

JPMethod Signed Arithmetic

Addition & Subtraction (with Negatives)

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JPMethod Signed Arithmetic - Addition & Subtraction (with Negatives) Instructions

This workbook helps students become confident in signed number arithmetic, especially when crossing zero. Start simple and work through each section.

Solve problems slowly and accurately.

Notice how signs change results.

Double-check any answers that involve zero.

Build fluency through consistent repetition.

Use a number line if needed.

Try estimating before solving to improve intuition.

Understanding signed arithmetic is essential for progress in math. Keep practicing and enjoy the improvement!

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Parent Guide: Signed Arithmetic

How to Print This Guide

- Print 2 pages per sheet (A5 pages on A4 paper)
- Select 'Flip on short edge' for double-sided printing
- Look for the standard cut marks on the printed pages
- Use a photo slicer or sharp blade to cut along the cut marks
- This will separate the pages into individual A5 sheets

Your Approach as a Parent

- Show empathy - learning negative numbers is genuinely challenging
- Be firm but never pushy - maintain standards without overwhelming
- Don't negotiate the work, but be flexible about timing and breaks
- Observe your child's daily capacity - some days they can do more, some less
- Daily practice is crucial - consistency beats intensity every time
- Be sensitive to their emotional state and adjust accordingly
- Remember: your patience and understanding create the learning environment

About This Workbook

This workbook teaches signed arithmetic through 15 progressive sections. Each section builds on previous concepts, so students should work through them sequentially. The workbook covers basic subtraction crossing zero, addition with negatives, bracket notation, and mixed operations with increasing complexity.

Essential Concepts

- Number line understanding: negatives to the left of zero, positives to the right
- Adding negatives is like subtracting: $5 + (-3) = 5 - 3 = 2$
- Subtracting negatives becomes addition: $5 - (-3) = 5 + 3 = 8$
- Brackets show clarity: when you see $5 - (-3)$, think 'subtract negative three'
- Real-world connections: temperature (above/below freezing), money (credits/debts), elevation (above/below sea level)

After Completing This Workbook

Students who master this workbook are ready for pre-algebra topics including solving equations with negative numbers, coordinate graphing, and integer operations. The foundation built here directly supports success

in algebra, physics, and advanced mathematics.

Section-by-Section Guide

- Sections 1-4: Basic subtraction that may cross zero. Start here to build confidence.
- Sections 5-8: Introduction of negative numbers in addition problems. Students learn that adding negatives equals subtracting.
- Section 9: Special bracket notation makes sign operations crystal clear: $+(+5) + (-3) =$
- Sections 10-15: Mixed operations with wider number ranges. Students develop fluency and speed.

Effective Teaching Strategies

- Be empathetic and patient - math anxiety is real and common
- Stay firm but kind - don't negotiate standards, but be understanding
- Be sensitive to your child's emotional state and learning capacity
- Use physical models: red counters for negatives, black for positives
- Draw or use a number line for every problem until patterns are clear
- Use consistent language: 'negative five' not 'minus five' for the number -5
- Connect to familiar contexts: temperature changes, money transactions, sports scores
- Work through errors step-by-step rather than just providing correct answers
- Encourage estimation before calculating: 'What should the answer be roughly?'

Effective Practice Sessions

- Daily practice is essential - even 10 minutes is better than none
- Observe carefully how much volume your child can handle each day
- Keep sessions short: 15-20 minutes maximum to maintain focus
- Complete one full section before moving to the next
- Review previous sections periodically to maintain skills
- Use solutions to check work, but encourage self-correction first
- Celebrate progress and small wins, not just correct answers
- If struggling, return to easier sections to rebuild confidence
- Focus on understanding rather than speed initially

Common Mistakes and Solutions

- Problem: Confusing subtraction operator with negative numbers
- Solution: Use brackets consistently - show $5 - (-3)$ clearly
-
- Problem: Forgetting that subtracting negatives becomes addition
- Solution: Practice the conversion: 'minus negative three becomes plus positive three'
-
- Problem: Making careless errors due to rushing
- Solution: Encourage careful reading and double-checking work
-
- Problem: Avoiding negative number problems entirely
- Solution: Start with real-world contexts they understand (temperature, money)

When Students Get Stuck

- Stay calm and empathetic - frustration is part of learning
- Don't push too hard - observe when they've reached their limit
- Use concrete examples: 'If it's 5 degrees and drops 8 degrees, what's the temperature?'
- Return to number line visualization for every problem
- Break complex problems into smaller steps
- Ask students to explain their thinking out loud
- Focus on accuracy over speed - mastery takes time
- Consider if the student needs to review earlier sections
- Take breaks when needed - forcing won't help
- Make connections to previously learned math concepts

Checking Understanding

- Ask 'How did you know to add instead of subtract?'
- Have students create problems for you to solve
- Quick verbal checks during daily activities: 'What's $-3 + 5$?'
- Look for consistent application across different problem types
- Check backwards thinking: 'What number plus -4 equals 1 ?'
- Observe if they can work without a number line eventually

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $4 - 4 =$

(7) $2 - 2 =$

(2) $10 - 7 =$

(8) $10 - 5 =$

(3) $1 - 2 =$

(9) $8 - 9 =$

(4) $9 - 4 =$

(10) $7 - 2 =$

(5) $7 - 6 =$

(11) $10 - 4 =$

(6) $3 - 4 =$

(12) $5 - 2 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $5 - 4 =$

(7) $4 - 2 =$

(2) $9 - 3 =$

(8) $6 - 2 =$

(3) $5 - 7 =$

(9) $10 - 10 =$

(4) $2 - 4 =$

(10) $7 - 4 =$

(5) $10 - 9 =$

(11) $6 - 7 =$

(6) $10 - 4 =$

(12) $2 - 1 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $4 - 4 =$

(7) $9 - 11 =$

(2) $9 - 8 =$

(8) $3 - 4 =$

(3) $7 - 3 =$

(9) $4 - 1 =$

(4) $8 - 4 =$

(10) $6 - 1 =$

(5) $1 - 3 =$

(11) $10 - 8 =$

(6) $8 - 5 =$

(12) $3 - 2 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $6 - 7 =$

(7) $7 - 7 =$

(2) $2 - 4 =$

(8) $9 - 5 =$

(3) $3 - 5 =$

(9) $6 - 2 =$

(4) $10 - 7 =$

(10) $7 - 3 =$

(5) $6 - 4 =$

(11) $10 - 6 =$

(6) $9 - 8 =$

(12) $1 - 2 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $10 - 4 =$

(7) $9 - 5 =$

(2) $10 - 2 =$

(8) $4 - 6 =$

(3) $10 - 10 =$

(9) $9 - 5 =$

(4) $5 - 4 =$

(10) $3 - 5 =$

(5) $4 - 5 =$

(11) $5 - 5 =$

(6) $8 - 6 =$

(12) $6 - 4 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $8 - 4 =$

(7) $5 - 1 =$

(2) $8 - 6 =$

(8) $6 - 7 =$

(3) $4 - 4 =$

(9) $9 - 5 =$

(4) $5 - 6 =$

(10) $6 - 7 =$

(5) $9 - 6 =$

(11) $9 - 3 =$

(6) $1 - 2 =$

(12) $7 - 9 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $5 - 5 =$

(7) $4 - 3 =$

(2) $8 - 8 =$

(8) $8 - 10 =$

(3) $5 - 4 =$

(9) $9 - 8 =$

(4) $3 - 1 =$

(10) $8 - 8 =$

(5) $8 - 7 =$

(11) $9 - 8 =$

(6) $7 - 8 =$

(12) $5 - 4 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $9 - 8 =$

(7) $7 - 3 =$

(2) $1 - 2 =$

(8) $5 - 6 =$

(3) $5 - 1 =$

(9) $6 - 4 =$

(4) $5 - 3 =$

(10) $10 - 12 =$

(5) $9 - 1 =$

(11) $1 - 3 =$

(6) $10 - 9 =$

(12) $5 - 3 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $6 - 6 =$

(7) $10 - 7 =$

(2) $3 - 3 =$

(8) $8 - 4 =$

(3) $4 - 2 =$

(9) $7 - 8 =$

(4) $7 - 6 =$

(10) $7 - 6 =$

(5) $7 - 1 =$

(11) $3 - 1 =$

(6) $7 - 7 =$

(12) $7 - 6 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $9 - 11 =$

(7) $6 - 5 =$

(2) $8 - 7 =$

(8) $9 - 1 =$

(3) $10 - 10 =$

(9) $2 - 4 =$

(4) $6 - 1 =$

(10) $8 - 9 =$

(5) $6 - 3 =$

(11) $5 - 5 =$

(6) $4 - 6 =$

(12) $4 - 2 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $6 - 2 =$

(7) $10 - 5 =$

(2) $4 - 4 =$

(8) $8 - 8 =$

(3) $5 - 4 =$

(9) $3 - 1 =$

(4) $3 - 5 =$

(10) $8 - 2 =$

(5) $9 - 3 =$

(11) $7 - 8 =$

(6) $1 - 1 =$

(12) $10 - 11 =$

Section 1. Subtraction: Positive or Slightly Negative Results

Solve each problem and write the answer in the box.

(1) $8 - 6 =$

(7) $10 - 4 =$

(2) $7 - 5 =$

(8) $3 - 5 =$

(3) $8 - 1 =$

(9) $10 - 1 =$

(4) $6 - 4 =$

(10) $10 - 11 =$

(5) $4 - 4 =$

(11) $6 - 2 =$

(6) $10 - 3 =$

(12) $8 - 2 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-13 + 3 =$

(7) $-11 + 14 =$

(2) $-14 + 4 =$

(8) $-11 + 10 =$

(3) $-7 + 13 =$

(9) $-6 + 12 =$

(4) $-6 + 10 =$

(10) $-3 + 4 =$

(5) $-3 + 9 =$

(11) $-11 + 11 =$

(6) $-8 + 15 =$

(12) $-13 + 4 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-6 + 12 =$

(7) $-14 + 4 =$

(2) $-8 + 2 =$

(8) $-3 + 11 =$

(3) $-4 + 5 =$

(9) $-6 + 1 =$

(4) $-11 + 9 =$

(10) $-8 + 9 =$

(5) $-1 + 7 =$

(11) $-1 + 5 =$

(6) $-6 + 5 =$

(12) $-6 + 7 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-14 + 8 =$

(7) $-8 + 2 =$

(2) $-9 + 6 =$

(8) $-11 + 6 =$

(3) $-5 + 2 =$

(9) $-3 + 7 =$

(4) $-10 + 7 =$

(10) $-5 + 14 =$

(5) $-11 + 11 =$

(11) $-9 + 1 =$

(6) $-2 + 13 =$

(12) $-7 + 6 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-7 + 2 =$

(7) $-14 + 11 =$

(2) $-15 + 7 =$

(8) $-1 + 5 =$

(3) $-4 + 10 =$

(9) $-9 + 2 =$

(4) $-11 + 1 =$

(10) $-5 + 3 =$

(5) $-11 + 12 =$

(11) $-2 + 3 =$

(6) $-4 + 14 =$

(12) $-15 + 3 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-5 + 8 =$

(7) $-7 + 1 =$

(2) $-12 + 5 =$

(8) $-14 + 4 =$

(3) $-1 + 5 =$

(9) $-8 + 2 =$

(4) $-1 + 12 =$

(10) $-8 + 15 =$

(5) $-14 + 1 =$

(11) $-7 + 12 =$

(6) $-4 + 3 =$

(12) $-9 + 14 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-2 + 4 =$

(7) $-8 + 1 =$

(2) $-6 + 7 =$

(8) $-7 + 10 =$

(3) $-2 + 13 =$

(9) $-2 + 2 =$

(4) $-15 + 6 =$

(10) $-14 + 9 =$

(5) $-4 + 15 =$

(11) $-15 + 12 =$

(6) $-9 + 11 =$

(12) $-9 + 14 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-14 + 8 =$

(7) $-6 + 2 =$

(2) $-10 + 10 =$

(8) $-5 + 11 =$

(3) $-5 + 2 =$

(9) $-12 + 12 =$

(4) $-2 + 11 =$

(10) $-9 + 2 =$

(5) $-10 + 11 =$

(11) $-8 + 3 =$

(6) $-2 + 9 =$

(12) $-1 + 1 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $- 8 + 4 =$

(7) $- 2 + 1 =$

(2) $- 7 + 3 =$

(8) $- 4 + 5 =$

(3) $- 12 + 15 =$

(9) $- 2 + 3 =$

(4) $- 2 + 2 =$

(10) $- 7 + 8 =$

(5) $- 3 + 13 =$

(11) $- 10 + 9 =$

(6) $- 10 + 15 =$

(12) $- 8 + 15 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-10 + 13 =$

(7) $-6 + 11 =$

(2) $-11 + 6 =$

(8) $-8 + 15 =$

(3) $-9 + 3 =$

(9) $-12 + 8 =$

(4) $-7 + 7 =$

(10) $-8 + 5 =$

(5) $-13 + 3 =$

(11) $-1 + 13 =$

(6) $-6 + 14 =$

(12) $-1 + 5 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-6 + 13 =$

(7) $-4 + 3 =$

(2) $-12 + 11 =$

(8) $-1 + 5 =$

(3) $-6 + 5 =$

(9) $-4 + 7 =$

(4) $-5 + 2 =$

(10) $-12 + 3 =$

(5) $-11 + 13 =$

(11) $-7 + 9 =$

(6) $-15 + 10 =$

(12) $-2 + 3 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-1 + 14 =$

(7) $-14 + 13 =$

(2) $-3 + 5 =$

(8) $-15 + 5 =$

(3) $-3 + 2 =$

(9) $-8 + 6 =$

(4) $-14 + 3 =$

(10) $-6 + 7 =$

(5) $-2 + 11 =$

(11) $-14 + 11 =$

(6) $-2 + 13 =$

(12) $-8 + 1 =$

Section 2. Addition: Negative First Number, Any Result

Solve each problem and write the answer in the box.

