

SIGMABUDGIE · GRADE 3

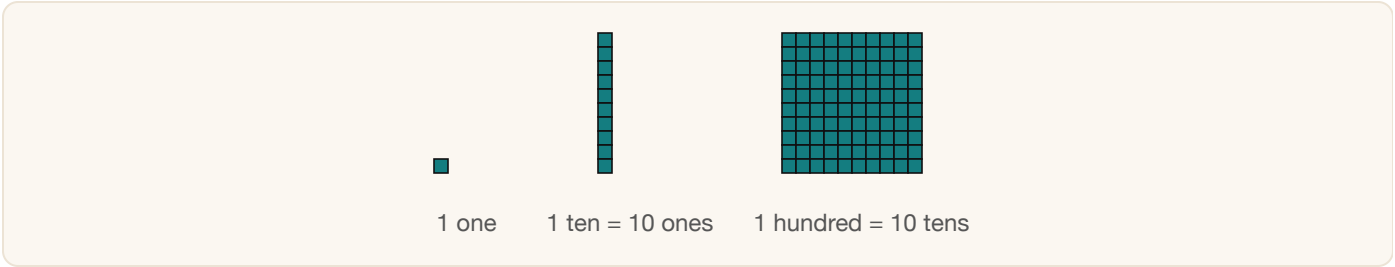
Place Value & Rounding

A gentle walkthrough & a 24-question exam

Part 1 walks through place value and rounding from the very beginning, with drawings. Part 2 is a 24-question exam that starts easy and slowly builds to harder, ISEE-style reasoning questions. Work through the lesson together first, then let your child try the exam. The answer key at the back explains every question.

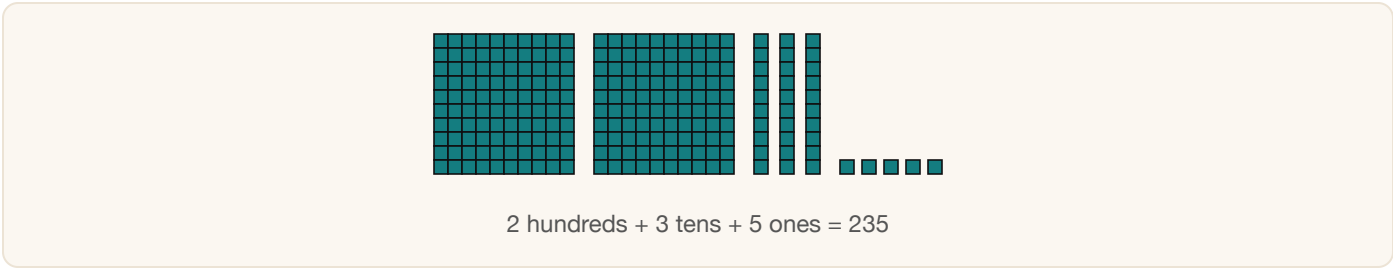
1 · Ones, tens, hundreds

We count in groups of ten. One little cube is **1**. Ten cubes in a row make a **ten**. Ten rows make a **hundred** flat.



2 · Reading a number from blocks

2 hundreds, 3 tens, and 5 ones. Say it as a number: **235**. Each block goes in its own place.



3 · The place-value chart

Every digit lives in a **place**. In **4,286** the 4 is in the thousands place, the 2 in hundreds, the 8 in tens, and the 6 in ones.

The place tells the digit's **value**. That 8 is not worth 8. It is in the tens place, so it is worth **80**.

Thousands	Hundreds	Tens	Ones
4	2	8	6

the 8 is worth 80

4 • Expanded form

Stretch a number out into the value of each digit: $4,286 = 4,000 + 200 + 80 + 6$. That is **expanded form**.

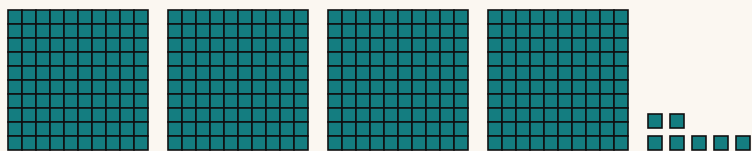
It works backwards too: $600 + 40 + 2 = 642$.

Thousands	Hundreds	Tens	Ones
	6	4	2

$$600 + 40 + 2 = 642$$

5 • Zero holds a place

407 has 4 hundreds, **0 tens**, and 7 ones. The zero keeps the 4 in the hundreds place. Without it you would have 47, a much smaller number.



407: 4 hundreds, 0 tens, 7 ones

Thousands	Hundreds	Tens	Ones
	4	0	7

zero in the tens place

6 • Comparing numbers

To compare, start from the **left**, the biggest place. **3,412** or **3,389**? Thousands tie (3 and 3). Hundreds: 4 beats 3. So 3,412 is greater: $3,412 > 3,389$.

