



NumberSense

Meet the Cast

STANDARD EDITION

Spark & Anvil

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This book collects 6 chapter books from the NumberSense cast — each character embodies a different curricular primitive; together they teach the full subject.

Methodology: story-based learning, where the characters embody the ideas being taught, with a trauma-informed, emotionally-safe approach.

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This is Volume 2 of 2 of the *NumberSense — Meet the Cast* series; each volume is a complete standalone book you can read on its own.

For everyone who learns by hearing a story first.

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Introduction

The NumberSense cast was authored to embody the curriculum, not decorate around it. Each of the 6 characters you'll meet in this book teaches a specific primitive — a particular tactic, a particular technique, a particular way of seeing. Together they form an ensemble: the cast IS the curriculum.

Read in any order. Each chapter stands alone.

Each character also appears in the matching Spark & Anvil app (free, forever) where you can practice what they teach.

— *The editors at Spark & Anvil*

Landmark Lena

benchmark numbers — judge any number by how it sits next to friendly landmarks like 0, a half, a whole, 10, 50, and 100



Landmark Lena carried a folded paper map everywhere, even indoors, even when she clearly knew the way. She liked knowing where things were in relation to other things. "I'm never lost," she'd say, "as long as I can see one landmark I know."

On the NumberSense screen, she showed up whenever a number left a kid feeling adrift.

Jonah was staring at a question about $\frac{7}{12}$ — was it more than half, or less? He had no idea. The numbers just floated there, meaningless.

"You feel lost," Lena said gently, unfolding her map. "That's because you're looking at seven-twelfths like it's a stranger. Let's find a landmark near it. What's *half* of twelve?"

"Six," said Jonah.

"So six-twelfths would be exactly one half. That's our landmark — the halfway mark." She traced it with a finger. "Now, is seven-twelfths bigger or smaller than six-twelfths?"

"Bigger. It's seven, not six."

"Then you already have your answer. Seven-twelfths is just past the halfway landmark. A little more than half." She refolded her map. "You don't have to know *exactly* what seven-twelfths is. You just have to know what it's *near*. And it's near a half — just on the far side of it."

Jonah let out a breath. The number didn't feel like a stranger anymore.



Lena grew up in a town built around one tall hill with a clock tower on top.

You could see that tower from almost anywhere, and her whole town gave directions by it. "Two streets past the tower." "Just before you reach the tower." "On the far side, away from the tower." Nobody in her town ever felt truly lost, because there was always that one landmark to measure everything against.

When she started learning math, she went looking for the clock towers of the number world — the friendly, can't-miss-them numbers that everything else could be measured against. Zero. One half. One whole. Ten. Fifty. A hundred.

She found that she almost never needed a number's *exact* value. She just needed to know which landmark it was near, and which side of it it sat on. Was it just under a hundred? Just over a half? A hair above ten? That was usually enough to understand it completely — and to catch a silly answer before it fooled her.

She drew her landmarks on a long paper strip and carried it folded in her pocket, the way her town had carried its clock tower in plain sight.



The landmarks were brilliant for catching mistakes, Lena explained.

A girl named Priya had multiplied something and gotten **48**, but she wasn't sure it was right.

"Let's not check it the long way," Lena said. "Let's use a landmark. Your two numbers — round each one to a friendly landmark in your head. About what should the answer be near?"

Priya squinted. "Um... it should be somewhere around fifty."

"And forty-eight is...?"

"Right next to fifty!" Priya said. "So it's probably right."

"Probably right," Lena agreed. "If you'd gotten five hundred, or four, you'd know instantly something had gone wrong, because those aren't anywhere near our landmark. The landmark doesn't give you the exact answer. It tells you the *neighborhood* the answer should live in. And if your answer shows up in the wrong neighborhood, you've caught a mistake before it caught you."

