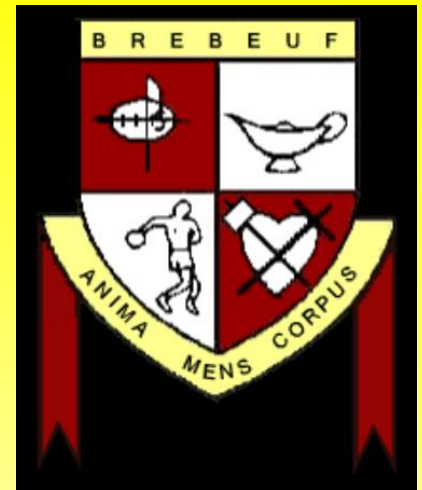


# ST. JEAN DE BREBEUF MATHEMATICS



# NUMBER SENSE

INTRODUCTION:

ROUNDING NUMBERS

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

Before we talk about rounding, let's review **place values**



### WHAT IS ROUNDING?

Rounding involves *reducing* the number of digits in a number while keeping its value similar

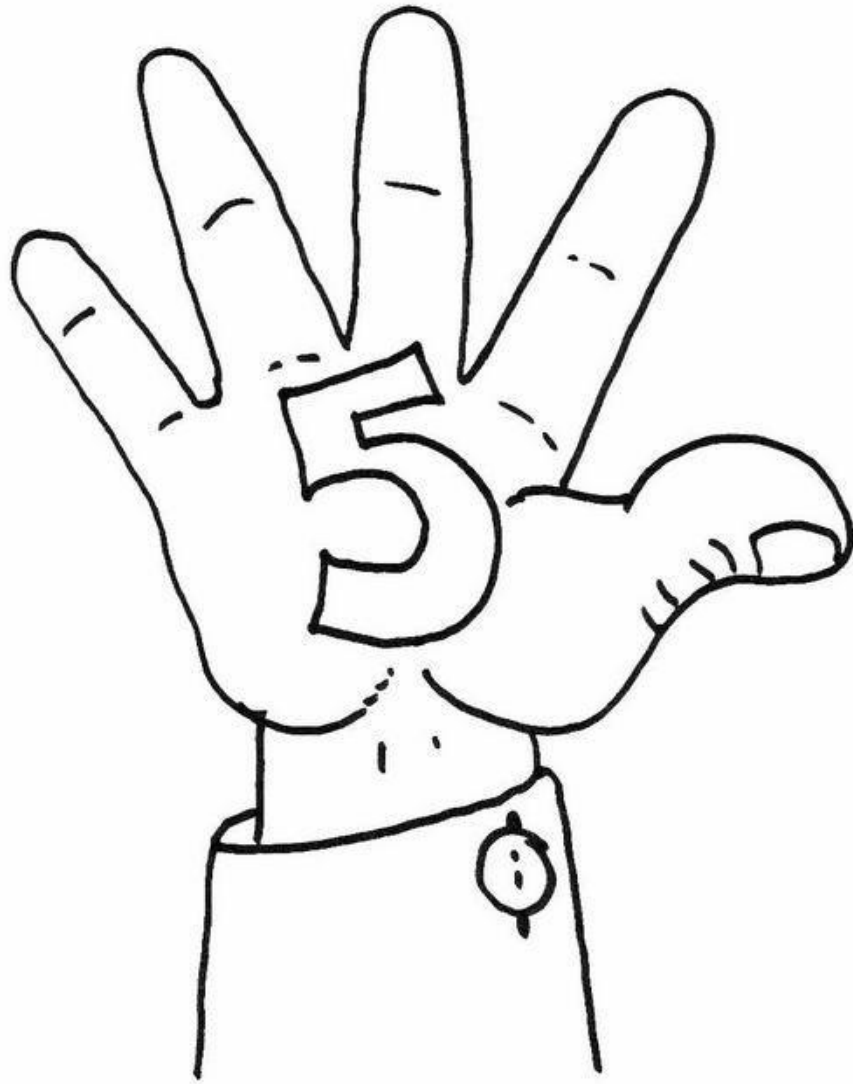
→ Although it is easier to use, it is not as accurate

**EXAMPLE:** \$5.97 rounded to the nearest dollar is \$\_\_\_\_\_6\_\_\_\_\_.

Although it is an easier number to use, you are three cents off the real value.

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS



### **HOW TO ROUND**

1. Decide the last digit you will keep or change
2. Look at the number to the *right* and determine whether you **round down** or **round up**

If the digit is less than 5, the number remains the same (this is called **rounding down**)

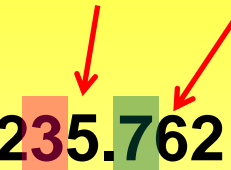
If the digit is 5 or more, the number increases by 1 (this is called **rounding up**)

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

### EXAMPLE

Consider the number **235.762**

The number 235.762 is shown. The digit 5 is highlighted with a pink box and a red arrow pointing to it from above. The digit 7 is highlighted with a green box and a red arrow pointing to it from above.

(a) Round this number to the **nearest ten**

**240**

(b) Round this number to the **nearest tenth**

**235.8**

### HOW TO ROUND

1. Decide the last digit you will keep or change
2. Look at the number to the *right* and determine whether you **round down** or **round up**

If the digit is less than 5, the number remains the same (this is called **rounding down**)


If the digit is 5 or more, the number increases by 1 (this is called **rounding up**)

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

### EXAMPLE

Consider the number **235.762**

The number 235.762 is shown with the digit 5 highlighted in a pink box and the digit 6 highlighted in a green box. Two red arrows point downwards from above to the 5 and the 6 respectively.

(c) Round this number to the **nearest hundred**

**200**

(d) Round this number to the **nearest hundredth**

**235.76**

### HOW TO ROUND

1. Decide the last digit you will keep or change
2. Look at the number to the *right* and determine whether you **round down** or **round up**

If the digit is less than 5, the number remains the same (this is called **rounding down**)

If the digit is 5 or more, the number increases by 1 (this is called **rounding up**)

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

### EXAMPLE

Consider the number **235.762**



(e) Round this number to the **nearest whole number**

**236**

(f) Round this number to **four significant digits**

*\*\*\* To round to a certain number of digits, count digits from left to right and round from there.*

**235.8**

### HOW TO ROUND

1. Decide the last digit you will keep or change
2. Look at the number to the *right* and determine whether you **round down** or **round up**

If the digit is less than 5, the number remains the same (this is called **rounding down**)


If the digit is 5 or more, the number increases by 1 (this is called **rounding up**)

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

### EXAMPLE

Consider the number **235.762**

The number 235.762 is shown. The digit 5 is highlighted in a red box, and the digit 7 is highlighted in a green box. Two red arrows point to these digits from above.

Note on **significant digits**

→ When counting digits from left to right, you do not include leading zeros

**EXAMPLE:** The number **0.00047** would have only two significant digits

(f) Round this number to **four significant digits**

*\*\*\* To round to a certain number of digits, count digits from left to right and round from there.*

**235.8**

### HOW TO ROUND

1. Decide the last digit you will keep or change
2. Look at the number to the *right* and determine whether you **round down** or **round up**

If the digit is less than 5, the number remains the same (this is called **rounding down**)

If the digit is 5 or more, the number increases by 1 (this is called **rounding up**)

# NUMBER SENSE

## INTRODUCTION: ROUNDING NUMBERS

### Homework:

Handouts