(1) $-14 + 8 =$

(7) $-6 + 6 =$

(2) $-6 + 5 =$

(8) $-2 + 11 =$

(3) $-4 + 5 =$

(9) $-11 + 1 =$

(4) $-2 + 5 =$

(10) $-1 + 10 =$

(5) $-9 + 14 =$

(11) $-2 + 15 =$

(6) $-14 + 4 =$

(12) $-3 + 13 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $4 - 2 =$

(7) $7 - 3 =$

(2) $5 - 7 =$

(8) $2 - 8 =$

(3) $3 - 1 =$

(9) $5 - 1 =$

(4) $5 - 8 =$

(10) $4 - 8 =$

(5) $2 - 4 =$

(11) $4 - 6 =$

(6) $7 - 8 =$

(12) $6 - 6 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $2 - 8 =$

(7) $3 - 2 =$

(2) $6 - 2 =$

(8) $5 - 6 =$

(3) $4 - 1 =$

(9) $5 - 8 =$

(4) $8 - 1 =$

(10) $7 - 8 =$

(5) $8 - 7 =$

(11) $7 - 6 =$

(6) $2 - 2 =$

(12) $7 - 7 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $6 - 7 =$

(7) $7 - 6 =$

(2) $5 - 6 =$

(8) $1 - 5 =$

(3) $8 - 2 =$

(9) $6 - 2 =$

(4) $2 - 2 =$

(10) $3 - 8 =$

(5) $2 - 6 =$

(11) $2 - 5 =$

(6) $1 - 6 =$

(12) $7 - 1 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $7 - 5 =$

(7) $3 - 1 =$

(2) $2 - 8 =$

(8) $3 - 3 =$

(3) $4 - 1 =$

(9) $3 - 2 =$

(4) $6 - 4 =$

(10) $4 - 6 =$

(5) $4 - 2 =$

(11) $3 - 5 =$

(6) $4 - 4 =$

(12) $3 - 7 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $1 - 3 =$

(7) $8 - 7 =$

(2) $5 - 6 =$

(8) $4 - 2 =$

(3) $7 - 2 =$

(9) $8 - 5 =$

(4) $1 - 2 =$

(10) $4 - 7 =$

(5) $7 - 7 =$

(11) $1 - 4 =$

(6) $6 - 3 =$

(12) $4 - 3 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $4 - 6 =$

(7) $8 - 8 =$

(2) $3 - 4 =$

(8) $5 - 1 =$

(3) $3 - 5 =$

(9) $2 - 5 =$

(4) $3 - 3 =$

(10) $8 - 1 =$

(5) $3 - 8 =$

(11) $6 - 5 =$

(6) $8 - 6 =$

(12) $2 - 7 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $1 - 8 =$

(7) $7 - 6 =$

(2) $6 - 8 =$

(8) $2 - 7 =$

(3) $6 - 2 =$

(9) $5 - 3 =$

(4) $1 - 4 =$

(10) $2 - 3 =$

(5) $8 - 3 =$

(11) $5 - 7 =$

(6) $6 - 5 =$

(12) $2 - 5 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $5 - 6 =$

(7) $7 - 5 =$

(2) $1 - 8 =$

(8) $3 - 8 =$

(3) $3 - 3 =$

(9) $2 - 7 =$

(4) $4 - 6 =$

(10) $4 - 7 =$

(5) $7 - 1 =$

(11) $6 - 4 =$

(6) $6 - 7 =$

(12) $3 - 2 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $6 - 3 =$

(7) $2 - 1 =$

(2) $7 - 6 =$

(8) $3 - 7 =$

(3) $6 - 5 =$

(9) $3 - 3 =$

(4) $4 - 6 =$

(10) $8 - 1 =$

(5) $4 - 4 =$

(11) $6 - 4 =$

(6) $3 - 2 =$

(12) $5 - 8 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $4 - 1 =$

(7) $3 - 7 =$

(2) $2 - 6 =$

(8) $5 - 4 =$

(3) $3 - 1 =$

(9) $2 - 1 =$

(4) $8 - 3 =$

(10) $7 - 8 =$

(5) $8 - 1 =$

(11) $2 - 8 =$

(6) $1 - 5 =$

(12) $4 - 3 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $7 - 1 =$

(7) $3 - 8 =$

(2) $4 - 7 =$

(8) $3 - 3 =$

(3) $2 - 6 =$

(9) $8 - 1 =$

(4) $1 - 7 =$

(10) $4 - 1 =$

(5) $5 - 1 =$

(11) $7 - 8 =$

(6) $1 - 6 =$

(12) $1 - 4 =$

Section 3. Simple Subtraction (Mixed Results)

Solve each problem and write the answer in the box.

(1) $4 - 5 =$

(7) $2 - 5 =$

(2) $4 - 6 =$

(8) $3 - 7 =$

(3) $8 - 5 =$

(9) $4 - 8 =$

(4) $7 - 3 =$

(10) $1 - 7 =$

(5) $3 - 5 =$

(11) $7 - 6 =$

(6) $8 - 6 =$

(12) $7 - 2 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $10 - 5 =$

(7) $11 - 6 =$

(2) $9 - 6 =$

(8) $14 - 7 =$

(3) $11 - 11 =$

(9) $10 - 6 =$

(4) $11 - 10 =$

(10) $10 - 15 =$

(5) $12 - 12 =$

(11) $9 - 12 =$

(6) $13 - 9 =$

(12) $7 - 12 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $10 - 15 =$

(7) $6 - 12 =$

(2) $8 - 6 =$

(8) $12 - 6 =$

(3) $7 - 12 =$

(9) $15 - 10 =$

(4) $13 - 6 =$

(10) $13 - 13 =$

(5) $9 - 12 =$

(11) $9 - 7 =$

(6) $14 - 9 =$

(12) $10 - 13 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $6 - 8 =$

(7) $13 - 11 =$

(2) $8 - 12 =$

(8) $10 - 15 =$

(3) $10 - 13 =$

(9) $12 - 12 =$

(4) $12 - 13 =$

(10) $7 - 13 =$

(5) $14 - 6 =$

(11) $7 - 11 =$

(6) $9 - 11 =$

(12) $6 - 13 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $12 - 5 =$

(7) $8 - 15 =$

(2) $14 - 11 =$

(8) $10 - 11 =$

(3) $15 - 5 =$

(9) $14 - 7 =$

(4) $15 - 15 =$

(10) $10 - 10 =$

(5) $10 - 13 =$

(11) $6 - 14 =$

(6) $5 - 7 =$

(12) $13 - 10 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $9 - 7 =$

(7) $13 - 15 =$

(2) $10 - 8 =$

(8) $14 - 14 =$

(3) $13 - 9 =$

(9) $14 - 5 =$

(4) $9 - 8 =$

(10) $6 - 5 =$

(5) $7 - 15 =$

(11) $15 - 8 =$

(6) $14 - 13 =$

(12) $14 - 15 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $8 - 7 =$

(7) $6 - 11 =$

(2) $5 - 9 =$

(8) $8 - 8 =$

(3) $14 - 11 =$

(9) $5 - 5 =$

(4) $7 - 10 =$

(10) $12 - 14 =$

(5) $13 - 12 =$

(11) $9 - 13 =$

(6) $9 - 12 =$

(12) $9 - 10 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $10 - 5 =$

(7) $10 - 10 =$

(2) $5 - 14 =$

(8) $7 - 8 =$

(3) $10 - 13 =$

(9) $13 - 5 =$

(4) $6 - 11 =$

(10) $5 - 7 =$

(5) $13 - 9 =$

(11) $12 - 13 =$

(6) $7 - 6 =$

(12) $7 - 14 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $12 - 15 =$

(7) $8 - 10 =$

(2) $15 - 9 =$

(8) $10 - 10 =$

(3) $8 - 15 =$

(9) $11 - 7 =$

(4) $9 - 12 =$

(10) $13 - 13 =$

(5) $5 - 7 =$

(11) $10 - 8 =$

(6) $11 - 12 =$

(12) $6 - 9 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $10 - 14 =$

(7) $14 - 12 =$

(2) $7 - 11 =$

(8) $15 - 14 =$

(3) $14 - 10 =$

(9) $5 - 14 =$

(4) $14 - 9 =$

(10) $7 - 13 =$

(5) $5 - 10 =$

(11) $7 - 15 =$

(6) $15 - 6 =$

(12) $8 - 5 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $11 - 10 =$

(7) $6 - 14 =$

(2) $9 - 5 =$

(8) $8 - 5 =$

(3) $6 - 10 =$

(9) $15 - 8 =$

(4) $15 - 9 =$

(10) $6 - 11 =$

(5) $8 - 8 =$

(11) $12 - 6 =$

(6) $13 - 9 =$

(12) $5 - 13 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $11 - 15 =$

(7) $11 - 7 =$

(2) $12 - 15 =$

(8) $11 - 12 =$

(3) $9 - 10 =$

(9) $9 - 5 =$

(4) $15 - 5 =$

(10) $9 - 14 =$

(5) $15 - 14 =$

(11) $10 - 9 =$

(6) $13 - 5 =$

(12) $15 - 13 =$

Section 4. Subtraction up to 20 (Mixed Results)

Solve each problem and write the answer in the box.

(1) $10 - 11 =$

(7) $7 - 12 =$

(2) $11 - 8 =$

(8) $14 - 12 =$

(3) $13 - 14 =$

(9) $8 - 9 =$

(4) $5 - 7 =$

(10) $8 - 12 =$

(5) $13 - 10 =$

(11) $12 - 10 =$

(6) $13 - 11 =$

(12) $9 - 6 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $3 - 9 =$

(7) $7 - 9 =$

(2) $5 - 4 =$

(8) $2 - 7 =$

(3) $6 + 3 =$

(9) $3 + 3 =$

(4) $5 - 3 =$

(10) $6 - 4 =$

(5) $6 + 5 =$

(11) $5 + 7 =$

(6) $3 + 10 =$

(12) $8 + 5 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $10 + 9 =$

(7) $10 - 1 =$

(2) $3 + 6 =$

(8) $5 - 1 =$

(3) $2 - 4 =$

(9) $10 + 2 =$

(4) $2 - 9 =$

(10) $7 + 6 =$

(5) $1 - 8 =$

(11) $9 + 1 =$

(6) $9 + 7 =$

(12) $8 + 1 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $7 - 3 =$

(7) $4 + 1 =$

(2) $7 + 6 =$

(8) $5 + 8 =$

(3) $8 - 7 =$

(9) $9 - 7 =$

(4) $2 - 9 =$

(10) $4 + 8 =$

(5) $6 + 2 =$

(11) $3 - 5 =$

(6) $9 + 7 =$

(12) $2 + 1 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $5 - 10 =$

(7) $3 - 8 =$

(2) $5 + 6 =$

(8) $7 - 9 =$

(3) $1 + 2 =$

(9) $9 - 4 =$

(4) $5 - 3 =$

(10) $10 + 2 =$

(5) $9 - 5 =$

(11) $9 - 6 =$

(6) $4 + 3 =$

(12) $9 + 9 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $10 - 1 =$

(7) $4 - 10 =$

(2) $4 + 2 =$

(8) $10 - 10 =$

(3) $10 + 1 =$

(9) $4 - 5 =$

(4) $1 + 7 =$

(10) $9 + 4 =$

(5) $4 - 9 =$

(11) $5 - 5 =$

(6) $1 + 3 =$

(12) $9 + 10 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $5 + 7 =$

(7) $7 + 4 =$

(2) $2 + 4 =$

(8) $5 - 7 =$

(3) $8 + 4 =$

(9) $9 - 6 =$

(4) $5 - 1 =$

(10) $5 - 6 =$

(5) $4 + 2 =$

(11) $8 - 2 =$

(6) $4 - 10 =$

(12) $6 - 4 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $6 - 7 =$

(7) $9 - 6 =$

(2) $10 + 4 =$

(8) $8 - 8 =$

(3) $1 + 5 =$

(9) $3 - 6 =$

(4) $5 - 3 =$

(10) $3 + 9 =$

(5) $6 + 4 =$

(11) $3 - 9 =$

(6) $10 - 4 =$

(12) $9 + 1 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $7 + 9 =$

(7) $9 + 7 =$

(2) $1 - 6 =$

(8) $9 - 9 =$

(3) $9 - 6 =$

(9) $7 + 4 =$

(4) $7 - 3 =$

(10) $4 - 6 =$

(5) $4 - 4 =$

(11) $8 + 6 =$

(6) $3 - 8 =$

(12) $9 + 4 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $1 + 1 =$

(7) $9 + 9 =$

(2) $3 - 4 =$

(8) $1 - 1 =$

(3) $3 + 1 =$

(9) $9 - 5 =$

(4) $9 + 8 =$

(10) $9 + 7 =$

(5) $1 - 10 =$

(11) $2 + 2 =$

(6) $8 - 1 =$

(12) $4 + 4 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $5 + 9 =$

(7) $7 - 3 =$

(2) $3 + 6 =$

(8) $9 + 6 =$

(3) $4 + 10 =$

(9) $2 + 7 =$

(4) $7 + 2 =$

(10) $2 + 6 =$

(5) $3 - 10 =$

(11) $6 - 1 =$

(6) $10 + 7 =$

(12) $8 - 8 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $6 + 9 =$

(7) $6 - 2 =$

(2) $7 - 3 =$

(8) $1 + 5 =$

(3) $2 - 10 =$

(9) $6 - 5 =$

(4) $4 - 2 =$

(10) $3 + 2 =$

(5) $5 + 3 =$

(11) $7 + 8 =$

(6) $3 - 7 =$

(12) $2 - 1 =$

Section 5. Mixed Positive Addition & Subtraction

Solve each problem and write the answer in the box.

