

CATCH-UP MATH

Get your child back on track!

Lessons and Activities

6th Grade

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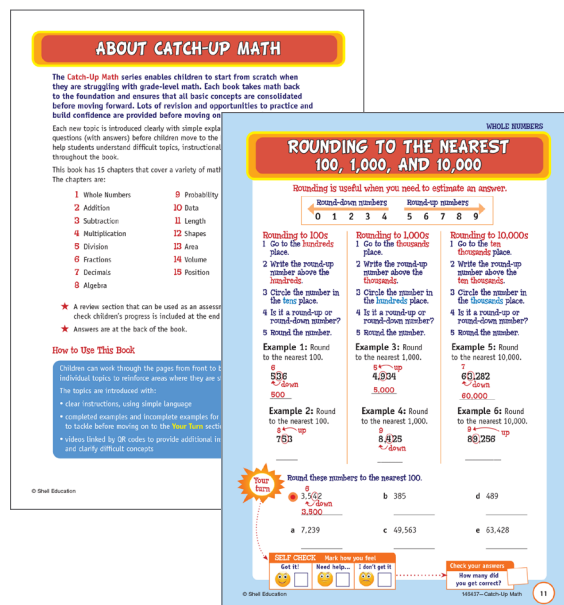
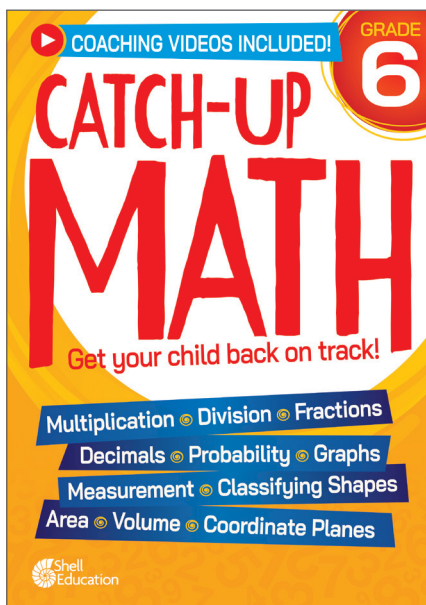
Cover (1 page)

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About Catch-Up Math (1 page)

How to Use the QR Codes in Catch-Up Math (1 page)

Lesson Pages (6 pages)





COACHING VIDEOS INCLUDED!

GRADE

6

CATCH-UP MATH

Get your child back on track!

Multiplication ⦿ Division ⦿ Fractions

Decimals ⦿ Probability ⦿ Graphs

Measurement ⦿ Classifying Shapes

Area ⦿ Volume ⦿ Coordinate Planes

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ABOUT CATCH-UP MATH

The **Catch-Up Math** series enables children to start from scratch when they are struggling with grade-level math. Each book takes math back to the foundation and ensures that all basic concepts are consolidated before moving forward. Lots of revision and opportunities to practice and build confidence are provided before moving on to new topics.

Each new topic is introduced clearly with simple explanations, examples, and trial questions (with answers) before children move to the Practice section. To help students understand difficult topics, instructional videos are included throughout the book.

This book has 15 chapters that cover a variety of mathematical concepts. The chapters are:

- | | |
|------------------|---------------|
| 1 Whole Numbers | 9 Probability |
| 2 Addition | 10 Data |
| 3 Subtraction | 11 Length |
| 4 Multiplication | 12 Shapes |
| 5 Division | 13 Area |
| 6 Fractions | 14 Volume |
| 7 Decimals | 15 Position |
| 8 Algebra | |

- ★ A review section that can be used as an assessment and to check children's progress is included at the end of each chapter.
- ★ Answers are at the back of the book.

How to Use This Book

Children can work through the pages from front to back or choose individual topics to reinforce areas where they are struggling.

The topics are introduced with:

- clear instructions, using simple language
- completed examples and incomplete examples for students to tackle before moving on to the **Your Turn** sections
- videos linked by QR codes to provide additional instruction and clarify difficult concepts



Each **Your Turn** section contains a **SELF CHECK** for students to reflect and give self-assessment on their understanding.

A QR code on a topic page provides access to the video.

HOW TO USE THE QR CODES IN CATCH-UP MATH

A unique aspect of the **Catch-Up Math** series is the **instructional videos**.

The videos further explain and clarify various mathematical concepts. The videos are simply accessed via QR codes and can be watched on a phone or tablet. Or, view all the videos by following a link.

Access the video by scanning the QR code with your device.

Each video shows the page from the book. An instructor talks through the concepts and examples and demonstrates what students need to do. The solutions to the examples are presented before children tackle the **Your Turn** sections. This careful instruction ensures that children can confidently move on to the following Practice questions. Children should be encouraged to check their **Your Turn** answers before moving on.

25 instructional videos included!