Priya wrote: *Check the neighborhood. Is my answer near the landmark it should be?*



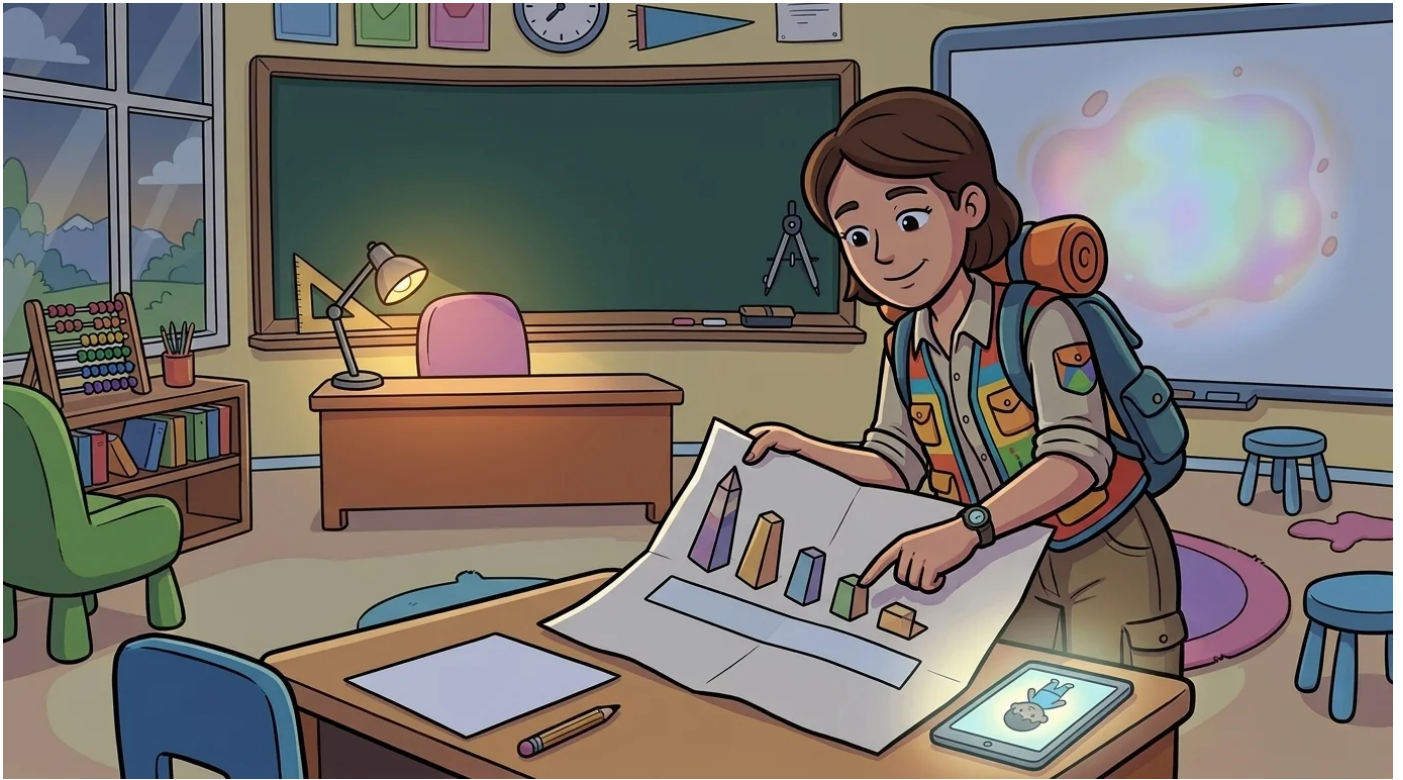
What Lena wanted most was for kids to stop feeling lost in front of a number.

"Lost is the worst feeling in math," she told a boy named Cole, who tended to freeze up. "Your brain goes blank, and the number just sits there like a wall. But you're almost never as lost as you feel. There's always a landmark nearby." She unfolded her map. "Is it near zero, or near a whole? Near ten, or near a hundred? More than half, or less? You don't have to know the number exactly to know where it *lives*. And the second you find one landmark you recognize, the lost feeling starts to fade."

Cole tried it on a number that had scared him a minute earlier. He didn't solve it exactly. He just found the landmark it was near — *a bit less than a hundred* — and suddenly it wasn't a wall anymore. It was just a place, near a place he knew.

"Huh," he said. "It's not scary. It's just close to a hundred."

"Now you're reading the map," Lena said.



That evening, after the screen went dim, Lena unfolded her paper strip of landmarks one more time — zero, a half, one, ten, fifty, a hundred — the friendly towers of the number world, right where they always were.

Cole's last message glowed softly: *I found a landmark and I stopped feeling lost.*

She read it and felt something settle in her chest, steady as a clock tower on a hill.