(1) $6 - 5 =$

(7) $1 - 1 =$

(2) $2 - 6 =$

(8) $2 + 8 =$

(3) $8 - 10 =$

(9) $6 - 10 =$

(4) $4 + 5 =$

(10) $9 + 1 =$

(5) $1 + 2 =$

(11) $4 + 10 =$

(6) $7 - 7 =$

(12) $5 - 1 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $6 - 7 =$

(7) $7 - 13 =$

(2) $10 - 6 =$

(8) $5 - 11 =$

(3) $7 - 15 =$

(9) $8 - 13 =$

(4) $7 - 9 =$

(10) $3 - 9 =$

(5) $9 - 1 =$

(11) $7 - 11 =$

(6) $10 - 7 =$

(12) $2 - 10 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $7 - 10 =$

(7) $4 - 11 =$

(2) $10 - 12 =$

(8) $7 - 3 =$

(3) $9 - 15 =$

(9) $2 - 8 =$

(4) $4 - 8 =$

(10) $10 - 9 =$

(5) $2 - 2 =$

(11) $9 - 6 =$

(6) $8 - 13 =$

(12) $2 - 3 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $6 - 13 =$

(7) $8 - 3 =$

(2) $10 - 5 =$

(8) $6 - 15 =$

(3) $6 - 3 =$

(9) $2 - 11 =$

(4) $2 - 15 =$

(10) $2 - 14 =$

(5) $5 - 12 =$

(11) $6 - 11 =$

(6) $8 - 10 =$

(12) $9 - 8 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $4 - 4 =$

(7) $7 - 2 =$

(2) $10 - 6 =$

(8) $5 - 10 =$

(3) $8 - 14 =$

(9) $8 - 10 =$

(4) $5 - 15 =$

(10) $7 - 10 =$

(5) $6 - 2 =$

(11) $8 - 6 =$

(6) $6 - 8 =$

(12) $6 - 9 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $8 - 14 =$

(7) $9 - 13 =$

(2) $8 - 10 =$

(8) $9 - 9 =$

(3) $5 - 15 =$

(9) $4 - 3 =$

(4) $1 - 2 =$

(10) $3 - 13 =$

(5) $2 - 5 =$

(11) $7 - 15 =$

(6) $4 - 7 =$

(12) $8 - 6 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $10 - 13 =$

(7) $10 - 15 =$

(2) $7 - 13 =$

(8) $1 - 8 =$

(3) $9 - 4 =$

(9) $4 - 2 =$

(4) $9 - 13 =$

(10) $9 - 7 =$

(5) $5 - 13 =$

(11) $7 - 5 =$

(6) $6 - 2 =$

(12) $7 - 4 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $8 - 13 =$

(7) $9 - 7 =$

(2) $10 - 15 =$

(8) $10 - 14 =$

(3) $5 - 15 =$

(9) $9 - 2 =$

(4) $4 - 7 =$

(10) $8 - 7 =$

(5) $3 - 3 =$

(11) $7 - 14 =$

(6) $10 - 4 =$

(12) $5 - 2 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $7 - 15 =$

(7) $10 - 9 =$

(2) $4 - 11 =$

(8) $6 - 2 =$

(3) $10 - 14 =$

(9) $10 - 13 =$

(4) $6 - 10 =$

(10) $10 - 6 =$

(5) $8 - 14 =$

(11) $3 - 10 =$

(6) $8 - 7 =$

(12) $9 - 9 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $8 - 11 =$

(7) $1 - 6 =$

(2) $2 - 8 =$

(8) $9 - 11 =$

(3) $4 - 12 =$

(9) $6 - 4 =$

(4) $10 - 5 =$

(10) $5 - 6 =$

(5) $3 - 6 =$

(11) $9 - 1 =$

(6) $4 - 2 =$

(12) $3 - 3 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $7 - 2 =$

(7) $8 - 8 =$

(2) $8 - 11 =$

(8) $7 - 12 =$

(3) $5 - 10 =$

(9) $5 - 13 =$

(4) $10 - 2 =$

(10) $2 - 5 =$

(5) $6 - 1 =$

(11) $5 - 14 =$

(6) $1 - 14 =$

(12) $3 - 15 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $5 - 4 =$

(7) $2 - 2 =$

(2) $7 - 5 =$

(8) $3 - 8 =$

(3) $2 - 15 =$

(9) $4 - 9 =$

(4) $8 - 14 =$

(10) $2 - 14 =$

(5) $10 - 12 =$

(11) $6 - 1 =$

(6) $1 - 15 =$

(12) $3 - 9 =$

Section 6. Negative Second Term (Addition)

Solve each problem and write the answer in the box.

(1) $1 - 11 =$

(7) $2 - 5 =$

(2) $3 - 12 =$

(8) $7 - 7 =$

(3) $6 - 2 =$

(9) $6 - 8 =$

(4) $7 - 8 =$

(10) $6 - 6 =$

(5) $10 - 5 =$

(11) $2 - 4 =$

(6) $7 - 9 =$

(12) $9 - 9 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-5 + 11 =$

(7) $-2 + 4 =$

(2) $-14 + 9 =$

(8) $-1 + 2 =$

(3) $-6 + 11 =$

(9) $-3 + 2 =$

(4) $-8 + 6 =$

(10) $-10 + 7 =$

(5) $-5 + 12 =$

(11) $-3 + 3 =$

(6) $-1 + 7 =$

(12) $-11 + 11 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-15 + 10 =$

(7) $-14 + 11 =$

(2) $-15 + 5 =$

(8) $-11 + 2 =$

(3) $-15 + 15 =$

(9) $-14 + 9 =$

(4) $-3 + 7 =$

(10) $-3 + 3 =$

(5) $-5 + 12 =$

(11) $-9 + 10 =$

(6) $-9 + 12 =$

(12) $-11 + 12 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-4 + 14 =$

(7) $-4 + 1 =$

(2) $-15 + 4 =$

(8) $-8 + 6 =$

(3) $-1 + 7 =$

(9) $-13 + 6 =$

(4) $-8 + 10 =$

(10) $-4 + 13 =$

(5) $-11 + 11 =$

(11) $-4 + 15 =$

(6) $-14 + 1 =$

(12) $-3 + 15 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-12 + 9 =$

(7) $-12 + 8 =$

(2) $-3 + 12 =$

(8) $-7 + 15 =$

(3) $-2 + 14 =$

(9) $-10 + 15 =$

(4) $-4 + 7 =$

(10) $-13 + 7 =$

(5) $-5 + 1 =$

(11) $-10 + 9 =$

(6) $-8 + 7 =$

(12) $-3 + 8 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-10 + 13 =$

(7) $-3 + 2 =$

(2) $-11 + 9 =$

(8) $-12 + 12 =$

(3) $-11 + 12 =$

(9) $-15 + 14 =$

(4) $-8 + 8 =$

(10) $-12 + 1 =$

(5) $-15 + 8 =$

(11) $-10 + 7 =$

(6) $-10 + 3 =$

(12) $-13 + 15 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-4 + 10 =$

(7) $-5 + 14 =$

(2) $-8 + 6 =$

(8) $-10 + 1 =$

(3) $-3 + 13 =$

(9) $-2 + 12 =$

(4) $-4 + 15 =$

(10) $-14 + 4 =$

(5) $-13 + 1 =$

(11) $-9 + 8 =$

(6) $-15 + 4 =$

(12) $-13 + 12 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-14 + 1 =$

(7) $-14 + 10 =$

(2) $-1 + 14 =$

(8) $-9 + 11 =$

(3) $-4 + 15 =$

(9) $-12 + 5 =$

(4) $-8 + 12 =$

(10) $-2 + 6 =$

(5) $-6 + 2 =$

(11) $-4 + 14 =$

(6) $-5 + 14 =$

(12) $-10 + 8 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-7 + 13 =$

(7) $-13 + 4 =$

(2) $-12 + 6 =$

(8) $-9 + 2 =$

(3) $-9 + 15 =$

(9) $-2 + 5 =$

(4) $-11 + 14 =$

(10) $-10 + 2 =$

(5) $-6 + 6 =$

(11) $-15 + 6 =$

(6) $-7 + 11 =$

(12) $-11 + 10 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-12 + 2 =$

(7) $-11 + 8 =$

(2) $-13 + 13 =$

(8) $-2 + 2 =$

(3) $-13 + 2 =$

(9) $-2 + 12 =$

(4) $-8 + 8 =$

(10) $-12 + 14 =$

(5) $-9 + 2 =$

(11) $-10 + 7 =$

(6) $-3 + 4 =$

(12) $-5 + 5 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-1 + 11 =$

(7) $-8 + 1 =$

(2) $-3 + 3 =$

(8) $-5 + 7 =$

(3) $-1 + 14 =$

(9) $-10 + 4 =$

(4) $-14 + 1 =$

(10) $-11 + 5 =$

(5) $-15 + 3 =$

(11) $-1 + 3 =$

(6) $-2 + 12 =$

(12) $-6 + 10 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-5 + 5 =$

(7) $-9 + 13 =$

(2) $-9 + 15 =$

(8) $-8 + 9 =$

(3) $-15 + 2 =$

(9) $-10 + 15 =$

(4) $-9 + 3 =$

(10) $-9 + 5 =$

(5) $-12 + 11 =$

(11) $-15 + 6 =$

(6) $-5 + 13 =$

(12) $-15 + 15 =$

Section 7. Negative First Term (Addition)

Solve each problem and write the answer in the box.

(1) $-2 + 3 =$

(7) $-2 + 13 =$

(2) $-9 + 14 =$

(8) $-13 + 4 =$

(3) $-7 + 12 =$

(9) $-10 + 11 =$

(4) $-14 + 8 =$

(10) $-6 + 10 =$

(5) $-3 + 13 =$

(11) $-1 + 14 =$

(6) $-14 + 1 =$

(12) $-15 + 2 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-15 - 3 =$

(7) $-10 - 1 =$

(2) $-7 - 10 =$

(8) $-13 - 12 =$

(3) $-13 - 14 =$

(9) $-3 - 4 =$

(4) $-5 - 12 =$

(10) $-1 - 6 =$

(5) $-7 - 2 =$

(11) $-4 - 4 =$

(6) $-3 - 12 =$

(12) $-6 - 6 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-6 - 14 =$

(7) $-12 - 5 =$

(2) $-11 - 10 =$

(8) $-9 - 11 =$

(3) $-13 - 4 =$

(9) $-13 - 13 =$

(4) $-3 - 5 =$

(10) $-4 - 6 =$

(5) $-5 - 10 =$

(11) $-2 - 3 =$

(6) $-4 - 7 =$

(12) $-13 - 6 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-1 - 3 =$

(7) $-2 - 4 =$

(2) $-5 - 6 =$

(8) $-8 - 15 =$

(3) $-1 - 8 =$

(9) $-12 - 12 =$

(4) $-10 - 4 =$

(10) $-10 - 11 =$

(5) $-12 - 10 =$

(11) $-4 - 15 =$

(6) $-13 - 5 =$

(12) $-9 - 8 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-6 - 12 =$

(7) $-3 - 13 =$

(2) $-7 - 11 =$

(8) $-4 - 13 =$

(3) $-8 - 15 =$

(9) $-15 - 15 =$

(4) $-15 - 12 =$

(10) $-6 - 4 =$

(5) $-15 - 7 =$

(11) $-3 - 14 =$

(6) $-15 - 10 =$

(12) $-14 - 10 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-13 - 1 =$

(7) $-11 - 15 =$

(2) $-8 - 1 =$

(8) $-11 - 14 =$

(3) $-10 - 7 =$

(9) $-10 - 13 =$

(4) $-14 - 2 =$

(10) $-13 - 4 =$

(5) $-3 - 2 =$

(11) $-7 - 1 =$

(6) $-13 - 8 =$

(12) $-10 - 6 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-11 - 3 =$

(7) $-8 - 11 =$

(2) $-8 - 8 =$

(8) $-2 - 11 =$

(3) $-14 - 5 =$

(9) $-13 - 3 =$

(4) $-13 - 10 =$

(10) $-3 - 7 =$

(5) $-10 - 13 =$

(11) $-3 - 6 =$

(6) $-15 - 11 =$

(12) $-7 - 15 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-2 - 7 =$

(7) $-14 - 3 =$

(2) $-7 - 5 =$

(8) $-13 - 13 =$

(3) $-6 - 1 =$

(9) $-3 - 12 =$

(4) $-8 - 11 =$

(10) $-15 - 9 =$

(5) $-9 - 1 =$

(11) $-5 - 9 =$

(6) $-7 - 6 =$

(12) $-2 - 5 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-4 - 15 =$

(7) $-12 - 14 =$

(2) $-5 - 13 =$

(8) $-9 - 6 =$

(3) $-13 - 15 =$

(9) $-15 - 9 =$

(4) $-10 - 12 =$

(10) $-11 - 2 =$

(5) $-9 - 4 =$

(11) $-12 - 13 =$

(6) $-5 - 11 =$

(12) $-14 - 8 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-2 - 6 =$

(7) $-13 - 6 =$

(2) $-10 - 1 =$

(8) $-1 - 14 =$

(3) $-14 - 9 =$

(9) $-3 - 11 =$

(4) $-7 - 10 =$

(10) $-1 - 9 =$

(5) $-7 - 8 =$

(11) $-9 - 5 =$

(6) $-3 - 4 =$

(12) $-6 - 6 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $- 11 - 4 =$

(7) $- 14 - 11 =$

(2) $- 6 - 5 =$

(8) $- 13 - 3 =$

(3) $- 12 - 8 =$

(9) $- 13 - 12 =$

(4) $- 1 - 2 =$

(10) $- 15 - 8 =$

(5) $- 4 - 8 =$

(11) $- 1 - 10 =$

(6) $- 2 - 15 =$

(12) $- 11 - 10 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-7 - 9 =$

(7) $-4 - 2 =$

(2) $-5 - 15 =$

(8) $-11 - 15 =$

(3) $-10 - 8 =$

(9) $-15 - 13 =$

(4) $-13 - 2 =$

(10) $-2 - 12 =$

(5) $-6 - 7 =$

(11) $-5 - 12 =$

(6) $-10 - 13 =$

(12) $-5 - 9 =$

Section 8. Both Terms Negative (Addition)

Solve each problem and write the answer in the box.

(1) $-15 - 13 =$

(7) $-10 - 2 =$

(2) $-9 - 13 =$

(8) $-11 - 11 =$

(3) $-15 - 9 =$

(9) $-2 - 4 =$

(4) $-4 - 12 =$

(10) $-2 - 12 =$

(5) $-4 - 8 =$

(11) $-11 - 4 =$

(6) $-1 - 10 =$

(12) $-3 - 2 =$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (+12) + (+9) =$$

$$(7) \quad + (+12) - (-4) =$$

$$(2) \quad + (+0) + (+14) =$$

$$(8) \quad + (-7) - (-9) =$$

$$(3) \quad + (+5) + (-10) =$$

$$(9) \quad + (-6) - (+6) =$$

$$(4) \quad + (-8) + (-7) =$$

$$(10) \quad + (+3) - (-12) =$$

$$(5) \quad + (+7) - (+15) =$$

$$(11) \quad + (+1) + (+6) =$$

$$(6) \quad + (-2) - (+13) =$$

$$(12) \quad + (+2) - (+5) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 5) + (+ 8) =$$

$$(7) \quad + (- 11) - (+ 8) =$$

$$(2) \quad + (+ 6) + (+ 2) =$$

$$(8) \quad + (+ 8) - (+ 10) =$$

$$(3) \quad + (+ 14) - (+ 15) =$$

$$(9) \quad + (+ 15) + (+ 6) =$$

$$(4) \quad + (+ 1) - (- 6) =$$

$$(10) \quad + (+ 5) - (- 13) =$$

$$(5) \quad + (+ 11) + (+ 6) =$$

$$(11) \quad + (- 4) + (- 8) =$$

$$(6) \quad + (- 6) + (- 12) =$$

$$(12) \quad + (- 2) - (+ 10) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 4) - (- 7) =$$

$$(7) \quad + (- 14) - (+ 12) =$$

$$(2) \quad + (- 1) - (+ 12) =$$

$$(8) \quad + (- 11) + (- 9) =$$

$$(3) \quad + (+ 0) + (- 14) =$$

$$(9) \quad + (- 2) - (+ 3) =$$

$$(4) \quad + (+ 0) + (+ 13) =$$

$$(10) \quad + (- 11) - (- 5) =$$

$$(5) \quad + (+ 1) + (- 12) =$$

$$(11) \quad + (+ 9) + (- 13) =$$

$$(6) \quad + (+ 1) - (- 6) =$$

$$(12) \quad + (- 5) - (+ 5) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 6) - (+ 6) =$$