Scan to access the video.

After watching the video, children can confidently complete the **Your Turn** section.

WHOLE NUMBERS

ROUNDING TO THE NEAREST 100, 1,000, AND 10,000

Rounding is useful when you need to estimate an answer.

← Round-down numbers Round-up numbers →

0 1 2 3 4 5 6 7 8 9

Rounding to 100

- Go to the **hundreds** column.
- Write the round-up number above the **hundreds**.
- Circle the number in the **tens** column.
- Is it a round-up or round-down number?
- Round the number.

Example 1: Round to the nearest 100.

$$\begin{array}{r} 9 \leftarrow \text{up} \\ 857 \\ \hline 900 \end{array}$$

Rounding to 1,000

- Go to the **thousands** column.
- Write the round-up number above the **thousands**.
- Circle the number in the **hundreds** column.
- Is it a round-up or round-down number?
- Round the number.

Example 2: Round to the nearest 1,000.

$$\begin{array}{r} 6 \leftarrow \text{up} \\ 45,845 \\ \hline 46,000 \end{array}$$

Rounding to 10,000

- Go to the **ten thousands** column.
- Write the round-up number above the **ten thousands**.
- Circle the number in the **thousands** column.
- Is it a round-up or round-down number?
- Round the number.

Example 3: Round to the nearest 10,000.

$$\begin{array}{r} 3 \\ 24,556 \\ \hline 20,000 \end{array}$$

Example 4: Round 15,486 to the nearest 100. $15,4\textcircled{8}6$

Example 5: Round 1,742 to the nearest 1,000. $1,7\textcircled{4}2$

Your Turn Round to the nearest 100.

$37,2\textcircled{9}5$ a 5,834 b 652

$37,300$

SELF CHECK Mark how you feel

Got it! Need help... I don't get it

Check your answers: How many did you get correct?

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VALUE

THREE-DIGIT, FOUR-DIGIT, AND FIVE-DIGIT NUMBERS

The value of a number is how much a number is worth.
To find the value of a digit, look at its place in a number.

For example, what is the value of the 3 in 23,000?
The 3 is in the thousands place, so the value of 3 is 3,000.

3-digit numbers

Example 1:

In the number 623,
the value of 6 is 600,
the value of 2 is 20,
and the value of 3 is 3.

Example 2:

In the number 459,
the value of 4 is _____,
the value of 5 is 50,
and the value of 9 is _____.

4-digit numbers

Example 3:

In the number 7,438,
the value of 7 is 7,000,
the value of 4 is 400,
the value of 3 is 30,
and the value of 8 is 8.

Example 4:

In the number 6,247,
the value of 6 is _____,
the value of 2 is _____,
the value of _____ is 40,
and the value of 7 is 7.

5-digit numbers

Example 5:

In the number 25,681,
the value of 2 is 20,000,
the value of 5 is 5,000,
the value of 6 is 600,
the value of 8 is 80,
and the value of 1 is 1.

Example 6:

In the number 34,592,
the value of 3 is _____,
the value of 4 is 4,000,
the value of 5 is _____,
the value of _____ is 90,
and the value of _____ is 2.

Remember, the place value is where the digit is in a number.



The value is how much the digit is worth.

Your turn

Use **red** to circle the numbers where the value of 5 is 500.
Use **blue** to circle the numbers where the value of 5 is 50.
Use **green** to circle the numbers where the value of 5 is 5.

62,538	1,453	526	59,342	852	5,493
73,581	8,500	105	72,531	549	1,532
753	2,985	645	7,539	258	5,371

SELF CHECK Mark how you feel

Got it!



Need help...

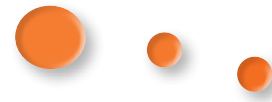


I don't get it



Check your answers

How many did you get correct?



1 What is the value of 6 in each of these numbers?

- | | | |
|--|-------------------|------------------|
| <input checked="" type="radio"/> 2,463 <u>60</u> | d 64,281 _____ | h 3,760 _____ |
| a 362 _____ | e 4,639 _____ | i 7,246 _____ |
| b 6,534 _____ | f 16,382 _____ | j 6 _____ |
| c 2,436 _____ | g 5,624 _____ | k 60 _____ |

2 Write a number that has a 7 with each given value.

- | | | |
|---|-------------------|---------------|
| <input checked="" type="radio"/> 70 <u>79</u> | b 70,000 _____ | d 70 _____ |
| a 700 _____ | c 7,000 _____ | e 7 _____ |

3 Circle the digits with the greatest values, and underline the digits with the least values.

- | | | | |
|---|----------|----------|----------|
| <input checked="" type="radio"/> <u>7</u> 3,821 | d 879 | h 1,509 | l 555 |
| a 439 | e 41,589 | i 16,073 | m 9,009 |
| b 1,384 | f 2,491 | j 97,329 | n 24,823 |
| c 593 | g 34,285 | k 42,444 | o 60,399 |

