



GRADE 3 · FREE TUTORIAL

Adding, Subtracting & Number Sense

A gentle walkthrough & a 24-question exam

Part 1 walks through three-digit adding, subtracting, and number sense 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 · Adding three-digit numbers

Line up the ones, tens, and hundreds. Add the **ones first**. If a column makes 10 or more, write the ones digit and **carry** the 1 to the next column.

$367 + 218$: ones $7 + 8 = 15$, write 5, carry 1. Tens $6 + 1 + 1 = 8$. Hundreds $3 + 2 = 5$. Answer: **585**.

$$\begin{array}{r} 1 \\ 367 \\ + 218 \\ \hline 585 \end{array}$$

$7 + 8 = 15$: write 5, carry 1

2 · Subtracting with regrouping

When the top digit is smaller, **borrow** from the next column: one ten becomes ten ones.

$524 - 337$: ones $4 - 7$ will not work, so borrow: $14 - 7 = 7$. Tens $1 - 3$ will not work, borrow again: $11 - 3 = 8$. Hundreds $4 - 3 = 1$. Answer: **187**.

Always **check** by adding back: $187 + 337 = 524$. ✓

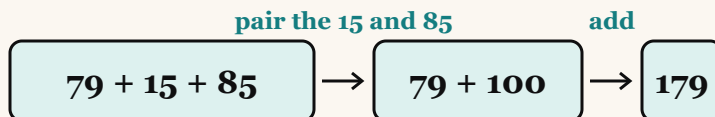
$$\begin{array}{r} 1 14 \\ 5\cancel{2}4 \\ - 337 \\ \hline 187 \end{array}$$

borrow a ten: $14 - 7 = 7$

3 · Make a hundred

Adding is easiest when a pair makes a round number. In $79 + 15 + 85$, spot that **$15 + 85 = 100$** . Then $79 + 100 = 179$. No carrying at all.

Look for pairs whose ones digits add to 10: $72 + 64 + 28 + 36 \rightarrow (72 + 28) + (64 + 36) = 100 + 100 = 200$.



find the pair that makes 100

4 • Compensation: round, then fix

To add 99, add 100 and take 1 back: $264 + 99 = 364 - 1 = \mathbf{363}$. To subtract 98, subtract 100 and give 2 back: $531 - 98 = 431 + 2 = \mathbf{433}$.

The move: change a number to a round one, do the easy sum, then **undo the change**.



$264 + 99$: add 100, take 1 back

5 • Use a problem you already solved

You know $757 - 492 = 265$. What is $757 - 494$? You took away **2 more**, so the answer is 2 less: **263**.

And $759 - 492$? You started with 2 more, so the answer is 2 more: **267**. Never restart from scratch when a neighbor is already done.

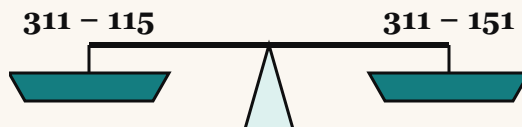
problem	answer
$757 - 492$	265
$757 - 494$	263
$759 - 492$	267
$758 - 491$	?

each row changes by 1 or 2

6 • Compare without computing

Which is greater, $311 - 151$ or $311 - 115$? Both start at 311. The one that **takes away less** leaves more: $115 < 151$, so **$311 - 115$** is greater.

For sums the rule flips: $208 + 181 > 208 + 118$ because you add more. Read the digits; do not add.

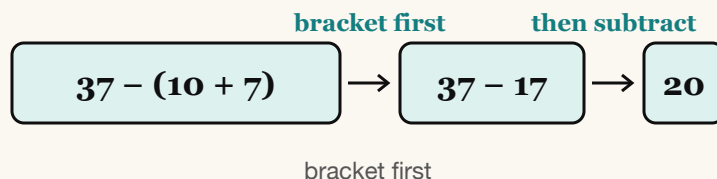


the left pan is heavier: it took away less

7 • Parentheses first

$37 - (10 + 7)$ means "do the bracket first": $37 - 17 = \mathbf{20}$. Without the bracket, $37 - 10 + 7$ goes left to right: $27 + 7 = \mathbf{34}$. Same numbers, different answers.

A useful family: $58 - 21 - 13$ is the same as $58 - (21 + 13)$. Taking away two amounts one after the other is the same as taking away their **total**.



8 • Find the missing digit

$1\square8 + 213 = 401$. Work backwards: $401 - 213 = 188$, so the box is **8**. Or reason column by column: $8 + 3 = 11$, carry 1; the tens must make 0 with a carry, so $\square + 1 + 1 = 10$, $\square = 8$.