That was the gift she most wanted to give — not a fast answer, but the end of that blank, adrift feeling. Because a number you can place is a number you're no longer afraid of. And there is a deep, quiet calm, she thought, folding her map away, in knowing that wherever you find yourself, however strange the ground, there is always some familiar landmark close by — and the moment you spot it, you are not lost at all.

Read it? Now hear Landmark Lena's audio drama + go play — scan or visit:



<https://spark-and-anvil.org/cast/numbersense/landmark-lena>

Factor Fiona

factors and multiples — every number is built from smaller numbers multiplied together, and seeing those building blocks makes hard arithmetic come apart in your hands



Factor Fiona had a tool belt, and she wore it even on the days she wasn't building anything, because you never knew when a number might need taking apart.

She showed up on the NumberSense screen whenever a number was sitting there pretending to be solid.

Dev was scowling at **24**. The problem wanted him to do something clever with it, and to him twenty-four was just... twenty-four. One lump. A wall.

"It only *looks* solid," Fiona said, unclipping an imaginary wrench. "Watch. Twenty-four isn't a lump. It's built. It's six fours, fitted together. Or eight threes. Or four sixes. Or two twelves. Or three eights." Her hands moved like she was turning a thing over to find the seams. "All those are hiding inside twenty-four. They're its building blocks — its *factors*. And once you can see the blocks, you can take the number apart and put it back together whatever way the problem needs."

Dev stared. "Twenty-four is *all* of those?"

"All at once," said Fiona, grinning. "A number isn't one thing. It's everything it's made of."



Fiona learned to see the blocks from her uncle, who built furniture.

She'd watch him look at a finished chair — a solid, whole thing — and somehow see, underneath, every joint and peg and plank that made it. "I can't help it," he told her. "Once you've *built* a chair, you can never look at one as just a chair again. You see how it goes together. And anything you can see how it's built, you can fix, or copy, or change."

Young Fiona started doing that with numbers. She'd take a number and pull it apart into the smaller numbers multiplied together to make it. Thirty-six? That was six sixes — or four nines, or two eighteens, or three twelves. Each number stopped being a lump and became a little kit of parts.

And just like her uncle and his chairs, once she could see what a number was built from, she could *do* things with it. Hard multiplications came apart into easy steps. Numbers that didn't seem related turned out to share a building block. The whole number world stopped being a row of solid walls and became a workshop full of parts she could mix and match.



The building blocks were a superpower for multiplying, Fiona showed kids.

A girl named Sana was stuck on a problem that needed **$24 \times \text{something}$** , and the something was awkward.

"Don't multiply by all of twenty-four at once," Fiona said. "Take it apart. Twenty-four is eight times three. So instead of one scary multiply, do two friendly ones — multiply by eight, then by three. Or break it however helps. Six times four. Two times twelve. You pick the blocks that make *your* problem easiest."

Sana tried it, multiplying by the easy block first, then the next. "That was so much less scary," she said. "I just did it in two little steps instead of one big one."

"That's the whole trick," Fiona said. "A hard number is just easy numbers wearing a disguise. Take it apart into its blocks, deal with the blocks one at a time, and the hard thing quietly falls to pieces in your hands."

Sana wrote: *Break the number into factors. Do the easy pieces one at a time.*



What Fiona loved most was the moment a kid stopped seeing a number as a wall.

"Walls are scary because you can't get through them," she told a boy named Theo, who used to freeze at big numbers. "But a number was never a wall. It was always built — and anything built can be taken apart." She tapped her tool belt. "Once you know what a number is *made of*, you're not stuck staring at the outside anymore. You're holding the pieces. And when you're holding the pieces, you're the one in charge. You can rebuild it any way you like."

Theo took a number that had scared him and pulled it apart into its factors, naming each block. "It's not a wall," he said slowly, turning the pieces over in his head. "It's a kit."

"It was always a kit," Fiona said. "You just couldn't see the seams yet."



That evening, after the app powered down, Fiona unclipped her tool belt and hung it on its hook, the way her uncle used to hang his at the end of a build.

Theo's last message glowed on the screen: *Numbers aren't walls. They're kits. I'm in charge of the pieces.*

She read it twice and felt the warm, particular pride of a maker who'd taught someone to see the seams.

That was what she most wanted a kid to keep — not any single factor, but the feeling of being the one *holding the pieces*. Because a number you understand the insides of is a number that can't intimidate you. And there is a deep, steady confidence, she thought, hanging up her belt, in knowing that nothing solid is truly solid — that anything built can be understood, and anything you understand, you can take apart, and rebuild, and make your own.

