

# Comparing and Ordering Decimals

When Will I Ever Do That???!!!

# McDonald's Menu....

## I'm Lovin It!!

- Double Cheeseburger: \$ .99
- Big Mac Value Meal: \$ 4.79
- Chicken McNuggetts Meal: \$ 3.80
- Small Drink: \$ .99
- McFlurry: \$ 1.97
- Salad: \$ 4.80
- 2 Cheeseburger Meal: \$ 3.70
- Ice Cream Cone: \$ .87

# Order Up!

## Least Expensive to Most Expensive

■ Ice Cream Cone	.87
■ Double Cheeseburger:	.99
■ Small Soft Drink:	.99
■ McFlurry:	1.97
■ 2 Cheeseburger Meal:	3.70
■ Chicken McNuggetts Meal:	3.80
■ Big Mac Value Meal:	4.79
■ Chicken Salad:	4.80

# What Do I Mean Compare Decimals?

- When we compare we use terms such as:
  - Less than  $<$
  - Greater than  $>$
  - Equal to  $=$
- Comparing decimals is similar to comparing whole numbers.
  - $45 < 47$
  - $150 > 105$
- When we compare decimals we use place value or a number line.

# Place Value

1,000	100	10	1	0.1	0.01	0.001	0.0001
Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths	Ten-thousandths

## Half pipe Results

Sara	42.1
Danny	42.5
Ross	42.0
Bethany	40.7
Jacob	46.1

### ■ Compare Sara's score with Danny's score.

#### 1. Line Up Decimal Points

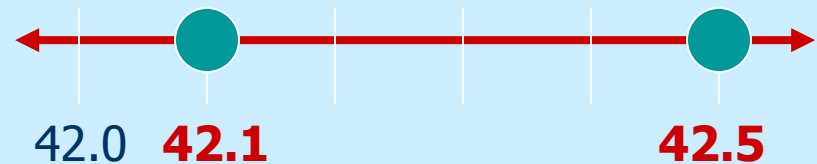
- Sara: 42.1
- Danny: 42.5

#### 2. Start at the left and find the first place where the digits differ. Compare the digits

- $1 < 5$
- $42.1 < 42.5$
- This means Sara's score was lower than Danny's score.

# Let's Try Using A Number Line

Sara	42.1
Danny	42.5
Ross	42.0
Bethany	40.7
Jacob	46.1



Numbers to the right are greater than numbers to the left. Since 42.5 is to the right of 42.1 we have:

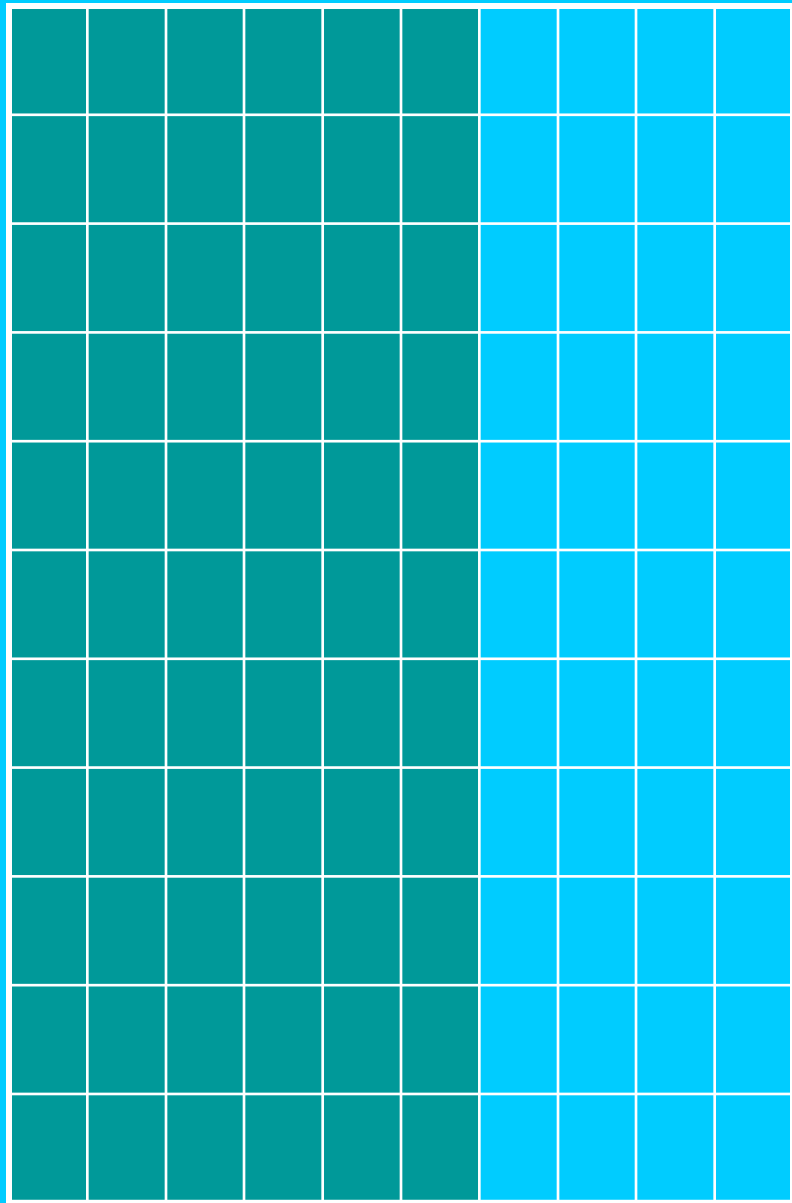
$$42.5 > 42.1$$

# Equivalent Decimals

- Decimals that name the same number are called equivalent decimals.
  - 0.60 and 0.6
- Are these the same???