The open side of $>$ faces the bigger number, like a hungry mouth.

Thousands	Hundreds	Tens	Ones
3	4	1	2

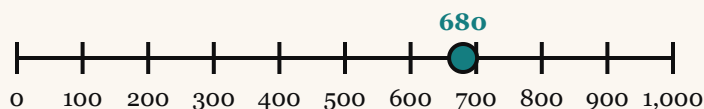
3,412

Thousands	Hundreds	Tens	Ones
3	3	8	9

3,389: the hundreds decide it

7 • Numbers on a number line

A number line puts numbers in order. Bigger is always to the **right**. 680 sits between 600 and 700, closer to 700.

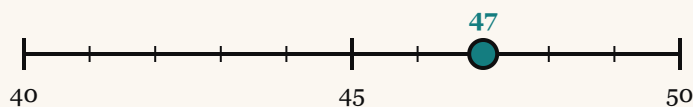


680 is between 600 and 700

8 • Rounding to the nearest ten

Rounding means picking the **closest friendly number**. 47 is between 40 and 50. It is closer to 50, so 47 rounds to **50**.

The rule: look at the **ones digit**. 5 or more, round up. 4 or less, round down. 43 → 40, 45 → 50, 47 → 50.

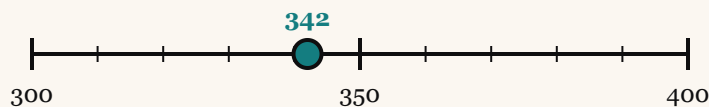


47 is closer to 50

9 • Rounding to the nearest hundred

Now look at the **tens digit**. 342 → the tens digit is 4, so round down to **300**. 371 → 7, round up to **400**.

Right in the middle, 350 rounds **up** to 400. Middle always goes up.



342 is closer to 300

10 • Rounding bigger numbers

Same idea, look at the digit **one place to the right** of where you are rounding.

2,468: nearest ten → 2,470 (ones digit 8). Nearest hundred → 2,500 (tens digit 6). Nearest thousand → 2,000 (hundreds digit 4).

Thousands	Hundreds	Tens	Ones
2	4	6	8

one number, three different roundings

11 • Estimating with rounding

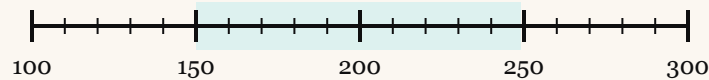
Rounding makes hard sums easy to guess. **298 + 407**: round to $300 + 400 =$ **about 700**.

Tests ask "about how many" or "closest to." That is your cue to round first.

12 • What could the number be?

A trickier question: "A number rounds to 200 at the nearest hundred. What is the **smallest** it could be?"

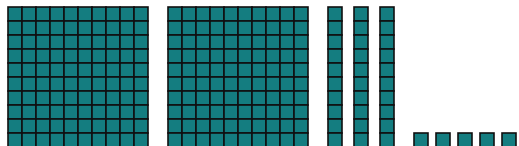
Numbers that round to 200 run from **150** up to **249** (the shaded part). So the smallest is 150, and the largest is 249. 🎯



everything from 150 to 249 rounds to 200

Read each drawing first, then choose the best answer. Take your time, there is no clock here. Questions start gentle and get harder toward the end. Circle your answer.

- 1 What number do the blocks show?



- | | |
|--------------|--------------|
| A 235 | B 532 |
| C 253 | D 325 |
-

- 2 In 472, which digit is in the tens place?

- | | |
|------------|-------------|
| A 4 | B 2 |
| C 7 | D 47 |
-

- 3 What is the value of the 5 in 358?

- | | |
|-------------|--------------|
| A 5 | B 500 |
| C 58 | D 50 |
-

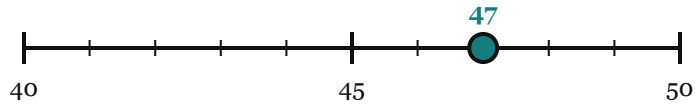
- 4 $600 + 40 + 2 = ?$

- | | |
|----------------|----------------|
| A 6,402 | B 642 |
| C 624 | D 6,042 |
-

- 5 Which number is the greatest?

- | | |
|--------------|--------------|
| A 391 | B 319 |
| C 913 | D 193 |
-

- 6 Round 47 to the nearest ten.



- A 50
B 40
C 45
D 100

- 7 What is the value of the 3 in 3,624?

- A 300
B 3,000
C 30
D 3

- 8 Which shows 5,087 in expanded form?