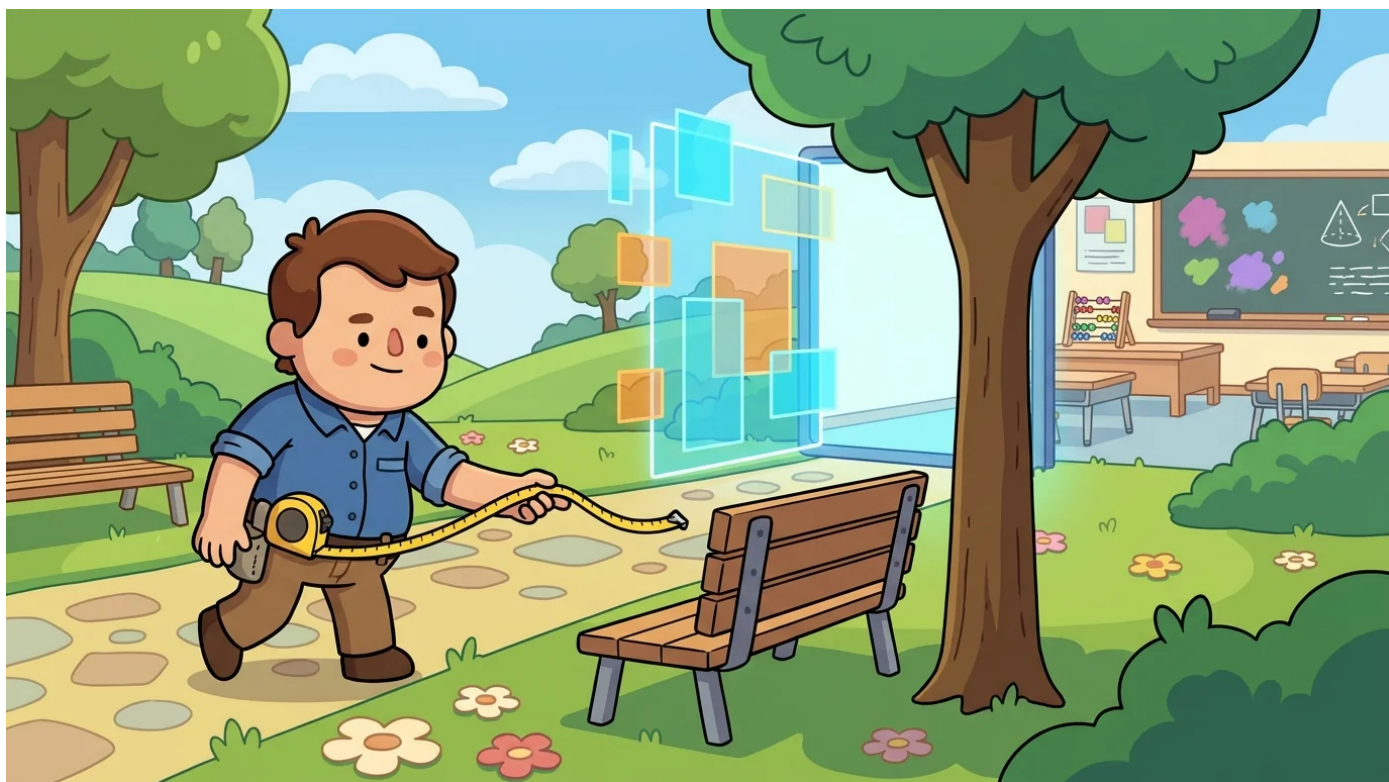
Read it? Now hear Factor Fiona's audio drama + go play — scan or visit:



<https://spark-and-anvil.org/cast/numbersense/factor-fiona>

Gap Gus

constant difference — subtraction is the gap between two numbers, and if you slide both numbers the same amount, the gap never changes, so you can shift them both to land on friendly numbers



Gap Gus had a long tape measure clipped to his belt, and he saw the whole world as distances between things. Not "the bench is *here* and the tree is *there*," but "the bench and the tree are eleven steps apart." The exact spots didn't interest him much. The *gap* between them did.

He'd amble onto the NumberSense screen whenever a subtraction was making a kid's head hurt.