4 Circle the numbers with the matching values.

- | | | | | | | |
|--|-----------|--------|--------|--------------|---------------|--------|
| <input checked="" type="radio"/> The value of 3 is 30: | <u>37</u> | 483 | 342 | <u>5,037</u> | <u>64,736</u> | 3,491 |
| a The value of 5 is 500: | 359 | 562 | 6,593 | 51 | 34,531 | 5,632 |
| b The value of 7 is 7,000: | 736 | 57,111 | 3,792 | 7,000 | 47,328 | 74,385 |
| c The value of 9 is 90,000: | 93,246 | 49,371 | 90,331 | 893 | 914 | 98,363 |
| d The value of 2 is 2: | 5,236 | 24,593 | 61,592 | 125 | 59,472 | 1,582 |
| e The value of 6 is 60: | 4,165 | 346 | 64,928 | 3,265 | 37,469 | 16,431 |

5 Write numbers that match the descriptions.

- | | |
|--|----------------------------------|
| <input checked="" type="radio"/> 3 is worth the most <u>34,172</u> | e 7 is worth the least __, __ |
| a 3 is worth the least __, __ | f 9 is worth the most __, __ |
| b 4 is worth the most ____ | g 9 is worth the least __, __ |
| c 4 is worth the least ____ | h 8 is worth the most ____ |
| d 7 is worth the most __, __ | i 8 is worth the least ____ |

ROUNDING TO THE NEAREST 100, 1,000, AND 10,000

Rounding is useful when you need to estimate an answer.



Rounding to 100s

- Go to the **hundreds** place.
- Write the round-up number above the **hundreds**.
- Circle the number in the **tens** place.
- Is it a round-up or round-down number?
- Round the number.

Example 1: Round to the nearest 100.

$$\begin{array}{r} 6 \\ 5 \text{ } \textcircled{3} \text{ } 6 \\ \swarrow \text{down} \\ \underline{500} \end{array}$$

Example 2: Round to the nearest 100.

$$\begin{array}{r} 8 \swarrow \text{up} \\ 7 \text{ } \textcircled{5} \text{ } 3 \\ \underline{\hspace{2cm}} \end{array}$$

Rounding to 1,000s

- Go to the **thousands** place.
- Write the round-up number above the **thousands**.
- Circle the number in the **hundreds** place.
- Is it a round-up or round-down number?
- Round the number.

Example 3: Round to the nearest 1,000.

$$\begin{array}{r} 5 \swarrow \text{up} \\ 4, \textcircled{9} \text{ } 3 \text{ } 4 \\ \underline{5,000} \end{array}$$

Example 4: Round to the nearest 1,000.

$$\begin{array}{r} 9 \swarrow \text{down} \\ 8, \textcircled{4} \text{ } 2 \text{ } 5 \\ \underline{\hspace{2cm}} \end{array}$$

Rounding to 10,000s

- Go to the **ten thousands** place.
- Write the round-up number above the **ten thousands**.
- Circle the number in the **thousands** place.
- Is it a round-up or round-down number?
- Round the number.

Example 5: Round to the nearest 10,000.

$$\begin{array}{r} 7 \\ 6 \text{ } \textcircled{3} \text{ } 2 \text{ } 8 \text{ } 2 \\ \swarrow \text{down} \\ \underline{60,000} \end{array}$$

Example 6: Round to the nearest 10,000.

$$\begin{array}{r} 9 \swarrow \text{up} \\ 8 \text{ } \textcircled{9} \text{ } 2 \text{ } 5 \text{ } 6 \\ \underline{\hspace{2cm}} \end{array}$$



Round these numbers to the nearest 100.

$$\begin{array}{r} 6 \\ 3, 5 \text{ } \textcircled{4} \text{ } 2 \\ \swarrow \text{down} \\ \underline{3,500} \end{array}$$

a 7,239

b 385

c 49,563

d 489

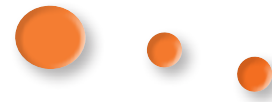
e 63,428

SELF CHECK Mark how you feel

Got it! <input type="checkbox"/>	Need help... <input type="checkbox"/>	I don't get it <input type="checkbox"/>
-------------------------------------	--	--

Check your answers

How many did you get correct?