- A $5,000 + 800 + 7$
B $500 + 80 + 7$
C $5,000 + 8 + 7$
D $5,000 + 80 + 7$

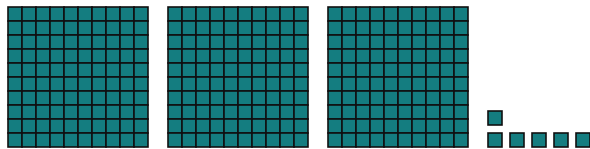
- 9 Round 342 to the nearest hundred.

- A 300
B 400
C 340
D 350

- 10 Which symbol makes this true? $2,845$ ____ $2,854$

- A $>$
B $=$
C $<$
D None of these

- 11 What number do the blocks show?



- A 36
B 360
C 603
D 306

12 Round 85 to the nearest ten.

A 80

B 90

C 100

D 85

13 How do you write 4,306 in words?

A four thousand, thirty-six

B forty-three thousand, six

C four thousand, three hundred six

D four hundred thirty-six

14 Which list is in order from least to greatest?

A 1,024; 1,204; 1,402

B 1,204; 1,024; 1,402

C 1,402; 1,204; 1,024

D 1,024; 1,402; 1,204

15 Round 1,650 to the nearest hundred.

A 1,600

B 1,700

C 2,000

D 1,650

16 Round 2,349 to the nearest thousand.

A 3,000

B 2,300

C 2,400

D 2,000

17 About how much is $298 + 407$?

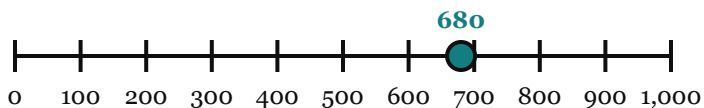
A about 600

B about 800

C about 1,000

D about 700

18 The dot is between 600 and 700, closer to 700. Which number could it be?



A 620

B 680

C 720

D 580

19 What is 10 more than 3,995?

A 4,005

B 3,905

C 4,095

D 3,996

20 Which number rounds to 500 when rounded to the nearest hundred?

A 449

B 551

C 451

D 401

21 A number has 2 thousands, 4 hundreds, 0 tens, and 9 ones. What is the number?

A 2,490

B 2,409

C 249

D 2,049

22 A whole number rounds to 300 at the nearest hundred. What is the smallest it could be?

A 299

B 200

C 251

D 250

23 In 7,371 there are two 7s. What is the sum of their values?

A 77

B 7,700

C 7,070

D 707

24 Mia rounds 4,762 to the nearest ten. Ben rounds it to the nearest hundred. What is the difference between their answers?

A 40

B 60

C 2

D 100

ANSWER KEY & EXPLANATIONS

- 1 A** 2 hundreds, 3 tens, 5 ones = 235.
-
- 2 C** 472: 4 hundreds, 7 tens, 2 ones. The tens digit is 7.
-
- 3 D** The 5 is in the tens place, so it is worth 5 tens = 50.
-
- 4 B** 6 hundreds, 4 tens, 2 ones = 642.
-
- 5 C** Compare the hundreds first: 9 is the biggest, so 913.
-
- 6 A** 47 is closer to 50 than to 40. The ones digit 7 says round up.
-
- 7 B** The 3 is in the thousands place: 3,000.
-
- 8 D** 5 thousands, 0 hundreds, 8 tens, 7 ones. The zero hundreds are left out.
-
- 9 A** The tens digit is 4, so round down: 300.
-
- 10 C** Thousands and hundreds tie. Tens: 4 is less than 5, so $2,845 < 2,854$.
-
- 11 D** 3 hundreds, 0 tens, 6 ones = 306. The zero holds the tens place.
-
- 12 B** The ones digit is 5, and 5 rounds up: 90.
-
- 13 C** 4 thousands, 3 hundreds, 0 tens, 6 ones.
-
- 14 A** Thousands tie, so compare hundreds: 0, then 2, then 4.
-
- 15 B** The tens digit is 5, so round up: 1,700.
-
- 16 D** Look at the hundreds digit, 3. It is less than 5, so round down to 2,000.
-
- 17 D** Round: $300 + 400 = 700$.
-
- 18 B** Only 680 is between 600 and 700 and closer to 700.
-
- 19 A** $3,995 + 10 = 4,005$. The tens roll over into the hundreds and thousands.
-
- 20 C** $451 \rightarrow 500$. But $449 \rightarrow 400$, $551 \rightarrow 600$, and $401 \rightarrow 400$.
-
- 21 B** $2,000 + 400 + 0 + 9 = 2,409$.
-
- 22 D** Numbers from 250 up to 349 round to 300. The smallest is 250.
-
- 23 C** One 7 is worth 7,000 and the other is worth 70. $7,000 + 70 = 7,070$.
-
- 24 A** Mia: 4,760. Ben: 4,800. $4,800 - 4,760 = 40$.
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