Aisha was wrestling with $83 - 47$. "Eighty-three take away forty-seven," she groaned. "All that borrowing and carrying. I always mess it up."

"Then stop subtracting," Gus said easily, "and start measuring. Subtraction isn't really 'take away.' It's the *gap*. How far is it from forty-seven up to eighty-three? That's your answer." He unspooled a bit of tape. "And here's the beautiful part. If I slide *both* numbers up by the same amount, the gap between them doesn't change at all. Forty-seven is so close to fifty — let me push it up by three. But to keep the gap the same, I push eighty-three up by three too. Now it's eighty-six minus fifty."

Aisha blinked. "Eighty-six minus fifty is... thirty-six. No borrowing."

"No borrowing," Gus agreed. "Because fifty is friendly. I just slid the whole gap over to sit next to a nice round number. The distance never changed. Only where it was standing."



Gus learned to think in gaps from his grandmother, who was a surveyor.

She measured land — where one fence should go relative to another, how far the well sat from the house. And she taught young Gus something he never forgot: when you're measuring a *distance*, it doesn't matter where you start counting from. Move your whole ruler three steps to the left, and the thing you're measuring is still exactly as long as it was.

"The gap belongs to the two things," she told him, "not to the ground underneath them. Slide them both, and the gap rides along, unchanged."

Gus carried that straight into arithmetic. A subtraction, he realized, was just a gap between two numbers. And a gap didn't care *where* on the number line it sat. So if one of his numbers was awkward, he could slide both of them — the same amount, in the same direction — until the awkward one landed on something round. The gap, the actual answer, stayed exactly the same the whole time.

He started carrying a tape measure, the way his grandmother always had.



The slide worked in either direction, Gus showed kids — up or down, whatever brought you to a friendly number.

A boy named Marcus had **62 – 38**.

"Thirty-eight wants to be forty," Gus said. "It's only two away. So push *both* numbers up by two. Sixty-two becomes sixty-four; thirty-eight becomes forty." He measured it out. "Now it's sixty-four minus forty. Way friendlier. That's twenty-four."

Marcus checked it. "Twenty-four. That's right!" Then he frowned. "But wait — I changed *both* the numbers. How is the answer still the same?"

"Because you didn't change the *gap*," Gus said. "You picked the whole thing up and set it down two steps over. The two numbers moved together, holding the same distance between them the entire way. The answer was never about where they stood. It was always about how far apart they were."

Marcus wrote: *Subtraction is the gap. Slide both numbers the same way; the gap stays.*



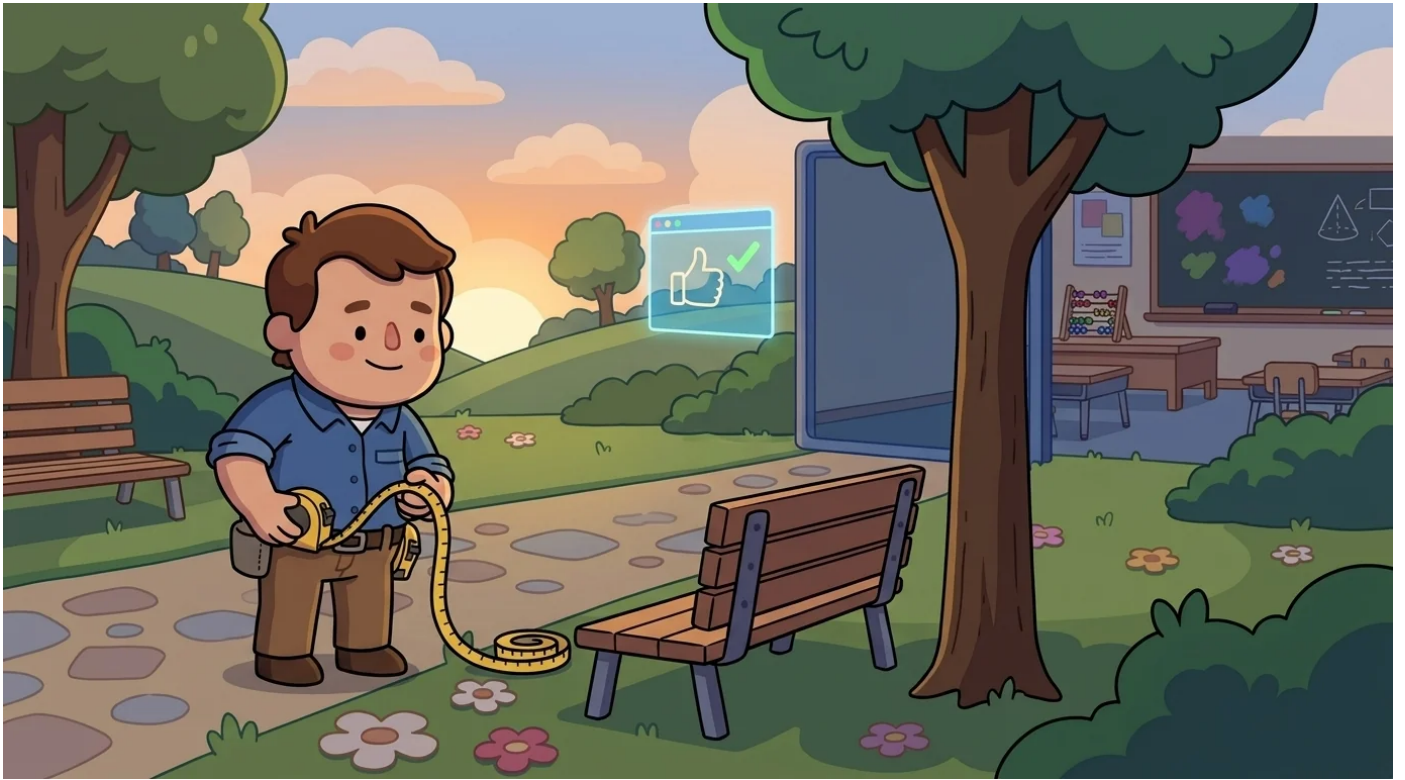
What Gus most wanted kids to feel was that they could stop dreading the borrowing.