$$(7) \quad + (+ 13) + (- 14) =$$

$$(2) \quad + (+ 0) + (- 13) =$$

$$(8) \quad + (+ 6) - (- 5) =$$

$$(3) \quad + (- 7) - (+ 5) =$$

$$(9) \quad + (+ 8) + (- 15) =$$

$$(4) \quad + (+ 12) - (- 7) =$$

$$(10) \quad + (- 6) - (- 7) =$$

$$(5) \quad + (+ 5) - (+ 7) =$$

$$(11) \quad + (- 3) - (- 3) =$$

$$(6) \quad + (- 9) - (- 11) =$$

$$(12) \quad + (+ 3) + (+ 7) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 5) + (+ 5) =$$

$$(7) \quad + (+ 5) - (- 2) =$$

$$(2) \quad + (- 15) + (- 1) =$$

$$(8) \quad + (- 2) - (+ 15) =$$

$$(3) \quad + (- 9) - (+ 9) =$$

$$(9) \quad + (- 3) - (- 15) =$$

$$(4) \quad + (+ 3) + (+ 9) =$$

$$(10) \quad + (+ 2) + (- 9) =$$

$$(5) \quad + (+ 0) + (+ 10) =$$

$$(11) \quad + (+ 15) - (- 15) =$$

$$(6) \quad + (- 11) + (+ 4) =$$

$$(12) \quad + (+ 9) - (+ 11) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 15) - (- 8) =$$

$$(7) \quad + (+4) + (- 14) =$$

$$(2) \quad + (+8) + (- 11) =$$

$$(8) \quad + (+5) + (+11) =$$

$$(3) \quad + (+8) + (- 15) =$$

$$(9) \quad + (- 14) + (+7) =$$

$$(4) \quad + (- 12) + (- 4) =$$

$$(10) \quad + (- 2) + (- 1) =$$

$$(5) \quad + (- 3) + (+13) =$$

$$(11) \quad + (- 12) - (+2) =$$

$$(6) \quad + (+9) - (+2) =$$

$$(12) \quad + (+0) - (+7) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 9) + (+ 7) =$$

$$(7) \quad + (- 6) + (- 12) =$$

$$(2) \quad + (- 6) + (- 2) =$$

$$(8) \quad + (+ 0) + (- 9) =$$

$$(3) \quad + (+ 6) + (+ 1) =$$

$$(9) \quad + (+ 9) + (- 7) =$$

$$(4) \quad + (+ 4) - (+ 4) =$$

$$(10) \quad + (- 4) + (+ 7) =$$

$$(5) \quad + (- 2) + (+ 11) =$$

$$(11) \quad + (- 6) - (- 10) =$$

$$(6) \quad + (+ 1) + (+ 8) =$$

$$(12) \quad + (+ 2) + (+ 0) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (-15) + (+6) =$$

$$(7) \quad + (-6) + (+15) =$$

$$(2) \quad + (+5) + (+8) =$$

$$(8) \quad + (-1) - (+8) =$$

$$(3) \quad + (-8) + (+7) =$$

$$(9) \quad + (-2) - (+13) =$$

$$(4) \quad + (-6) - (-11) =$$

$$(10) \quad + (-5) + (+13) =$$

$$(5) \quad + (-3) + (+1) =$$

$$(11) \quad + (-4) - (+9) =$$

$$(6) \quad + (-10) - (-13) =$$

$$(12) \quad + (-10) + (+15) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (+7) + (+14) =$$

$$(7) \quad + (+8) + (+8) =$$

$$(2) \quad + (- 5) - (- 8) =$$

$$(8) \quad + (+13) + (- 7) =$$

$$(3) \quad + (- 15) + (+6) =$$

$$(9) \quad + (- 1) + (- 6) =$$

$$(4) \quad + (+14) + (- 12) =$$

$$(10) \quad + (- 1) - (- 14) =$$

$$(5) \quad + (- 11) - (+15) =$$

$$(11) \quad + (+11) + (- 10) =$$

$$(6) \quad + (+9) + (+1) =$$

$$(12) \quad + (+12) + (- 6) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (+7) - (+12) =$$

$$(7) \quad + (- 10) - (+4) =$$

$$(2) \quad + (+10) - (- 2) =$$

$$(8) \quad + (+9) - (- 4) =$$

$$(3) \quad + (- 12) + (- 11) =$$

$$(9) \quad + (+12) + (+6) =$$

$$(4) \quad + (+15) + (+12) =$$

$$(10) \quad + (+0) + (+14) =$$

$$(5) \quad + (- 12) + (- 2) =$$

$$(11) \quad + (- 12) - (+13) =$$

$$(6) \quad + (+10) - (+3) =$$

$$(12) \quad + (- 1) - (- 14) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (- 7) + (+ 5) =$$

$$(7) \quad + (- 11) - (+ 11) =$$

$$(2) \quad + (- 15) - (+ 7) =$$

$$(8) \quad + (- 15) + (+ 5) =$$

$$(3) \quad + (+ 15) + (+ 6) =$$

$$(9) \quad + (+ 1) + (+ 12) =$$

$$(4) \quad + (+ 1) - (+ 1) =$$

$$(10) \quad + (+ 12) - (+ 0) =$$

$$(5) \quad + (- 2) + (+ 6) =$$

$$(11) \quad + (- 13) + (+ 9) =$$

$$(6) \quad + (+ 0) + (- 4) =$$

$$(12) \quad + (- 5) - (- 8) =$$

Section 9. Addition with Brackets (Mixed Signs)

Solve each problem and write the answer in the box.

$$(1) \quad + (+10) - (+6) =$$

$$(7) \quad + (+15) - (+4) =$$

$$(2) \quad + (-2) - (+8) =$$

$$(8) \quad + (+13) - (+8) =$$

$$(3) \quad + (-12) + (+12) =$$

$$(9) \quad + (-4) + (+11) =$$

$$(4) \quad + (-15) + (+12) =$$

$$(10) \quad + (-10) - (-12) =$$

$$(5) \quad + (+6) + (+5) =$$

$$(11) \quad + (-3) - (+15) =$$

$$(6) \quad + (-5) + (-4) =$$

$$(12) \quad + (-7) - (+11) =$$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $-2 - 10 =$

(7) $10 - 10 =$

(2) $7 - 20 =$

(8) $2 - 16 =$

(3) $2 - 13 =$

(9) $7 - 18 =$

(4) $4 - 17 =$

(10) $-8 - 19 =$

(5) $-8 - 17 =$

(11) $6 - 18 =$

(6) $0 - 11 =$

(12) $10 - 20 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $0 - 11 =$

(7) $-6 - 11 =$

(2) $-9 - 20 =$

(8) $9 - 19 =$

(3) $4 - 17 =$

(9) $6 - 16 =$

(4) $5 - 10 =$

(10) $9 - 13 =$

(5) $7 - 16 =$

(11) $2 - 15 =$

(6) $6 - 12 =$

(12) $4 - 12 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $3 - 19 =$

(7) $8 - 19 =$

(2) $7 - 15 =$

(8) $7 - 14 =$

(3) $-4 - 13 =$

(9) $-10 - 18 =$

(4) $1 - 20 =$

(10) $-10 - 16 =$

(5) $10 - 12 =$

(11) $-9 - 20 =$

(6) $-7 - 15 =$

(12) $-4 - 14 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $0 - 15 =$

(7) $10 - 14 =$

(2) $-3 - 17 =$

(8) $-7 - 10 =$

(3) $7 - 19 =$

(9) $5 - 12 =$

(4) $1 - 17 =$

(10) $-7 - 14 =$

(5) $-7 - 20 =$

(11) $-4 - 11 =$

(6) $-10 - 15 =$

(12) $-4 - 17 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $-1 - 20 =$

(7) $-3 - 18 =$

(2) $-6 - 10 =$

(8) $-9 - 16 =$

(3) $-4 - 18 =$

(9) $3 - 20 =$

(4) $1 - 17 =$

(10) $7 - 10 =$

(5) $9 - 20 =$

(11) $-2 - 13 =$

(6) $10 - 18 =$

(12) $-3 - 20 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $-8 - 15 =$

(7) $-4 - 19 =$

(2) $-5 - 18 =$

(8) $7 - 20 =$

(3) $6 - 12 =$

(9) $-7 - 20 =$

(4) $7 - 18 =$

(10) $4 - 13 =$

(5) $-4 - 20 =$

(11) $-9 - 20 =$

(6) $0 - 15 =$

(12) $2 - 11 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $-2 - 18 =$

(7) $-5 - 18 =$

(2) $-10 - 18 =$

(8) $10 - 11 =$

(3) $6 - 18 =$

(9) $-7 - 13 =$

(4) $5 - 10 =$

(10) $-10 - 17 =$

(5) $10 - 13 =$

(11) $-9 - 11 =$

(6) $6 - 11 =$

(12) $-9 - 12 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $8 - 18 =$

(7) $-6 - 12 =$

(2) $-4 - 14 =$

(8) $-10 - 15 =$

(3) $-5 - 20 =$

(9) $-6 - 10 =$

(4) $-5 - 12 =$

(10) $0 - 19 =$

(5) $2 - 10 =$

(11) $10 - 19 =$

(6) $-2 - 18 =$

(12) $5 - 19 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $7 - 11 =$

(7) $8 - 10 =$

(2) $-2 - 16 =$

(8) $1 - 18 =$

(3) $4 - 20 =$

(9) $-1 - 20 =$

(4) $3 - 15 =$

(10) $9 - 11 =$

(5) $2 - 20 =$

(11) $4 - 16 =$

(6) $7 - 10 =$

(12) $-10 - 17 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $7 - 17 =$

(7) $-4 - 15 =$

(2) $-1 - 20 =$

(8) $4 - 15 =$

(3) $-2 - 11 =$

(9) $8 - 12 =$

(4) $8 - 17 =$

(10) $0 - 16 =$

(5) $1 - 12 =$

(11) $-10 - 15 =$

(6) $-7 - 14 =$

(12) $-3 - 20 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $-2 - 15 =$

(7) $-2 - 20 =$

(2) $0 - 17 =$

(8) $-8 - 10 =$

(3) $4 - 15 =$

(9) $8 - 19 =$

(4) $5 - 18 =$

(10) $8 - 13 =$

(5) $-5 - 20 =$

(11) $7 - 14 =$

(6) $-2 - 12 =$

(12) $10 - 12 =$

Section 10. Negative Results from Subtraction

Solve each problem and write the answer in the box.

(1) $7 - 13 =$

(7) $8 - 19 =$

(2) $2 - 18 =$

(8) $-1 - 13 =$

(3) $10 - 12 =$

(9) $-4 - 16 =$

(4) $10 - 15 =$

(10) $-5 - 12 =$

(5) $7 - 18 =$

(11) $9 - 14 =$

(6) $-7 - 10 =$

(12) $-7 - 12 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $0 - (-5) =$

(7) $6 + 6 =$

(2) $-8 - 2 =$

(8) $11 + 11 =$

(3) $0 - 1 =$

(9) $-1 - (-11) =$

(4) $9 - 5 =$

(10) $12 + 3 =$

(5) $12 + 4 =$

(11) $-10 - 4 =$

(6) $2 - 7 =$

(12) $-5 - (-11) =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $-7 - (-5) =$

(7) $3 + 9 =$

(2) $4 + 8 =$

(8) $3 - (-6) =$

(3) $-6 - (-8) =$

(9) $8 + 1 =$

(4) $-7 - 1 =$

(10) $-5 - 11 =$

(5) $9 - 5 =$

(11) $6 + 6 =$

(6) $-2 - 11 =$

(12) $-8 + 8 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $6 - 8 =$

(7) $- 7 - (- 5) =$

(2) $- 7 - 4 =$

(8) $7 - (- 8) =$

(3) $4 + 0 =$

(9) $7 + 9 =$

(4) $11 + 11 =$

(10) $- 7 - 11 =$

(5) $- 10 - (- 6) =$

(11) $2 - 7 =$

(6) $7 - 3 =$

(12) $- 5 + 0 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $4 - 1 =$

(7) $- 1 - 6 =$

(2) $3 - 2 =$

(8) $4 - 4 =$

(3) $- 11 + 8 =$

(9) $- 5 - 4 =$

(4) $- 9 - 10 =$

(10) $- 1 - (- 1) =$

(5) $11 - (- 4) =$

(11) $3 - 7 =$

(6) $0 + 8 =$

(12) $4 - 8 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $-8 - (-9) =$

(7) $7 + 5 =$

(2) $-6 + 4 =$

(8) $12 + 9 =$

(3) $-8 - 7 =$

(9) $4 - 1 =$

(4) $-7 + 3 =$

(10) $-11 - 10 =$

(5) $5 + 4 =$

(11) $-5 - 3 =$

(6) $-10 + 3 =$

(12) $-1 - 6 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $9 - 0 =$

(7) $11 - 5 =$

(2) $1 + 5 =$

(8) $10 - (-7) =$

(3) $-7 - (-1) =$

(9) $-6 + 4 =$

(4) $-4 - (-3) =$

(10) $-2 - 5 =$

(5) $12 - 10 =$

(11) $-7 + 0 =$

(6) $11 - (-8) =$

(12) $-10 - 8 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $7 - 1 =$

(7) $12 - 7 =$

(2) $- 10 - 4 =$

(8) $2 - (- 12) =$

(3) $- 1 - 10 =$

(9) $9 + 4 =$

(4) $11 + 0 =$

(10) $- 6 - (- 11) =$

(5) $7 - 8 =$

(11) $7 - 7 =$

(6) $10 - 7 =$

(12) $- 1 - 5 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $1 - 8 =$

(7) $4 - 12 =$

(2) $3 - 12 =$

(8) $8 - (-6) =$

(3) $-10 - 3 =$

(9) $1 - (-1) =$

(4) $-4 - (-6) =$

(10) $-8 + 1 =$

(5) $10 + 11 =$

(11) $-4 - 5 =$

(6) $6 + 4 =$

(12) $6 - (-1) =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $-7 - 10 =$

(7) $11 - 5 =$

(2) $12 - 0 =$

(8) $-1 - (-4) =$

(3) $9 - 0 =$

(9) $7 - 6 =$

(4) $6 - (-6) =$

(10) $0 - 6 =$

(5) $11 + 10 =$

(11) $-4 - 7 =$

(6) $-10 + 5 =$

(12) $4 - (-9) =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $10 - 4 =$

(7) $- 7 - 11 =$

(2) $- 3 - 10 =$

(8) $3 + 11 =$

(3) $9 - 11 =$

(9) $- 5 + 11 =$

(4) $- 10 - 5 =$

(10) $- 4 - 6 =$

(5) $3 - 2 =$

(11) $- 6 - 5 =$

(6) $- 6 - 6 =$

(12) $- 8 - 12 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $-9 - 10 =$

(7) $-11 + 4 =$

(2) $7 - (-12) =$

(8) $3 - 5 =$

(3) $3 - 1 =$

(9) $4 - 1 =$

(4) $3 - 6 =$

(10) $9 - 12 =$

(5) $3 - (-7) =$

(11) $2 - 9 =$

(6) $0 - (-5) =$

(12) $-2 - 10 =$

Section 11. Controlled Mixed Signs

Solve each problem and write the answer in the box.

