausage +  $\frac{1}{4}$  spinach = 1 pizza).

*Idea:* Follow up with a pizza party for dinner, and let your child hand out fractional pieces to everyone!



## Sort and snack

Here’s a tasty way for your youngster to make up and solve fraction addition and subtraction problems.

Have her put 20 pieces of trail mix on a plate and sort

them by ingredient. Then, take turns coming up with word problems using fractions. Say there are 7 pretzels, 6 crackers, 4 peanuts, and 3 chocolate chips. You could ask, “If you ate all of the crackers and peanuts, what fraction of the total pieces did you eat?” (Answer:  $\frac{1}{2}$ , because 6 crackers + 4 peanuts = 10 pieces, and 10 is  $\frac{1}{2}$  of the total 20 pieces.) Or she might say, “If I eat 2 chocolate chips, what fraction of my chocolate chips will be left?” (Answer:  $\frac{1}{3}$ . She ate 2 of the 3 chocolate chips, which is  $\frac{2}{3}$ , and  $\frac{3}{3} - \frac{2}{3} = \frac{1}{3}$ .)

As you share the snack, continue creating new fraction problems. Or spill out more trail mix to change the numbers, and start again.



## How much farther?

Get your child thinking about fractional parts of a road trip with this twist on the question, “Are we there yet?”

Before a car trip, tell your youngster the number of miles to your destination, and set the trip odometer to zero. Along the way, read the odometer aloud, and ask him what fraction of the trip’s length you’ve gone so far. For example, if your trip is 50 miles and you’ve traveled 20 miles, you’ve gone  $\frac{2}{5}$  of the

*continued*

way. What portion is left? He should say  $\frac{2}{3}$ . Then, challenge him to turn those fractions into decimals ( $\frac{2}{5} = \frac{4}{10} = 0.4$ , and  $\frac{2}{3} = \frac{6}{10} = 0.6$ ).



### Read all about it!

Newspapers are full of decimals. Encourage your youngster to look through the paper for numbers that include decimals. Her goal? To find ones that add up to exactly 100—without going over. She'll practice adding decimals, and she'll see how decimal numbers are used for many purposes.

She might find a baseball player's batting average (.275), the price of a gallon of gas (\$3.79), and the magnitude of an earthquake (5.8). After she writes each number, she can add it to her total. As she gets close to 100, she'll need to find smaller numbers to avoid going over. How many days of newspapers will it take for her to add up to exactly 100?

*Tip:* Suggest that your child record all the ways decimals are used. How many can she find?



### Estimate the bill

Your youngster uses decimals every time he reads a price tag or counts money. With this activity, he can use prices to practice rounding decimals.

Let him carry a small notebook and a

pencil around the grocery store and round items in your cart to the nearest dollar. Tell him he will need to look at the numbers after the decimal—if it's \$0.50 or higher, he would round up to the next dollar, and if it's \$0.49 or below, he would round down. For example, if you put a \$3.45 box of cereal in the cart, he should write \$3. And if you get a \$1.57 bag of raisins, he would write \$2.

Before you check out, encourage him to add the numbers in his head—he'll practice "mental math" as he estimates your total bill. How close did he come?

*Variation:* In a restaurant, your child could use a menu to round and add up the prices of items you order. When you get your bill, he can compare his amount to the total before taxes.

### Build a decimal

Who can make a decimal that's closest to 1? To 0? This game gives your youngster a chance to find out.

You'll need a deck of playing cards (face cards and jokers removed). Also, each player gets a button (to represent a decimal point) and a card with a zero on it (to put before the decimal).

The dealer announces a "rule" for the round and deals three cards to each player. Her rule tells players how to arrange their cards to create a decimal. For instance, the rule might be to make the decimal closest to 1 or the decimal closest to 0.



Then, each person arranges her cards faceup, using the button as a decimal point. If the rule is to create the decimal closest to 1 and your cards are 5, 1, and 7, you should make 0.751. Read your numbers aloud, and the dealer declares the winner (751 thousandths beats 643 thousandths, for example). That person keeps all the cards and becomes the next dealer. Play until the cards are used up. The person with the most cards wins.

*Tip:* Have the dealer make a number line from 0 to 1 and write the decimals on the line. That's an easy way to see which number is closest to 0 or 1.