"Borrowing and carrying isn't *wrong*," he told a girl named Lin, who tensed up every time she saw a subtraction. "It works fine. But it makes a lot of kids nervous, and nervous is no way to do math." He patted his tape measure. "So here's another road. Don't take anything apart. Just slide the whole gap over until it's leaning on a friendly number. You're not borrowing from anybody. You're just walking the same distance to an easier spot."

Lin tried it. She found the awkward number, figured out how far it was from the nearest ten, and slid *both* numbers that far. The subtraction landed on a round number, and the dread she usually felt just... didn't show up.

"It's the same gap," she said, almost surprised. "I just moved it somewhere easier to stand."

"That's it exactly," Gus said. "Same distance. Friendlier ground."



That evening, after the screen dimmed, Gus reeled in his tape measure and clipped it back on his belt, the way his grandmother used to at the end of a long day in the fields.

Lin's last message glowed quietly: *I slid the gap and I wasn't nervous.*

He read it and felt an easygoing warmth settle over him.

That was the thing he most hoped a kid would carry — not a single answer, but the calm of knowing that what matters is the *distance*, not the ground beneath it. Two numbers can pick themselves up and move together, the same amount, in the same direction, and the bond between them — the gap, the thing you actually care about — rides along completely unchanged. And there is something deeply steadying, he thought, clipping the tape to his belt, in knowing that you can move to easier ground without losing a single thing that mattered.

Read it? Now hear Gap Gus's audio drama + go play — scan or visit:



<https://spark-and-anvil.org/cast/numbersense/gap-gus>

Bridge Bao

derived facts — you don't need to know every fact; you reach a fact you don't know by stepping out from one you do



Bridge Bao built bridges out of anything — popsicle sticks, dominoes, a line of books across a gap between two chairs. He believed you could get from almost anywhere to almost anywhere else, as long as you started from solid ground and built out one step at a time.

He'd appear on the NumberSense screen whenever a kid was sure they were stuck on a fact they "just didn't know."

Maya was frozen on 8×6 . "I don't know it," she said miserably. "I only know the easy ones."

"Which easy one is closest?" Bao asked, warm and unhurried. "Do you know eight times five?"

Maya thought. "Eight times five is forty. That one I know."

"Then you're not stuck — you're one step away," Bao said. "Eight times six is just *one more eight* than eight times five. So start on the ground you know: forty. Then take one step out: add one more eight. Forty plus eight is forty-eight. Eight times six is forty-eight." He smiled. "You didn't *not know* it. You just hadn't built the little bridge from the fact you already had."

Maya stared at the forty-eight. "I kind of... knew it the whole time?"