(1) $4 - 3 =$

(7) $9 - 2 =$

(2) $-9 - 4 =$

(8) $3 - 9 =$

(3) $5 - 6 =$

(9) $-10 - 0 =$

(4) $10 - 2 =$

(10) $9 + 10 =$

(5) $6 - 3 =$

(11) $-2 + 1 =$

(6) $12 - 2 =$

(12) $4 - 5 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-20 - 7 =$

(7) $-9 - 11 =$

(2) $17 - (-14) =$

(8) $-7 - 6 =$

(3) $3 - 19 =$

(9) $3 - 5 =$

(4) $-9 - 15 =$

(10) $8 - (-9) =$

(5) $-5 - (-3) =$

(11) $16 - 6 =$

(6) $19 - 1 =$

(12) $-3 - 5 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-13 - 2 =$

(7) $-10 + 20 =$

(2) $16 + 16 =$

(8) $6 - 20 =$

(3) $-2 + 2 =$

(9) $-16 - (-15) =$

(4) $12 - 11 =$

(10) $1 - 6 =$

(5) $-15 - 4 =$

(11) $0 - (-2) =$

(6) $9 - 20 =$

(12) $18 - 5 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $8 - 3 =$

(7) $15 - (- 17) =$

(2) $6 - (- 10) =$

(8) $5 + 13 =$

(3) $- 19 - 12 =$

(9) $- 14 - 4 =$

(4) $- 4 - 15 =$

(10) $- 15 + 4 =$

(5) $- 10 + 5 =$

(11) $- 6 - (- 5) =$

(6) $- 14 - 16 =$

(12) $8 - 20 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $4 - (-8) =$

(7) $5 - 14 =$

(2) $-11 + 10 =$

(8) $-17 - 7 =$

(3) $-9 + 6 =$

(9) $10 - 20 =$

(4) $-12 - 20 =$

(10) $8 + 1 =$

(5) $11 - (-1) =$

(11) $3 - 3 =$

(6) $15 - 16 =$

(12) $2 - (-19) =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-12 + 13 =$

(7) $20 - 20 =$

(2) $-19 - 18 =$

(8) $13 - 20 =$

(3) $0 - 10 =$

(9) $2 - 10 =$

(4) $14 - (-3) =$

(10) $-15 + 8 =$

(5) $-12 - 14 =$

(11) $3 - 6 =$

(6) $17 + 18 =$

(12) $-11 - (-1) =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $6 - (-8) =$

(7) $-17 + 14 =$

(2) $-9 - 12 =$

(8) $-9 - 14 =$

(3) $-13 - 20 =$

(9) $-3 - (-12) =$

(4) $19 - 8 =$

(10) $-20 - (-6) =$

(5) $19 - 11 =$

(11) $-11 - 20 =$

(6) $0 - 19 =$

(12) $-7 - 1 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-1 - 11 =$

(7) $-20 - (-13) =$

(2) $9 - (-18) =$

(8) $4 + 8 =$

(3) $-15 - (-11) =$

(9) $-18 - 8 =$

(4) $-3 + 5 =$

(10) $-14 - 13 =$

(5) $14 + 10 =$

(11) $10 + 4 =$

(6) $-8 - 4 =$

(12) $0 - (-10) =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-20 + 13 =$

(7) $-8 - 6 =$

(2) $2 - 2 =$

(8) $5 - (-5) =$

(3) $14 - (-20) =$

(9) $4 + 4 =$

(4) $10 - (-1) =$

(10) $-4 - 15 =$

(5) $7 - 2 =$

(11) $20 - (-5) =$

(6) $-20 + 15 =$

(12) $-2 - 14 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $15 + 13 =$

(7) $17 - (- 13) =$

(2) $- 4 + 10 =$

(8) $- 5 - (- 20) =$

(3) $- 8 - 3 =$

(9) $17 + 10 =$

(4) $- 7 - 13 =$

(10) $3 - 15 =$

(5) $20 + 7 =$

(11) $- 10 + 11 =$

(6) $- 20 - (- 10) =$

(12) $19 + 1 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $8 - 2 =$

(7) $- 8 - 13 =$

(2) $14 - 3 =$

(8) $15 - (- 11) =$

(3) $- 20 - 20 =$

(9) $0 - 6 =$

(4) $- 9 - (- 19) =$

(10) $- 13 - (- 14) =$

(5) $19 - (- 5) =$

(11) $- 18 - 12 =$

(6) $- 16 - 14 =$

(12) $- 18 - 8 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $11 - 8 =$

(7) $9 + 20 =$

(2) $-18 + 16 =$

(8) $3 + 15 =$

(3) $11 - 13 =$

(9) $3 - (-17) =$

(4) $-17 - 3 =$

(10) $13 - (-18) =$

(5) $18 - 16 =$

(11) $-1 - 16 =$

(6) $-7 + 11 =$

(12) $13 - 14 =$

Section 12. Mixed with Zero

Solve each problem and write the answer in the box.

(1) $-17 + 2 =$

(7) $-18 - 11 =$

(2) $14 - 14 =$

(8) $15 - (-2) =$

(3) $11 - 6 =$

(9) $-8 - 16 =$

(4) $15 - 2 =$

(10) $14 + 2 =$

(5) $-8 - (-19) =$

(11) $9 - (-3) =$

(6) $2 - (-12) =$

(12) $-16 + 13 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $16 - 16 =$

(7) $26 - (- 24) =$

(2) $- 18 - (- 18) =$

(8) $20 - 19 =$

(3) $6 + 10 =$

(9) $2 - (- 9) =$

(4) $5 + 17 =$

(10) $4 + 8 =$

(5) $17 - (- 24) =$

(11) $29 - (- 8) =$

(6) $13 - (- 1) =$

(12) $5 - (- 10) =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-24 - 28 =$

(7) $16 - 26 =$

(2) $-8 - (-21) =$

(8) $20 - 0 =$

(3) $-14 - 7 =$

(9) $1 + 22 =$

(4) $-16 - 14 =$

(10) $8 + 11 =$

(5) $-25 - 6 =$

(11) $-28 - 16 =$

(6) $6 - 28 =$

(12) $-25 - 19 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $28 + 19 =$

(7) $- 27 - (- 11) =$

(2) $- 8 - 26 =$

(8) $- 10 + 4 =$

(3) $- 4 - 29 =$

(9) $- 10 + 2 =$

(4) $25 + 19 =$

(10) $- 21 - 27 =$

(5) $17 + 11 =$

(11) $- 2 - 18 =$

(6) $10 + 19 =$

(12) $- 16 - 3 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-4 - 18 =$

(7) $-12 + 8 =$

(2) $22 - 16 =$

(8) $3 - 22 =$

(3) $8 - (-15) =$

(9) $-30 - (-11) =$

(4) $-6 + 19 =$

(10) $-17 + 24 =$

(5) $-7 - (-2) =$

(11) $-29 - 19 =$

(6) $-5 - (-30) =$

(12) $28 - 5 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $20 - (-5) =$

(7) $18 - 22 =$

(2) $-22 - 9 =$

(8) $5 - (-18) =$

(3) $0 + 6 =$

(9) $-5 - 11 =$

(4) $5 - 5 =$

(10) $5 + 9 =$

(5) $-25 - (-5) =$

(11) $-15 - 26 =$

(6) $19 - 14 =$

(12) $19 - (-3) =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-15 + 30 =$

(7) $-17 + 4 =$

(2) $25 + 23 =$

(8) $5 - 0 =$

(3) $-30 - (-9) =$

(9) $14 + 14 =$

(4) $-11 - 2 =$

(10) $-6 + 7 =$

(5) $-29 - (-9) =$

(11) $-14 - 20 =$

(6) $17 + 4 =$

(12) $-12 - 18 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-27 - (-1) =$

(7) $27 - 10 =$

(2) $-26 - 6 =$

(8) $25 - 8 =$

(3) $12 - 24 =$

(9) $-19 - 18 =$

(4) $25 - (-24) =$

(10) $5 - 29 =$

(5) $-12 + 25 =$

(11) $-28 - 15 =$

(6) $-16 - (-6) =$

(12) $-9 - 1 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $13 - 29 =$

(7) $- 8 + 9 =$

(2) $- 23 + 12 =$

(8) $9 - (- 21) =$

(3) $- 3 - (- 7) =$

(9) $- 28 - 29 =$

(4) $- 18 - (- 10) =$

(10) $- 18 + 13 =$

(5) $8 - 11 =$

(11) $- 21 - 18 =$

(6) $19 - 11 =$

(12) $- 23 + 17 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $17 - (-20) =$

(7) $30 + 5 =$

(2) $-8 + 13 =$

(8) $-16 - (-21) =$

(3) $-8 - 10 =$

(9) $27 - (-5) =$

(4) $-15 - 2 =$

(10) $-25 + 16 =$

(5) $21 - (-27) =$

(11) $3 - 13 =$

(6) $26 - (-6) =$

(12) $-4 - 15 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-11 - (-2) =$

(7) $13 - 29 =$

(2) $-21 - 19 =$

(8) $-25 - 14 =$

(3) $-24 - 22 =$

(9) $-22 - 2 =$

(4) $-29 + 18 =$

(10) $15 - 11 =$

(5) $8 - 6 =$

(11) $-19 - 24 =$

(6) $8 - 16 =$

(12) $1 - 0 =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-20 - 18 =$

(7) $25 - 9 =$

(2) $-28 - 4 =$

(8) $14 - (-10) =$

(3) $29 - 13 =$

(9) $26 - (-15) =$

(4) $-16 - 17 =$

(10) $-5 - 19 =$

(5) $18 - 17 =$

(11) $8 + 17 =$

(6) $-19 + 29 =$

(12) $16 - (-10) =$

Section 13. Mixed Signs: Wider Range

Solve each problem and write the answer in the box.

(1) $-3 - 11 =$

(7) $-3 + 28 =$

(2) $-2 - 4 =$

(8) $11 + 29 =$

(3) $-17 + 11 =$

(9) $-10 - 26 =$

(4) $7 + 4 =$

(10) $-19 - 10 =$

(5) $25 - 22 =$

(11) $16 - 29 =$

(6) $14 - 15 =$

(12) $26 - (-4) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $38 - 33 =$

(7) $-16 - 3 =$

(2) $26 - 27 =$

(8) $10 - (-2) =$

(3) $18 - (-35) =$

(9) $19 - (-19) =$

(4) $26 + 28 =$

(10) $-3 - 38 =$

(5) $-35 - 31 =$

(11) $26 - 22 =$

(6) $26 - 40 =$

(12) $17 - (-29) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-22 - 18 =$

(7) $23 - 29 =$

(2) $13 - 1 =$

(8) $37 + 23 =$

(3) $17 - (-4) =$

(9) $-13 + 35 =$

(4) $-25 - 24 =$

(10) $18 - 12 =$

(5) $-40 + 39 =$

(11) $-30 - 36 =$

(6) $-39 - 18 =$

(12) $-9 + 30 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $39 - 40 =$

(7) $-20 - 4 =$

(2) $-34 - 17 =$

(8) $18 + 34 =$

(3) $-33 + 4 =$

(9) $-36 - (-29) =$

(4) $-22 - 36 =$

(10) $1 - 7 =$

(5) $2 - (-29) =$

(11) $-32 - 14 =$

(6) $-27 + 13 =$

(12) $-3 + 20 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-17 + 34 =$

(7) $-29 - 26 =$

(2) $10 + 12 =$

(8) $6 - (-30) =$

(3) $17 - (-37) =$

(9) $25 - 38 =$

(4) $18 + 35 =$

(10) $8 + 30 =$

(5) $18 - 29 =$

(11) $-35 - (-19) =$

(6) $1 - (-20) =$

(12) $32 - (-21) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-25 - 5 =$

(7) $-7 - 27 =$

(2) $27 - 12 =$

(8) $-24 - 38 =$

(3) $-14 + 38 =$

(9) $26 - 40 =$

(4) $-27 + 33 =$

(10) $23 - (-17) =$

(5) $21 + 37 =$

(11) $-3 - 16 =$

(6) $14 - 37 =$

(12) $-25 - 37 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-21 - 40 =$

(7) $-5 - 37 =$

(2) $28 - 2 =$

(8) $8 - 40 =$

(3) $12 - (-33) =$

(9) $33 + 37 =$

(4) $32 - 0 =$

(10) $-17 - 36 =$

(5) $-14 + 33 =$

(11) $-1 + 0 =$

(6) $5 - (-32) =$

(12) $-6 + 12 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $23 - 10 =$

(7) $24 - (- 21) =$

(2) $17 - (- 2) =$

(8) $3 + 21 =$

(3) $27 - 2 =$

(9) $1 - (- 22) =$

(4) $- 26 + 7 =$

(10) $26 - 24 =$

(5) $- 15 - 29 =$

(11) $- 36 + 18 =$

(6) $24 - (- 37) =$

(12) $26 - (- 26) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $40 - (- 25) =$

(7) $24 - 30 =$

(2) $38 + 13 =$

(8) $- 40 - (- 26) =$

(3) $- 35 - 2 =$

(9) $3 - 10 =$

(4) $31 - (- 13) =$

(10) $- 18 - 16 =$

(5) $- 15 - 4 =$

(11) $3 - 21 =$

(6) $- 32 - (- 1) =$

(12) $- 36 - (- 23) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-1 - 35 =$

(7) $28 - 0 =$

(2) $2 + 19 =$

(8) $-25 - (-6) =$

(3) $-27 + 26 =$

(9) $-20 - 5 =$

(4) $-38 - 33 =$

(10) $-39 + 39 =$

(5) $-14 - 1 =$

(11) $-14 + 29 =$

(6) $-16 - 4 =$

(12) $30 - 0 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $18 - 1 =$

(7) $20 - 26 =$

(2) $20 - (-11) =$

(8) $21 - 19 =$

(3) $-22 + 38 =$

(9) $-4 + 4 =$

(4) $6 - 10 =$

(10) $25 - 27 =$

(5) $2 + 1 =$

(11) $-27 - 1 =$

(6) $22 - (-37) =$

(12) $-2 + 28 =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $11 - 35 =$

(7) $29 - (-10) =$

(2) $-10 - 39 =$

(8) $-31 + 33 =$

(3) $30 - 20 =$

(9) $-26 - 35 =$

(4) $9 - (-32) =$

(10) $1 - 31 =$

(5) $-14 - 35 =$

(11) $16 - 18 =$

(6) $15 - 32 =$

(12) $11 - (-32) =$

Section 14. Near Boundaries: -40 to 40

Solve each problem and write the answer in the box.