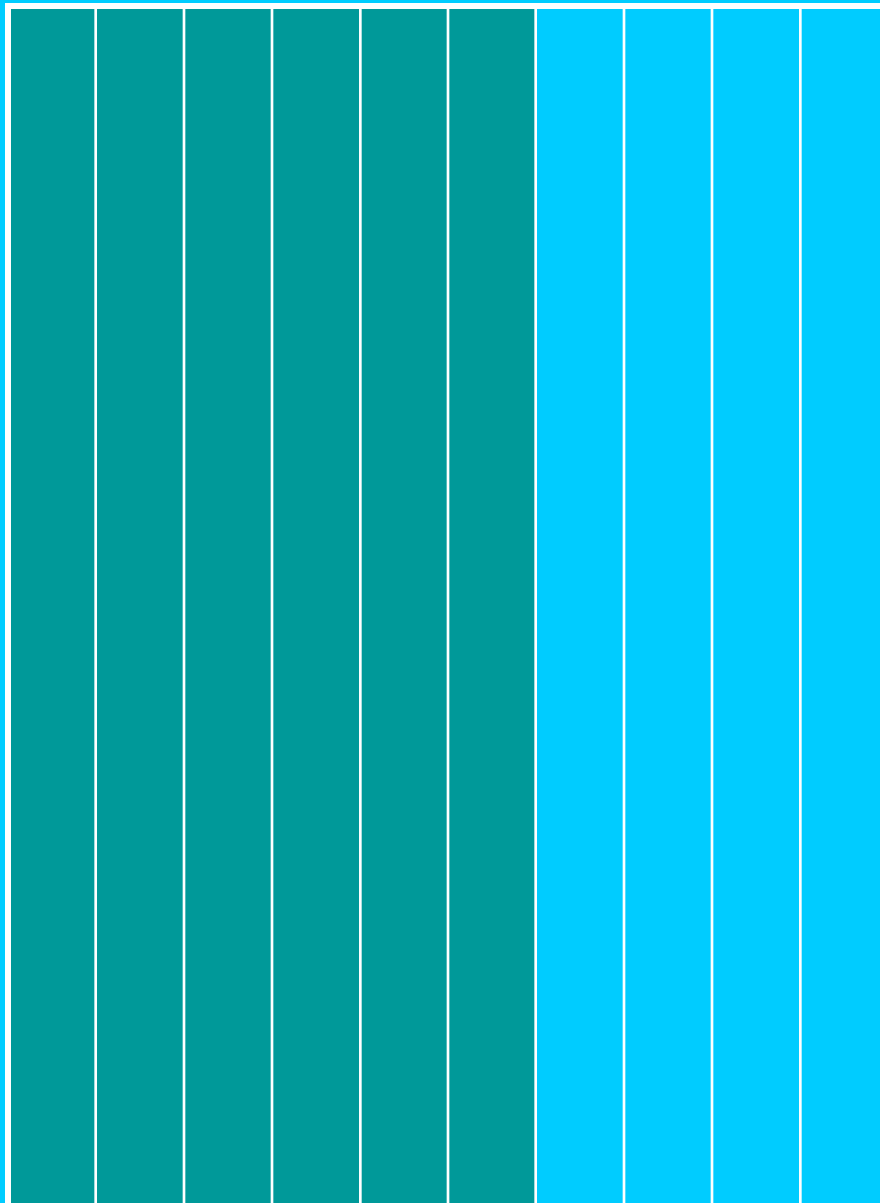


0.60



=

0.6



# Annexing Zeros

- This means placing a zero to the right of the last digit in a decimal.
- $0.6 \longrightarrow 0.60$
- Although we added a zero, the value of the decimal did not change!!
- Annexing or adding zeros is useful when ordering a group of decimals.

# Ordering Decimals

- We can order decimals from least to greatest or we can order from greatest to least.
- Let's try an example:
- Order 15, 14.95, 15.8, and 15.01 from least to greatest

15, 14.95, 15.8, 15.01

- First, line up the decimal points

15

14.95

15.8

15.01

15, 14.95, 15.8, 15.01

- Next, annex zeros so that each number has the same number of decimal places

15.00 ←

14.95

15.80 ←

15.01

**15, 14.95, 15.8, 15.01**

- Finally, use place value to compare the decimals. Always start from the left!!

15.00

14.95

15.80

15.01

- 14.95, 15, 15.01, 15.8

# One More Example

- Order these numbers from greatest to least
  - 35.06, 35.7, 35.5, 35.849