Either way, **check**: $188 + 213 = 401$. ✓

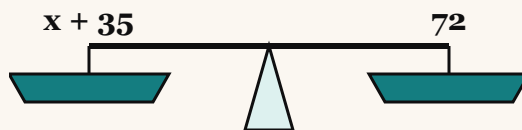
$$\begin{array}{r} 1 \ ? \ 8 \\ + \ 2 \ 1 \ 3 \\ \hline 4 \ 0 \ 1 \end{array}$$

$401 - 213 = 188$, so $? = 8$

9 • Missing numbers in equations

$x + 35 = 72$. The two sides balance. Take 35 off both sides: $x = 72 - 35 = \mathbf{37}$.

$54 - x = 23$ asks "54 take away what leaves 23?" That is $54 - 23 = \mathbf{31}$. Check: $54 - 31 = 23$. ✓



$$x = 72 - 35 = 37$$

10 • More than, fewer than: one step at a time

A hamster has 67 grains. 12 are rice. There are 7 **more** corn than rice, and 4 **fewer** buckwheat than corn. The rest are quinoa.

Corn: $12 + 7 = 19$. Buckwheat: $19 - 4 = 15$. Rice + corn + buckwheat = 46. Quinoa: $67 - 46 = \mathbf{21}$. Write each answer down before the next step.

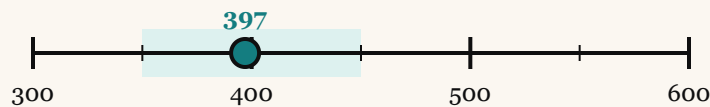
kind	grains
rice	12
corn (7 more)	19
buckwheat (4 fewer)	15
quinoa (the rest)	21

each row uses the row above

11 • Estimate to the nearest hundred

For "about how much," round each number to the nearest hundred, then add. $397 + 512$ is about $400 + 500 = \mathbf{900}$.

On the number line, 397 sits just below 400, so it rounds up; 512 sits just above 500, so it rounds down. A quick estimate also catches silly mistakes: if you got 1,909, something went wrong.

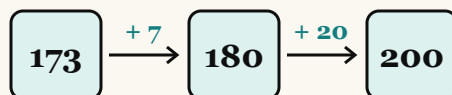


397 rounds to 400

12 • Reach the next round number

$173 + \square = 200$. Count up: $173 \rightarrow 180$ is 7, $180 \rightarrow 200$ is 20. So $\square = \mathbf{27}$. This is also how you make change and how you subtract in your head: $200 - 173 = 27$.

Counting up to a round number turns hard subtraction into easy addition. You are ready for the test! 🎉



$$7 + 20 = 27$$

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 is $245 + 132$?

$$\begin{array}{r} 245 \\ + 132 \\ \hline \end{array}$$

A 367

B 387

C 377

D 113

- 2 What is $468 - 236$?

$$\begin{array}{r} 468 \\ - 236 \\ \hline \end{array}$$

A 232

B 242

C 222

D 704

- 3 Which pair adds to exactly 100?

A $45 + 45$

B $30 + 60$

C $55 + 55$

D $35 + 65$

- 4 $173 + \square = 200$. What number goes in the box?

A 37

B 27

C 23

D 33

- 5 What is $367 + 218$?

$$\begin{array}{r} 1 \\ 367 \\ + 218 \\ \hline \end{array}$$

- A 585 B 575
C 595 D 149
-

- 6 Which shows the easiest way to add $79 + 15 + 85$?

- A $(79 + 15) + 85$ B $(79 + 85) + 15$
C $79 + (15 + 85)$ D $79 + 15 - 85$
-

- 7 What is $524 - 337$?

$$\begin{array}{r} 524 \\ - 337 \\ \hline \end{array}$$

- A 197 B 187
C 213 D 861
-

- 8 What is $264 + 99$?

- A 353 B 364
C 373 D 363
-

- 9 You know that $757 - 492 = 265$. What is $757 - 494$?

- A 263 B 267
C 265 D 261
-

- 10 Without calculating, which has the greatest value?

- A $311 - 151$ B $311 - 161$
C $311 - 115$ D $311 - 119$
-

11 What is $37 - (10 + 7)$?

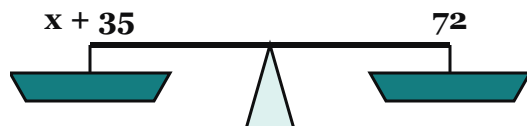
A 34

B 54

C 14

D 20

12 $x + 35 = 72$. What is x ?