1 Round these numbers to the nearest 100.

- | | | | |
|------------------------------------|-------------------------|---------------------------|-----------------------------|
| a 126,498
<u>126,500</u> | b 8,739
_____ | d 15,438
_____ | f 1,573,249
_____ |
| a 1,526
_____ | c 403
_____ | e 152,493
_____ | g 7,594
_____ |

2 Round these numbers to the nearest 1,000.

- | | | | |
|--|--------------------------|---------------------------|-----------------------------|
| a 4,593,628
<u>4,594,000</u> | b 92,635
_____ | d 124,253
_____ | f 3,427
_____ |
| a 1,928
_____ | c 17,268
_____ | e 74,629
_____ | g 6,372,871
_____ |

3 Round these numbers to the nearest 10,000.

- | | | | |
|----------------------------------|---------------------------|-----------------------------|-----------------------------|
| a 53,497
<u>50,000</u> | b 274,389
_____ | d 3,262,950
_____ | f 7,458,218
_____ |
| a 42,651
_____ | c 15,491
_____ | e 15,583
_____ | g 81,818
_____ |

4 Complete the table.

	Nearest 100	Nearest 1,000	Nearest 10,000
a 53,852	53,900	54,000	50,000
a 34,568			
b 59,731			
c 54,836			
d 97,425			
e 580,263			
f 742,589			
g 1,429,632			
h 5,643,859			

VALUE

SIX-DIGIT AND SEVEN-DIGIT NUMBERS

The value of a number is how much a number is worth. To find the value of a digit, look at where it is in a number.

6-digit numbers

Example 1:

In the number 526,391,
the value of 5 is 500,000,
the value of 2 is 20,000,
the value of 6 is 6,000,
the value of 3 is 300,
the value of 9 is 90,
and the value of 1 is 1.

Example 2:

In the number 742,186,
the value of 7 is _____,
the value of 4 is 40,000,
the value of 2 is _____,
the value of 1 is _____,
the value of 8 is 80,
and the value of 6 is 6.

7-digit numbers

Example 3:

In the number 6,384,173,
the value of 6 is 6,000,000,
the value of 3 is 300,000,
the value of 8 is 80,000,
the value of 4 is 4,000,
the value of 1 is 100,
the value of 7 is 70,
and the value of 3 is 3.

Example 4:

In the number 5,872,493,
the value of 5 is _____,
the value of 8 is 800,000,
the value of 7 is 70,000,
the value of 2 is _____,
the value of 4 is 400 ,
the value of 9 is _____,
and the value of 3 is _____.



SCAN to watch video



Remember, the place value is where the digit is in a number. The value is how much the digit is worth.

Your turn

Use **yellow** to circle the numbers where 7 has a value of 700,000. Use **black** to circle the numbers where 4 has a value of 4,000,000.

- 725,435 4,373,362 736,489 4,759,328 5,768,430
9,759,015 4,873,581 6,700,000 4,573,000

SELF CHECK Mark how you feel

Got it!



Need help...

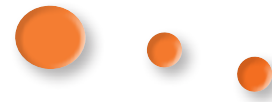


I don't get it



Check your answers

How many did you get correct?



1 What is the value of 8 in each of these numbers?

- | | | | |
|--|--|--|--|
| <input checked="" type="radio"/> 8,052,436
<u>8,000,000</u> | <input type="radio"/> c 8,645,590
_____ | <input type="radio"/> f 5,493,183
_____ | <input type="radio"/> i 583,462
_____ |
| <input type="radio"/> a 3,842,431
_____ | <input type="radio"/> d 136,852
_____ | <input type="radio"/> g 7,841,320
_____ | <input type="radio"/> j 642,837
_____ |
| <input type="radio"/> b 842,376
_____ | <input type="radio"/> e 4,382,915
_____ | <input type="radio"/> h 1,573,108
_____ | <input type="radio"/> k 149,383
_____ |

2 Complete the information for 7,324,951.

- | | |
|--|---|
| <input checked="" type="radio"/> <u>7,324,951</u> ones | <input type="radio"/> c ___ hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ ones |
| <input type="radio"/> 732,495 tens + 1 ones | <input type="radio"/> d ___ millions + ___ hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ ones |
| <input type="radio"/> 73,249 hundreds + 5 tens + 1 ones | |
| <input type="radio"/> a _____ thousands + ___ hundreds + ___ tens + ___ ones | |
| <input type="radio"/> b ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ ones | |

3 Complete the information for 583,284.

- | | |
|--|--|
| <input checked="" type="radio"/> <u>583,284</u> ones | <input type="radio"/> d ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ ones |
| <input type="radio"/> a _____ tens + ___ ones | <input type="radio"/> e ___ hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ ones |
| <input type="radio"/> b _____ hundreds + ___ tens + ___ ones | |
| <input type="radio"/> c ___ thousands + ___ hundreds + ___ tens + ___ ones | |

4 Write three different numbers that fit each description.

- | | | | |
|------------------------------|-------|-------|-------|
| a 4 has a value of 400,000 | _____ | _____ | _____ |
| b 6 has a value of 6,000,000 | _____ | _____ | _____ |
| c 3 has a value of 30,000 | _____ | _____ | _____ |
| d 7 has a value of 7,000 | _____ | _____ | _____ |