(1) $-22 - (-4) =$

(7) $14 + 10 =$

(2) $-19 - 31 =$

(8) $36 + 35 =$

(3) $38 - 3 =$

(9) $38 - 5 =$

(4) $-34 - (-24) =$

(10) $2 - (-15) =$

(5) $20 - 34 =$

(11) $19 + 32 =$

(6) $9 - 34 =$

(12) $-29 + 19 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $36 + 8 =$

(7) $-15 - (-14) =$

(2) $23 - (-33) =$

(8) $-2 - 32 =$

(3) $-13 - 23 =$

(9) $15 - 4 =$

(4) $-22 - 21 =$

(10) $34 - 39 =$

(5) $28 - (-3) =$

(11) $-24 - (-3) =$

(6) $38 - 33 =$

(12) $7 + 30 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $-30 - 23 =$

(7) $33 + 23 =$

(2) $18 - 37 =$

(8) $24 - 6 =$

(3) $39 - (-17) =$

(9) $29 - 33 =$

(4) $25 - 14 =$

(10) $-36 - (-36) =$

(5) $9 - 5 =$

(11) $7 - (-26) =$

(6) $-17 + 14 =$

(12) $-30 - (-22) =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $19 - 26 =$

(7) $18 - 25 =$

(2) $26 + 38 =$

(8) $33 - 2 =$

(3) $-9 + 20 =$

(9) $5 - (-3) =$

(4) $29 + 34 =$

(10) $-19 - (-36) =$

(5) $38 - (-34) =$

(11) $32 - (-7) =$

(6) $28 - (-39) =$

(12) $40 + 20 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $-40 + 31 =$

(7) $20 - 23 =$

(2) $-26 - (-4) =$

(8) $31 + 9 =$

(3) $-10 + 15 =$

(9) $13 - (-21) =$

(4) $40 - 0 =$

(10) $-24 - (-23) =$

(5) $11 - 8 =$

(11) $-31 - 38 =$

(6) $29 - (-13) =$

(12) $22 + 15 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $33 - 34 =$

(7) $- 26 + 37 =$

(2) $39 - (- 37) =$

(8) $35 - 21 =$

(3) $22 - (- 30) =$

(9) $7 - (- 18) =$

(4) $24 - 31 =$

(10) $- 10 - 22 =$

(5) $- 8 - (- 24) =$

(11) $27 - 36 =$

(6) $- 5 - (- 8) =$

(12) $- 30 - (- 22) =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $15 - 38 =$

(7) $-39 - 32 =$

(2) $2 - (-6) =$

(8) $12 - 28 =$

(3) $-28 - (-8) =$

(9) $17 + 4 =$

(4) $19 - (-10) =$

(10) $-4 - 8 =$

(5) $26 + 3 =$

(11) $-36 - 37 =$

(6) $0 + 30 =$

(12) $-33 + 36 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $36 - 25 =$

(7) $1 - (-8) =$

(2) $-29 + 37 =$

(8) $-31 - 5 =$

(3) $8 + 32 =$

(9) $8 + 9 =$

(4) $-26 - 17 =$

(10) $-33 - (-7) =$

(5) $-3 - 19 =$

(11) $-18 - 16 =$

(6) $18 - 5 =$

(12) $22 - 15 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $23 + 12 =$

(7) $20 - 28 =$

(2) $-10 - 16 =$

(8) $8 + 9 =$

(3) $-14 + 33 =$

(9) $-7 - (-22) =$

(4) $-34 - (-7) =$

(10) $-39 - (-4) =$

(5) $-34 - 19 =$

(11) $8 - 0 =$

(6) $11 - 20 =$

(12) $-28 + 28 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $-18 - 22 =$

(7) $-38 - 23 =$

(2) $-22 + 29 =$

(8) $-40 - 36 =$

(3) $-13 - 38 =$

(9) $-6 - (-21) =$

(4) $16 - 7 =$

(10) $10 - 33 =$

(5) $-36 - 31 =$

(11) $25 + 22 =$

(6) $33 - 8 =$

(12) $15 - 11 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $-16 - 37 =$

(7) $-25 - (-13) =$

(2) $22 + 9 =$

(8) $28 - (-21) =$

(3) $29 - 1 =$

(9) $-31 - 36 =$

(4) $28 - 17 =$

(10) $22 - 38 =$

(5) $-36 + 3 =$

(11) $39 - (-35) =$

(6) $3 - 35 =$

(12) $-24 - 39 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $40 - 34 =$

(7) $-25 - 33 =$

(2) $-28 - 18 =$

(8) $1 - 13 =$

(3) $35 - 32 =$

(9) $35 - 18 =$

(4) $-26 + 23 =$

(10) $-32 - (-25) =$

(5) $-32 - 15 =$

(11) $-22 - 13 =$

(6) $3 - 11 =$

(12) $7 + 30 =$

Section 15. Final Revision: All Concepts

Solve each problem and write the answer in the box.

(1) $29 - 12 =$

(7) $-30 - 18 =$

(2) $9 + 21 =$

(8) $-15 - (-18) =$

(3) $32 + 28 =$

(9) $9 - 16 =$

(4) $2 - (-2) =$

(10) $9 - (-27) =$

(5) $-33 - 40 =$

(11) $22 - (-30) =$

(6) $6 + 28 =$

(12) $-16 - (-23) =$

1a-1	0	2a-1	1	3a-1	6	4a-1	4
1a-2	3	2a-2	6	3a-2	8	4a-2	2
1a-3	-1	2a-3	-2	3a-3	0	4a-3	0
1a-4	5	2a-4	-2	3a-4	1	4a-4	-1
1a-5	1	2a-5	1	3a-5	-1	4a-5	3
1a-6	-1	2a-6	6	3a-6	2	4a-6	-1
1a-7	0	2a-7	2	3a-7	4	4a-7	4
1a-8	5	2a-8	4	3a-8	-2	4a-8	-1
1a-9	-1	2a-9	0	3a-9	4	4a-9	4
1a-10	5	2a-10	3	3a-10	-2	4a-10	-1
1a-11	6	2a-11	-1	3a-11	0	4a-11	6
1a-12	3	2a-12	1	3a-12	2	4a-12	-2
1b-1	-1	2b-1	0	3b-1	1	4b-1	0
1b-2	-2	2b-2	1	3b-2	-1	4b-2	0
1b-3	-2	2b-3	4	3b-3	4	4b-3	1
1b-4	3	2b-4	4	3b-4	2	4b-4	2
1b-5	2	2b-5	-2	3b-5	8	4b-5	1
1b-6	1	2b-6	3	3b-6	1	4b-6	-1
1b-7	0	2b-7	-2	3b-7	4	4b-7	1
1b-8	4	2b-8	-1	3b-8	-1	4b-8	-2
1b-9	4	2b-9	3	3b-9	2	4b-9	1
1b-10	4	2b-10	5	3b-10	-2	4b-10	0
1b-11	4	2b-11	2	3b-11	-2	4b-11	1
1b-12	-1	2b-12	1	3b-12	2	4b-12	1

5a-1	0	6a-1	-2	7a-1	-10	8a-1	6
5a-2	0	6a-2	1	7a-2	-10	8a-2	-6
5a-3	2	6a-3	0	7a-3	6	8a-3	1
5a-4	1	6a-4	5	7a-4	4	8a-4	-2
5a-5	6	6a-5	3	7a-5	6	8a-5	6
5a-6	0	6a-6	-2	7a-6	7	8a-6	-1
5a-7	3	6a-7	1	7a-7	3	8a-7	-10
5a-8	4	6a-8	8	7a-8	-1	8a-8	8
5a-9	-1	6a-9	-2	7a-9	6	8a-9	-5
5a-10	1	6a-10	-1	7a-10	1	8a-10	1
5a-11	2	6a-11	0	7a-11	0	8a-11	4
5a-12	1	6a-12	2	7a-12	-9	8a-12	1
5b-1	2	6b-1	4	7b-1	-5	8b-1	-6
5b-2	2	6b-2	0	7b-2	-8	8b-2	-3
5b-3	7	6b-3	1	7b-3	6	8b-3	-3
5b-4	2	6b-4	-2	7b-4	-10	8b-4	-3
5b-5	0	6b-5	6	7b-5	1	8b-5	0
5b-6	7	6b-6	0	7b-6	10	8b-6	11
5b-7	6	6b-7	5	7b-7	-3	8b-7	-6
5b-8	-2	6b-8	0	7b-8	4	8b-8	-5
5b-9	9	6b-9	2	7b-9	-7	8b-9	4
5b-10	-1	6b-10	6	7b-10	-2	8b-10	9
5b-11	4	6b-11	-1	7b-11	1	8b-11	-8
5b-12	6	6b-12	-1	7b-12	-12	8b-12	-1

9a-1	3	10a-1	2	11a-1	3	12a-1	7
9a-2	-7	10a-2	1	11a-2	-5	12a-2	-1
9a-3	4	10a-3	11	11a-3	-6	12a-3	-1
9a-4	11	10a-4	-9	11a-4	0	12a-4	-3
9a-5	-13	10a-5	11	11a-5	-10	12a-5	2
9a-6	-1	10a-6	2	11a-6	8	12a-6	-5
9a-7	-6	10a-7	-7	11a-7	5	12a-7	-1
9a-8	-10	10a-8	3	11a-8	7	12a-8	4
9a-9	-6	10a-9	0	11a-9	-4	12a-9	3
9a-10	7	10a-10	-5	11a-10	-3	12a-10	-9
9a-11	5	10a-11	-3	11a-11	12	12a-11	2
9a-12	5	10a-12	5	11a-12	4	12a-12	1
9b-1	-4	10b-1	-6	11b-1	-6	12b-1	13
9b-2	-4	10b-2	0	11b-2	-1	12b-2	2
9b-3	3	10b-3	-3	11b-3	1	12b-3	-1
9b-4	0	10b-4	9	11b-4	3	12b-4	-11
9b-5	10	10b-5	1	11b-5	5	12b-5	9
9b-6	5	10b-6	7	11b-6	-10	12b-6	11
9b-7	-1	10b-7	-4	11b-7	0	12b-7	-1
9b-8	1	10b-8	6	11b-8	9	12b-8	-10
9b-9	1	10b-9	0	11b-9	-10	12b-9	-2
9b-10	1	10b-10	-7	11b-10	9	12b-10	1
9b-11	-1	10b-11	-5	11b-11	13	12b-11	-3
9b-12	7	10b-12	0	11b-12	10	12b-12	-7

13a-1	2	14a-1	-6	15a-1	-2	16a-1	-2
13a-2	-2	14a-2	4	15a-2	-1	16a-2	-1
13a-3	2	14a-3	3	15a-3	5	16a-3	-2
13a-4	-3	14a-4	7	15a-4	-1	16a-4	0
13a-5	-2	14a-5	1	15a-5	0	16a-5	-5
13a-6	-1	14a-6	0	15a-6	3	16a-6	2
13a-7	4	14a-7	1	15a-7	1	16a-7	0
13a-8	-6	14a-8	-1	15a-8	2	16a-8	4
13a-9	4	14a-9	-3	15a-9	3	16a-9	-3
13a-10	-4	14a-10	-1	15a-10	-3	16a-10	7
13a-11	-2	14a-11	1	15a-11	-3	16a-11	1
13a-12	0	14a-12	0	15a-12	1	16a-12	-5
13b-1	2	14b-1	-1	15b-1	-1	16b-1	-7
13b-2	-6	14b-2	-1	15b-2	-7	16b-2	-2
13b-3	3	14b-3	6	15b-3	0	16b-3	4
13b-4	2	14b-4	0	15b-4	-2	16b-4	-3
13b-5	2	14b-5	-4	15b-5	6	16b-5	5
13b-6	0	14b-6	-5	15b-6	-1	16b-6	1
13b-7	2	14b-7	1	15b-7	2	16b-7	1
13b-8	0	14b-8	-4	15b-8	-5	16b-8	-5
13b-9	1	14b-9	4	15b-9	-5	16b-9	2
13b-10	-2	14b-10	-5	15b-10	-3	16b-10	-1
13b-11	-2	14b-11	-3	15b-11	2	16b-11	-2
13b-12	-4	14b-12	6	15b-12	1	16b-12	-3

17a-1	3	18a-1	3	19a-1	5	20a-1	-5
17a-2	1	18a-2	-4	19a-2	3	20a-2	2
17a-3	1	18a-3	2	19a-3	0	20a-3	-5
17a-4	-2	18a-4	5	19a-4	1	20a-4	7
17a-5	0	18a-5	7	19a-5	0	20a-5	-3
17a-6	1	18a-6	-4	19a-6	4	20a-6	5
17a-7	1	18a-7	-4	19a-7	5	20a-7	-6
17a-8	-4	18a-8	1	19a-8	7	20a-8	6
17a-9	0	18a-9	1	19a-9	4	20a-9	5
17a-10	7	18a-10	-1	19a-10	-5	20a-10	0
17a-11	2	18a-11	-6	19a-11	-3	20a-11	2
17a-12	-3	18a-12	1	19a-12	-5	20a-12	-3
17b-1	-1	18b-1	6	19b-1	7	20b-1	-2
17b-2	-2	18b-2	-3	19b-2	3	20b-2	-4
17b-3	3	18b-3	-4	19b-3	10	20b-3	-3
17b-4	4	18b-4	-6	19b-4	0	20b-4	-1
17b-5	-2	18b-5	4	19b-5	-3	20b-5	8
17b-6	2	18b-6	-5	19b-6	-2	20b-6	-2
17b-7	-3	18b-7	-5	19b-7	-7	20b-7	2
17b-8	-4	18b-8	0	19b-8	-1	20b-8	-5
17b-9	-4	18b-9	7	19b-9	7	20b-9	0
17b-10	-6	18b-10	3	19b-10	0	20b-10	-6
17b-11	1	18b-11	-1	19b-11	-8	20b-11	-4
17b-12	5	18b-12	-3	19b-12	3	20b-12	-7

21a-1	2	22a-1	1	23a-1	-4	24a-1	1
21a-2	2	22a-2	-4	23a-2	-4	24a-2	4
21a-3	4	22a-3	3	23a-3	4	24a-3	-4
21a-4	1	22a-4	-3	23a-4	5	24a-4	6
21a-5	-8	22a-5	1	23a-5	-5	24a-5	0
21a-6	1	22a-6	-3	23a-6	9	24a-6	4
21a-7	-2	22a-7	-5	23a-7	2	24a-7	-8
21a-8	0	22a-8	0	23a-8	1	24a-8	3
21a-9	9	22a-9	0	23a-9	-9	24a-9	7
21a-10	1	22a-10	-2	23a-10	-6	24a-10	-5
21a-11	7	22a-11	-4	23a-11	-8	24a-11	6
21a-12	-1	22a-12	-1	23a-12	3	24a-12	-8
21b-1	-3	22b-1	5	23b-1	-1	24b-1	-4
21b-2	6	22b-2	-9	23b-2	3	24b-2	-3
21b-3	-7	22b-3	-3	23b-3	-1	24b-3	-1
21b-4	-3	22b-4	-5	23b-4	-2	24b-4	10
21b-5	-2	22b-5	4	23b-5	3	24b-5	1
21b-6	-1	22b-6	1	23b-6	2	24b-6	8
21b-7	-2	22b-7	0	23b-7	-5	24b-7	4
21b-8	0	22b-8	-1	23b-8	2	24b-8	-1
21b-9	4	22b-9	8	23b-9	-1	24b-9	4
21b-10	0	22b-10	-2	23b-10	-4	24b-10	-5
21b-11	2	22b-11	-1	23b-11	2	24b-11	1
21b-12	-3	22b-12	-7	23b-12	3	24b-12	2