A 107

B 37

C 47

D 33

13 A library had 348 books. It received 175 more, then lent out 96. How many books are in the library now?

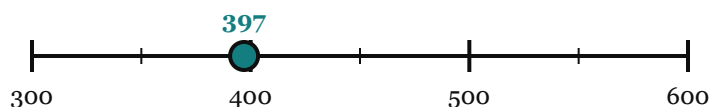
A 523

B 619

C 427

D 277

14 Which expression gives the best estimate of $397 + 512$?



A $400 + 500$

B $300 + 500$

C $400 + 600$

D $390 + 510$

15 What digit goes in the box? $1\Box8 + 213 = 401$

$$\begin{array}{r} 1 \ ? \ 8 \\ + \ 2 \ 1 \ 3 \\ \hline 4 \ 0 \ 1 \end{array}$$

A 9

B 8

C 7

D 0

16 Which expression has the same value as $58 - 21 - 13$?

A $58 - (21 - 13)$

B $58 + (21 - 13)$

C $(58 - 21) + 13$

D $58 - (21 + 13)$

17 $54 - x = 23$. What is x ?

A 31

B 77

C 33

D 21

18 A hamster collected 67 grains. 12 are rice. There are 7 more grains of corn than rice, and 4 fewer grains of buckwheat than corn. The rest are quinoa. How many grains of quinoa are there?

A 36

B 25

C 21

D 17

19 You know that $46 + 37 = 83$. Which of these is also true?

A $46 + 39 = 83$

B $46 + 35 = 85$

C $44 + 37 = 85$

D $48 + 37 = 85$

20 What is $600 - 247$?

A 363

B 353

C 453

D 343

21 What is $72 + 64 + 28 + 36$?

A 190

B 200

C 210

D 180

22 Ana has 128 stickers. Ben has 45 fewer than Ana. Cara has 60 more than Ben. How many stickers does Cara have?

A 83

B 188

C 113

D 143

23 Two three-digit numbers add to 1,000. One of them is 463. What is the other?

A 537

B 547

C 637

D 463

24 Which is the best way to work out $531 - 98$ in your head?

531

98

A $531 - 100$, then subtract 2

B $531 - 90$, then subtract 8

C $531 - 100$, then add 2

D $500 - 98$, then add 31

ANSWER KEY & EXPLANATIONS

- 1 C** Ones $5 + 2 = 7$, tens $4 + 3 = 7$, hundreds $2 + 1 = 3$: 377.
-
- 2 A** Ones $8 - 6 = 2$, tens $6 - 3 = 3$, hundreds $4 - 2 = 2$: 232.
-
- 3 D** $35 + 65 = 100$. The others make 90, 90, and 110.
-
- 4 B** Count up: 173 to 180 is 7, 180 to 200 is 20. $7 + 20 = 27$.
-
- 5 A** $7 + 8 = 15$, write 5 carry 1; $6 + 1 + 1 = 8$; $3 + 2 = 5$: 585.
-
- 6 C** $15 + 85 = 100$, then $79 + 100 = 179$. Pairing the numbers that make 100 avoids carrying.
-
- 7 B** Borrow twice: $14 - 7 = 7$, $11 - 3 = 8$, $4 - 3 = 1$: 187. Check: $187 + 337 = 524$.
-
- 8 D** Add 100 then take 1 back: $264 + 100 = 364$, $364 - 1 = 363$.
-
- 9 A** 494 is 2 more than 492, so the answer is 2 less: $265 - 2 = 263$.
-
- 10 C** All start at 311. Taking away the least, 115, leaves the most.
-
- 11 D** Bracket first: $10 + 7 = 17$. Then $37 - 17 = 20$.
-
- 12 B** Take 35 from both sides: $72 - 35 = 37$.
-
- 13 C** $348 + 175 = 523$, then $523 - 96 = 427$.
-
- 14 A** 397 rounds to 400 and 512 rounds to 500: about 900.
-
- 15 B** $401 - 213 = 188$, so the tens digit is 8.
-
- 16 D** Taking away 21 and then 13 is the same as taking away 34 all at once: $58 - 34 = 24$.
-
- 17 A** 54 take away what leaves 23? $54 - 23 = 31$. Check: $54 - 31 = 23$.
-
- 18 C** Corn 19, buckwheat 15. Rice + corn + buckwheat = 46. Quinoa: $67 - 46 = 21$.
-
- 19 D** Adding 2 to one number adds 2 to the total: $48 + 37 = 85$. The others change a number without changing the total the same way.
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- 20 B** Count up from 247: 3 to 250, 50 to 300, 300 to 600. $3 + 50 + 300 = 353$.
-
- 21 B** Pair them: $72 + 28 = 100$ and $64 + 36 = 100$. $100 + 100 = 200$.
-
- 22 D** Ben: $128 - 45 = 83$. Cara: $83 + 60 = 143$.
-
- 23 A** Count up from 463: 7 to 470, 30 to 500, 500 to 1,000. $7 + 30 + 500 = 537$.
-
- 24 C** 98 is 2 less than 100, so subtract 100 and give the 2 back: $431 + 2 = 433$. (The last choice also works, but takes more steps.)
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