25a-1	-6	26a-1	19	27a-1	9	28a-1	12
25a-2	1	26a-2	9	27a-2	6	28a-2	6
25a-3	9	26a-3	-2	27a-3	11	28a-3	12
25a-4	2	26a-4	-7	27a-4	8	28a-4	4
25a-5	11	26a-5	-7	27a-5	-5	28a-5	6
25a-6	13	26a-6	16	27a-6	4	28a-6	-6
25a-7	-2	26a-7	9	27a-7	-6	28a-7	11
25a-8	-5	26a-8	4	27a-8	0	28a-8	-2
25a-9	6	26a-9	12	27a-9	-1	28a-9	3
25a-10	2	26a-10	13	27a-10	13	28a-10	-1
25a-11	12	26a-11	10	27a-11	0	28a-11	6
25a-12	13	26a-12	9	27a-12	19	28a-12	2
25b-1	-5	26b-1	4	27b-1	16	28b-1	-1
25b-2	11	26b-2	13	27b-2	-5	28b-2	14
25b-3	3	26b-3	1	27b-3	3	28b-3	6
25b-4	2	26b-4	-7	27b-4	4	28b-4	2
25b-5	4	26b-5	8	27b-5	0	28b-5	10
25b-6	7	26b-6	16	27b-6	-5	28b-6	6
25b-7	-5	26b-7	5	27b-7	16	28b-7	3
25b-8	-2	26b-8	13	27b-8	0	28b-8	0
25b-9	5	26b-9	2	27b-9	11	28b-9	-3
25b-10	12	26b-10	12	27b-10	-2	28b-10	12
25b-11	3	26b-11	-2	27b-11	14	28b-11	-6
25b-12	18	26b-12	3	27b-12	13	28b-12	10

29a-1	2	30a-1	14	31a-1	-1	32a-1	-3
29a-2	-1	30a-2	9	31a-2	4	32a-2	-2
29a-3	4	30a-3	14	31a-3	-8	32a-3	-6
29a-4	17	30a-4	9	31a-4	-2	32a-4	-4
29a-5	-9	30a-5	-7	31a-5	8	32a-5	0
29a-6	7	30a-6	17	31a-6	3	32a-6	-5
29a-7	18	30a-7	4	31a-7	-6	32a-7	-7
29a-8	0	30a-8	15	31a-8	-6	32a-8	4
29a-9	4	30a-9	9	31a-9	-5	32a-9	-6
29a-10	16	30a-10	8	31a-10	-6	32a-10	1
29a-11	4	30a-11	5	31a-11	-4	32a-11	3
29a-12	8	30a-12	0	31a-12	-8	32a-12	-1
29b-1	1	30b-1	15	31b-1	0	32b-1	-7
29b-2	-4	30b-2	4	31b-2	4	32b-2	5
29b-3	-2	30b-3	-8	31b-3	-6	32b-3	3
29b-4	9	30b-4	2	31b-4	-10	32b-4	-13
29b-5	3	30b-5	8	31b-5	4	32b-5	-7
29b-6	0	30b-6	-4	31b-6	-2	32b-6	-2
29b-7	0	30b-7	4	31b-7	5	32b-7	5
29b-8	10	30b-8	6	31b-8	-5	32b-8	-9
29b-9	-4	30b-9	1	31b-9	-2	32b-9	-9
29b-10	10	30b-10	5	31b-10	-3	32b-10	-12
29b-11	14	30b-11	15	31b-11	2	32b-11	-5
29b-12	4	30b-12	1	31b-12	-3	32b-12	1

33a-1	-6	34a-1	-3	35a-1	-3	36a-1	5
33a-2	-2	34a-2	-6	35a-2	-6	36a-2	-3
33a-3	-10	34a-3	5	35a-3	-8	36a-3	-5
33a-4	-1	34a-4	-4	35a-4	5	36a-4	8
33a-5	-3	34a-5	-8	35a-5	-3	36a-5	5
33a-6	-3	34a-6	4	35a-6	2	36a-6	-13
33a-7	-4	34a-7	-5	35a-7	-5	36a-7	0
33a-8	0	34a-8	-7	35a-8	-2	36a-8	-5
33a-9	1	34a-9	2	35a-9	2	36a-9	-8
33a-10	-10	34a-10	2	35a-10	-1	36a-10	-3
33a-11	-8	34a-11	2	35a-11	8	36a-11	-9
33a-12	2	34a-12	3	35a-12	0	36a-12	-12
33b-1	-8	34b-1	-5	35b-1	-10	36b-1	1
33b-2	-7	34b-2	-5	35b-2	-9	36b-2	2
33b-3	-4	34b-3	-10	35b-3	4	36b-3	-13
33b-4	-4	34b-4	-3	35b-4	-1	36b-4	-6
33b-5	-6	34b-5	0	35b-5	5	36b-5	-2
33b-6	1	34b-6	6	35b-6	-2	36b-6	-14
33b-7	1	34b-7	2	35b-7	-3	36b-7	0
33b-8	4	34b-8	-4	35b-8	0	36b-8	-5
33b-9	-3	34b-9	7	35b-9	-2	36b-9	-5
33b-10	4	34b-10	1	35b-10	0	36b-10	-12
33b-11	-7	34b-11	-7	35b-11	-2	36b-11	5
33b-12	0	34b-12	3	35b-12	0	36b-12	-6

37a-1	6	38a-1	-5	39a-1	3	40a-1	6
37a-2	-5	38a-2	-10	39a-2	-2	40a-2	-2
37a-3	5	38a-3	0	39a-3	1	40a-3	10
37a-4	-2	38a-4	4	39a-4	0	40a-4	11
37a-5	7	38a-5	7	39a-5	-7	40a-5	-12
37a-6	6	38a-6	3	39a-6	-7	40a-6	-11
37a-7	2	38a-7	-3	39a-7	-1	40a-7	9
37a-8	1	38a-8	-9	39a-8	0	40a-8	-9
37a-9	-1	38a-9	-5	39a-9	-1	40a-9	10
37a-10	-3	38a-10	0	39a-10	-11	40a-10	-10
37a-11	0	38a-11	1	39a-11	-3	40a-11	-1
37a-12	0	38a-12	1	39a-12	2	40a-12	-1
37b-1	-3	38b-1	10	39b-1	6	40b-1	-13
37b-2	9	38b-2	-11	39b-2	-6	40b-2	13
37b-3	12	38b-3	6	39b-3	6	40b-3	11
37b-4	3	38b-4	2	39b-4	3	40b-4	4
37b-5	-4	38b-5	0	39b-5	0	40b-5	-4
37b-6	-1	38b-6	-13	39b-6	4	40b-6	9
37b-7	-4	38b-7	-3	39b-7	-9	40b-7	-4
37b-8	8	38b-8	-2	39b-8	-7	40b-8	2
37b-9	5	38b-9	-7	39b-9	3	40b-9	-7
37b-10	-6	38b-10	9	39b-10	-8	40b-10	4
37b-11	-1	38b-11	11	39b-11	-9	40b-11	10
37b-12	5	38b-12	12	39b-12	-1	40b-12	-2

41a-1	-10	42a-1	10	43a-1	-18	44a-1	-20
41a-2	0	42a-2	0	43a-2	-17	44a-2	-21
41a-3	-11	42a-3	13	43a-3	-27	44a-3	-17
41a-4	0	42a-4	-13	43a-4	-17	44a-4	-8
41a-5	-7	42a-5	-12	43a-5	-9	44a-5	-15
41a-6	1	42a-6	10	43a-6	-15	44a-6	-11
41a-7	-3	42a-7	-7	43a-7	-11	44a-7	-17
41a-8	0	42a-8	2	43a-8	-25	44a-8	-20
41a-9	10	42a-9	-6	43a-9	-7	44a-9	-26
41a-10	2	42a-10	-6	43a-10	-7	44a-10	-10
41a-11	-3	42a-11	2	43a-11	-8	44a-11	-5
41a-12	0	42a-12	4	43a-12	-12	44a-12	-19
41b-1	1	42b-1	0	43b-1	-18	44b-1	-4
41b-2	5	42b-2	6	43b-2	-18	44b-2	-11
41b-3	5	42b-3	-13	43b-3	-23	44b-3	-9
41b-4	-6	42b-4	-6	43b-4	-27	44b-4	-14
41b-5	10	42b-5	-1	43b-5	-22	44b-5	-22
41b-6	-13	42b-6	8	43b-6	-25	44b-6	-18
41b-7	11	42b-7	4	43b-7	-16	44b-7	-6
41b-8	-9	42b-8	1	43b-8	-17	44b-8	-23
41b-9	1	42b-9	5	43b-9	-30	44b-9	-24
41b-10	4	42b-10	-4	43b-10	-10	44b-10	-21
41b-11	13	42b-11	-9	43b-11	-17	44b-11	-19
41b-12	-13	42b-12	0	43b-12	-24	44b-12	-17

45a-1	-14	46a-1	-14	47a-1	-8	48a-1	-15
45a-2	-9	46a-2	-16	47a-2	-11	48a-2	-11
45a-3	-17	46a-3	-19	47a-3	-23	48a-3	-20
45a-4	-16	46a-4	-23	47a-4	-17	48a-4	-3
45a-5	-5	46a-5	-23	47a-5	-15	48a-5	-12
45a-6	-21	46a-6	-26	47a-6	-7	48a-6	-17
45a-7	-26	46a-7	-19	47a-7	-19	48a-7	-25
45a-8	-25	46a-8	-13	47a-8	-15	48a-8	-16
45a-9	-23	46a-9	-16	47a-9	-14	48a-9	-25
45a-10	-17	46a-10	-10	47a-10	-10	48a-10	-23
45a-11	-8	46a-11	-9	47a-11	-14	48a-11	-11
45a-12	-16	46a-12	-22	47a-12	-12	48a-12	-21
45b-1	-19	46b-1	-9	47b-1	-28	48b-1	-16
45b-2	-18	46b-2	-12	47b-2	-22	48b-2	-20
45b-3	-28	46b-3	-7	47b-3	-24	48b-3	-18
45b-4	-22	46b-4	-19	47b-4	-16	48b-4	-15
45b-5	-13	46b-5	-10	47b-5	-12	48b-5	-13
45b-6	-16	46b-6	-13	47b-6	-11	48b-6	-23
45b-7	-26	46b-7	-17	47b-7	-12	48b-7	-6
45b-8	-15	46b-8	-26	47b-8	-22	48b-8	-26
45b-9	-24	46b-9	-15	47b-9	-6	48b-9	-28
45b-10	-13	46b-10	-24	47b-10	-14	48b-10	-14
45b-11	-25	46b-11	-14	47b-11	-15	48b-11	-17
45b-12	-22	46b-12	-7	47b-12	-5	48b-12	-14

49a-1	21	50a-1	3	51a-1	0	52a-1	-7
49a-2	14	50a-2	8	51a-2	-16	52a-2	-3
49a-3	-5	50a-3	-1	51a-3	-18	52a-3	-7
49a-4	-15	50a-4	7	51a-4	12	52a-4	-16
49a-5	-8	50a-5	17	51a-5	10	52a-5	10
49a-6	-15	50a-6	-18	51a-6	-7	52a-6	7
49a-7	16	50a-7	-19	51a-7	7	52a-7	-10
49a-8	2	50a-8	-2	51a-8	-17	52a-8	16
49a-9	-12	50a-9	21	51a-9	12	52a-9	-7
49a-10	15	50a-10	18	51a-10	-7	52a-10	-3
49a-11	7	50a-11	-12	51a-11	30	52a-11	-14
49a-12	-3	50a-12	-12	51a-12	-2	52a-12	-7
49b-1	-12	50b-1	3	51b-1	-9	52b-1	-2
49b-2	-13	50b-2	-13	51b-2	13	52b-2	-8
49b-3	-12	50b-3	-14	51b-3	-1	52b-3	7
49b-4	19	50b-4	13	51b-4	5	52b-4	0
49b-5	-2	50b-5	-11	51b-5	-2	52b-5	9
49b-6	2	50b-6	7	51b-6	3	52b-6	9
49b-7	-1	50b-7	-26	51b-7	9	52b-7	-18
49b-8	11	50b-8	-20	51b-8	-9	52b-8	-9
49b-9	-7	50b-9	-5	51b-9	-15	52b-9	2
49b-10	1	50b-10	-6	51b-10	8	52b-10	3
49b-11	0	50b-11	-4	51b-11	-13	52b-11	4
49b-12	10	50b-12	-10	51b-12	5	52b-12	2

53a-1	21	54a-1	-5	55a-1	-12	56a-1	-11
53a-2	3	54a-2	12	55a-2	-13	56a-2	-29
53a-3	-9	54a-3	-23	55a-3	-11	56a-3	-13
53a-4	2	54a-4	27	55a-4	-13	56a-4	-5
53a-5	-26	54a-5	-14	55a-5	-25	56a-5	-9
53a-6	10	54a-6	7	55a-6	-11	56a-6	-6
53a-7	16	54a-7	-14	55a-7	0	56a-7	-17
53a-8	6	54a-8	13	55a-8	-14	56a-8	-10
53a-9	-7	54a-9	18	55a-9	-11	56a-9	-10
53a-10	13	54a-10	14	55a-10	-27	56a-10	-4
53a-11	1	54a-11	-25	55a-11	-12	56a-11	-13
53a-12	6	54a-12	13	55a-12	-10	56a-12	-8
53b-1	4	54b-1	-2	55b-1	-15	56b-1	-16
53b-2	-10	54b-2	-22	55b-2	-20	56b-2	-8
53b-3	0	54b-3	21	55b-3	-12	56b-3	-17
53b-4	-3	54b-4	0	55b-4	-16	56b-4	-19
53b-5	11	54b-5	4	55b-5	-27	56b-5	-2
53b-6	-9	54b-6	-4	55b-6	-25	56b-6	-22
53b-7	11	54b-7	-22	55b-7	-4	56b-7	-11
53b-8	5	54b-8	-10	55b-8	-17	56b-8	-7
53b-9	7	54b-9	13	55b-9	-7	56b-9	-28
53b-10	2	54b-10	12	55b-10	-21	56b-10	-26
53b-11	-18	54b-11	-4	55b-11	-15	56b-11	-29
53b-12	-18	54b-12	3	55b-12	-21	56b-12	-18

57a-1	-21	58a-1	-23	59a-1	-4	60a-1	-10
57a-2	-16	58a-2	-23	59a-2	-18	60a-2	-21
57a-3	-22	58a-3	-6	59a-3	-16	60a-3	-13
57a-4	-16	58a-4	-11	59a-4	-12	60a-4	-9
57a-5	-11	58a-5	-24	59a-5	-18	60a-5	-11
57a-6	-8	58a-6	-15	59a-6	-3	60a-6	-21
57a-7	-21	58a-7	-23	59a-7	-2	60a-7	-19
57a-8	-25	58a-8	-13	59a-8	-17	60a-8	-11
57a-9	-17	58a-9	-27	59a-9	-21	60a-9	-4
57a-10	-3	58a-10	-9	59a-10	-2	60a-10	-16
57a-11	-15	58a-11	-29	59a-11	-12	60a-11	-25
57a-12	-23	58a-12	-9	59a-12	-27	60a-12	-23
57b-1	-10	58b-1	-20	59b-1	-6	60b-1	-17
57b-2	-18	58b-2	-28	59b-2	-16	60b-2	-17
57b-3	-25	58b-3	-12	59b-3	-2	60b-3	-11
57b-4	-17	58b-4	-5	59b-4	-5	60b-4	-13
57b-5	-8	58b-5	-3	59b-5	-11	60b-5	-25
57b-6	-20	58b-6	-5	59b-6	-17	60b-6	-14
57b-7	-18	58b-7	-23	59b-7	-11	60b-7	-22
57b-8	-25	58b-8	-1	59b-8	-14	60b-8	-18
57b-9	-16	58b-9	-20	59b-9	-20	60b-9	-11
57b-10	-19	58b-10	-27	59b-10	-17	60b-10	-5
57b-11	-9	58b-11	-20	59b-11	-5	60b-11	-7
57b-12	-14	58b-12	-21	59b-12	-19	60b-12	-2

61a-1	5	62a-1	-2	63a-1	1	64a-1	9
61a-2	-10	62a-2	12	63a-2	-2	64a-2	6
61a-3	-1	62a-3	2	63a-3	-15	64a-3	-6
61a-4	4	62a-4	-8	63a-4	-4	64a-4	-1
61a-5	16	62a-5	4	63a-5	9	64a-5	2
61a-6	-5	62a-6	-13	63a-6	-7	64a-6	19
61a-7	12	62a-7	12	63a-7	12	64a-7	6
61a-8	22	62a-8	9	63a-8	21	64a-8	17
61a-9	10	62a-9	9	63a-9	3	64a-9	-2
61a-10	15	62a-10	-16	63a-10	-21	64a-10	-7
61a-11	-14	62a-11	12	63a-11	-8	64a-11	-7
61a-12	6	62a-12	0	63a-12	-7	64a-12	-18
61b-1	3	62b-1	-2	63b-1	-7	64b-1	6
61b-2	1	62b-2	-11	63b-2	-9	64b-2	-14
61b-3	-3	62b-3	4	63b-3	-13	64b-3	-11
61b-4	-19	62b-4	22	63b-4	2	64b-4	11
61b-5	15	62b-5	-4	63b-5	21	64b-5	-1
61b-6	8	62b-6	4	63b-6	10	64b-6	3
61b-7	-7	62b-7	-2	63b-7	-8	64b-7	5
61b-8	0	62b-8	15	63b-8	14	64b-8	14
61b-9	-9	62b-9	16	63b-9	2	64b-9	13
61b-10	0	62b-10	-18	63b-10	-7	64b-10	5
61b-11	-4	62b-11	-5	63b-11	-9	64b-11	0
61b-12	-4	62b-12	-5	63b-12	7	64b-12	-6

65a-1	-17	66a-1	6	67a-1	-27	68a-1	-15
65a-2	12	66a-2	-13	67a-2	31	68a-2	32
65a-3	9	66a-3	-2	67a-3	-16	68a-3	0
65a-4	12	66a-4	-15	67a-4	-24	68a-4	1
65a-5	21	66a-5	1	67a-5	-2	68a-5	-19
65a-6	-5	66a-6	-12	67a-6	18	68a-6	-11
65a-7	6	66a-7	-18	67a-7	-20	68a-7	10
65a-8	3	66a-8	14	67a-8	-13	68a-8	-14
65a-9	1	66a-9	6	67a-9	-2	68a-9	-1
65a-10	-6	66a-10	-10	67a-10	17	68a-10	-5
65a-11	-11	66a-11	-11	67a-11	10	68a-11	2
65a-12	13	66a-12	-20	67a-12	-8	68a-12	13
65b-1	1	66b-1	-19	67b-1	12	68b-1	5
65b-2	-13	66b-2	19	67b-2	-1	68b-2	16
65b-3	-1	66b-3	2	67b-3	-3	68b-3	-31
65b-4	8	66b-4	-3	67b-4	-32	68b-4	-19
65b-5	3	66b-5	10	67b-5	12	68b-5	-5
65b-6	10	66b-6	5	67b-6	-1	68b-6	-30
65b-7	7	66b-7	-7	67b-7	-9	68b-7	32
65b-8	-6	66b-8	-2	67b-8	-24	68b-8	18
65b-9	-10	66b-9	3	67b-9	-10	68b-9	-18
65b-10	19	66b-10	-3	67b-10	9	68b-10	-11
65b-11	-1	66b-11	-7	67b-11	0	68b-11	-1
65b-12	-1	66b-12	-12	67b-12	21	68b-12	-12

69a-1	1	70a-1	14	71a-1	28	72a-1	6
69a-2	-37	70a-2	-21	71a-2	6	72a-2	11
69a-3	-10	70a-3	-33	71a-3	-11	72a-3	-40
69a-4	17	70a-4	11	71a-4	-20	72a-4	10
69a-5	-26	70a-5	8	71a-5	27	72a-5	24
69a-6	35	70a-6	-19	71a-6	-10	72a-6	-30
69a-7	0	70a-7	-3	71a-7	30	72a-7	-21
69a-8	-7	70a-8	-23	71a-8	15	72a-8	26
69a-9	-8	70a-9	9	71a-9	27	72a-9	-6
69a-10	-7	70a-10	-14	71a-10	-12	72a-10	1
69a-11	-3	70a-11	-31	71a-11	1	72a-11	-30
69a-12	-10	70a-12	-8	71a-12	20	72a-12	-26
69b-1	-7	70b-1	-12	71b-1	-15	72b-1	3
69b-2	0	70b-2	27	71b-2	0	72b-2	-2
69b-3	34	70b-3	-4	71b-3	5	72b-3	-2
69b-4	11	70b-4	2	71b-4	13	72b-4	-20
69b-5	5	70b-5	24	71b-5	11	72b-5	2
69b-6	-5	70b-6	-12	71b-6	14	72b-6	4
69b-7	-14	70b-7	-7	71b-7	-29	72b-7	29
69b-8	10	70b-8	12	71b-8	17	72b-8	18
69b-9	8	70b-9	-26	71b-9	-24	72b-9	20
69b-10	-19	70b-10	-27	71b-10	16	72b-10	31
69b-11	25	70b-11	14	71b-11	12	72b-11	-17
69b-12	-16	70b-12	10	71b-12	-3	72b-12	-1

73a-1	0	74a-1	-52	75a-1	25	76a-1	15
73a-2	0	74a-2	13	75a-2	-31	76a-2	48
73a-3	16	74a-3	-21	75a-3	6	76a-3	-21
73a-4	22	74a-4	-30	75a-4	0	76a-4	-13
73a-5	41	74a-5	-31	75a-5	-20	76a-5	-20
73a-6	14	74a-6	-22	75a-6	5	76a-6	21
73a-7	50	74a-7	-10	75a-7	-4	76a-7	-13
73a-8	1	74a-8	20	75a-8	23	76a-8	5
73a-9	11	74a-9	23	75a-9	-16	76a-9	28
73a-10	12	74a-10	19	75a-10	14	76a-10	1
73a-11	37	74a-11	-44	75a-11	-41	76a-11	-34
73a-12	15	74a-12	-44	75a-12	22	76a-12	-30
73b-1	-22	74b-1	47	75b-1	-16	76b-1	-26
73b-2	6	74b-2	-34	75b-2	-11	76b-2	-32
73b-3	23	74b-3	-33	75b-3	4	76b-3	-12
73b-4	13	74b-4	44	75b-4	-8	76b-4	49
73b-5	-5	74b-5	28	75b-5	-3	76b-5	13
73b-6	25	74b-6	29	75b-6	8	76b-6	-10
73b-7	-4	74b-7	-16	75b-7	1	76b-7	17
73b-8	-19	74b-8	-6	75b-8	30	76b-8	17
73b-9	-19	74b-9	-8	75b-9	-57	76b-9	-37
73b-10	7	74b-10	-48	75b-10	-5	76b-10	-24
73b-11	-48	74b-11	-20	75b-11	-39	76b-11	-43
73b-12	23	74b-12	-19	75b-12	-6	76b-12	-10

77a-1	37	78a-1	-9	79a-1	5	80a-1	-40
77a-2	5	78a-2	-40	79a-2	-1	80a-2	12
77a-3	-18	78a-3	-46	79a-3	53	80a-3	21
77a-4	-17	78a-4	-11	79a-4	54	80a-4	-49
77a-5	48	78a-5	2	79a-5	-66	80a-5	-1
77a-6	32	78a-6	-8	79a-6	-14	80a-6	-57
77a-7	35	78a-7	-16	79a-7	-19	80a-7	-6
77a-8	5	78a-8	-39	79a-8	12	80a-8	60
77a-9	32	78a-9	-24	79a-9	38	80a-9	22
77a-10	-9	78a-10	4	79a-10	-41	80a-10	6
77a-11	-10	78a-11	-43	79a-11	4	80a-11	-66
77a-12	-19	78a-12	1	79a-12	46	80a-12	21
77b-1	-14	78b-1	-38	79b-1	17	80b-1	-1
77b-2	-6	78b-2	-32	79b-2	22	80b-2	-51
77b-3	-6	78b-3	16	79b-3	54	80b-3	-29
77b-4	11	78b-4	-33	79b-4	53	80b-4	-58
77b-5	3	78b-5	1	79b-5	-11	80b-5	31
77b-6	-1	78b-6	10	79b-6	21	80b-6	-14
77b-7	25	78b-7	16	79b-7	-55	80b-7	-24
77b-8	40	78b-8	24	79b-8	36	80b-8	52
77b-9	-36	78b-9	41	79b-9	-13	80b-9	-7
77b-10	-29	78b-10	-24	79b-10	38	80b-10	-6
77b-11	-13	78b-11	25	79b-11	-16	80b-11	-46
77b-12	30	78b-12	26	79b-12	53	80b-12	17

81a-1	-30	82a-1	-61	83a-1	-36	84a-1	17
81a-2	15	82a-2	26	83a-2	21	84a-2	31
81a-3	24	82a-3	45	83a-3	-1	84a-3	16
81a-4	6	82a-4	32	83a-4	-71	84a-4	-4
81a-5	58	82a-5	19	83a-5	-15	84a-5	3
81a-6	-23	82a-6	37	83a-6	-20	84a-6	59
81a-7	-34	82a-7	-42	83a-7	28	84a-7	-6
81a-8	-62	82a-8	-32	83a-8	-19	84a-8	2
81a-9	-14	82a-9	70	83a-9	-25	84a-9	0
81a-10	40	82a-10	-53	83a-10	0	84a-10	-2
81a-11	-19	82a-11	-1	83a-11	15	84a-11	-28
81a-12	-62	82a-12	6	83a-12	30	84a-12	26
81b-1	65	82b-1	13	83b-1	-18	84b-1	-24
81b-2	51	82b-2	19	83b-2	-50	84b-2	-49
81b-3	-37	82b-3	25	83b-3	35	84b-3	10
81b-4	44	82b-4	-19	83b-4	-10	84b-4	41
81b-5	-19	82b-5	-44	83b-5	-14	84b-5	-49
81b-6	-31	82b-6	61	83b-6	-25	84b-6	-17
81b-7	-6	82b-7	45	83b-7	24	84b-7	39
81b-8	-14	82b-8	24	83b-8	71	84b-8	2
81b-9	-7	82b-9	23	83b-9	33	84b-9	-61
81b-10	-34	82b-10	2	83b-10	17	84b-10	-30
81b-11	-18	82b-11	-18	83b-11	51	84b-11	-2
81b-12	-13	82b-12	52	83b-12	-10	84b-12	43

85a-1	44	86a-1	-53	87a-1	-1	88a-1	-23
85a-2	56	86a-2	-19	87a-2	76	88a-2	8
85a-3	-36	86a-3	56	87a-3	52	88a-3	-20
85a-4	-43	86a-4	11	87a-4	-7	88a-4	29
85a-5	31	86a-5	4	87a-5	16	88a-5	29
85a-6	5	86a-6	-3	87a-6	3	88a-6	30
85a-7	-1	86a-7	56	87a-7	11	88a-7	-71
85a-8	-34	86a-8	18	87a-8	14	88a-8	-16
85a-9	11	86a-9	-4	87a-9	25	88a-9	21
85a-10	-5	86a-10	0	87a-10	-32	88a-10	-12
85a-11	-21	86a-11	33	87a-11	-9	88a-11	-73
85a-12	37	86a-12	-8	87a-12	-8	88a-12	3
85b-1	-9	86b-1	-7	87b-1	35	88b-1	11
85b-2	-22	86b-2	64	87b-2	-26	88b-2	8
85b-3	5	86b-3	11	87b-3	19	88b-3	40
85b-4	40	86b-4	63	87b-4	-27	88b-4	-43
85b-5	3	86b-5	72	87b-5	-53	88b-5	-22
85b-6	42	86b-6	67	87b-6	-9	88b-6	13
85b-7	-3	86b-7	-7	87b-7	-8	88b-7	9
85b-8	40	86b-8	31	87b-8	17	88b-8	-36
85b-9	34	86b-9	8	87b-9	15	88b-9	17
85b-10	-1	86b-10	17	87b-10	-35	88b-10	-26
85b-11	-69	86b-11	39	87b-11	8	88b-11	-34
85b-12	37	86b-12	60	87b-12	0	88b-12	7

89a-1	-40	90a-1	-53
89a-2	7	90a-2	31
89a-3	-51	90a-3	28
89a-4	9	90a-4	11
89a-5	-67	90a-5	-33
89a-6	25	90a-6	-32
89a-7	-61	90a-7	-12
89a-8	-76	90a-8	49
89a-9	15	90a-9	-67
89a-10	-23	90a-10	-16
89a-11	47	90a-11	74
89a-12	4	90a-12	-63
89b-1	17	90b-1	6
89b-2	30	90b-2	-46
89b-3	60	90b-3	3
89b-4	4	90b-4	-3
89b-5	-73	90b-5	-47
89b-6	34	90b-6	-8
89b-7	-48	90b-7	-58
89b-8	3	90b-8	-12
89b-9	-7	90b-9	17
89b-10	36	90b-10	-7
89b-11	52	90b-11	-35
89b-12	7	90b-12	37