"You knew something *next to* it," Bao said. "And next-to is close enough to build from."



Bao built his first real bridge when he was small, across a creek behind his house.

The creek was too wide to jump. For a long time he just stood on his side, staring at the far bank, certain he could never get there. Then his aunt, who built actual bridges for a living, crouched next to him.

"You're looking at the whole gap," she said. "Don't. Look at the nearest solid thing." She pointed to a flat rock, close to his side. "Stand there. Now what's the next solid thing you can reach from *that*?" A log, a little further. Then a sandbar. Then the far bank. "You never crossed the whole creek at once," she told him after. "You crossed one small reachable step at a time, each one from solid ground."

Bao took that to heart, and then he took it to numbers. He noticed he didn't actually need to *memorize* every fact. He needed a handful of solid ones — the fives, the tens, the doubles — and then he could reach any other fact by stepping out from the nearest solid one. Nine sevens? Start from ten sevens, which is easy: seventy. Step back one seven: sixty-three. Seven eights? Start from the double of the double — he had a dozen little bridges, each one anchored on a fact he was sure of.

He stopped feeling like there was an endless wall of facts to cram. There was just solid ground, and short steps, and bridges he could build on the spot.



The bridges worked in every direction, Bao showed kids — step forward, step back, double, whatever was shortest from solid ground.

A boy named Sef was stuck on 9×8 .

"Nine is so close to ten," Bao said. "And ten times eight is the easiest thing alive: eighty. So stand on eighty. Now, nine eights is *one fewer eight* than ten eights. Step back one eight: eighty minus eight is seventy-two." He spread his hands like a finished bridge. "Nine times eight is seventy-two. You started on a fact you were sure of, and took one short step back."

Sef tried another, reaching from a fact he knew toward one he didn't, taking the shortest step he could find. "I keep thinking I don't know these," he said slowly, "but I always know one that's *close*."

"You always do," Bao said. "Nobody starts from nothing. There's always solid ground nearby. The skill isn't knowing every fact. It's knowing how to step out from the ones you've got."

Sef wrote: *Start from a fact I know. Take the shortest step to the one I don't.*



What Bao wanted most was for kids to stop believing the lie that they "knew nothing."

"That's the feeling that beats people," he told a girl named Priya, who shut down the second a fact felt unfamiliar. "Not the math — the *thought*. 'I don't know this, so I'm stuck.' But you're almost never starting from nothing." He gestured at an imaginary gap. "There's always a fact near the one you want — a five, a ten, a double, something. Find that solid spot, stand on it, and reach. You don't have to leap the whole creek. You just have to take one step from the nearest rock."

Priya looked at a fact that had scared her, and instead of freezing, she went looking for the nearest thing she *did* know. She found it. She took one step. The new fact was just... there, on the other side of a tiny bridge.

"I wasn't starting from nothing," she said, sounding almost relieved.

"You never were," said Bao.



That evening, after the app went dark, Bao laid one last popsicle stick across a little gap between two books, finishing a bridge just because he liked the way a gap looked once it was crossed.

Priya's last message glowed softly: *I wasn't starting from nothing. I found a fact close by and built from it.*

He read it and felt the warm, patient happiness of a builder watching someone else pick up a tool.

That was the thing he most wanted a kid to keep — not any single times-table fact, but the deep refusal to believe they were ever truly starting from zero. Because the kids who get stuck aren't the ones who know less. They're the ones who forget they're standing next to solid ground. And there is a quiet, lasting courage, he thought, setting the last stick in place, in knowing that no gap is too wide when you stop staring at the whole distance — and simply reach, one short step, from what you already know.

Read it? Now hear Bridge Bao's audio drama + go play — scan or visit:



<https://spark-and-anvil.org/cast/numbersense/bridge-bao>

Nudge Nora and Gap Gus

TWO ROADS TO ONE ANSWER — a subtraction can be made friendly two different ways: nudge one number to a round one and give back the difference (compensation), OR slide both numbers the same amount so the gap is unchanged (constant difference). Both reach the exact same answer.



Nudge Nora and Gap Gus and the Race to the Same Answer

Wren had a subtraction on her screen — **72 – 38** — and before she could even sigh, two characters popped up at once, each elbowing for room.

"I've got this," said Nudge Nora, straightening her rubber-banded notebook.

"No no, this one's *mine*," said Gap Gus, unspooling a bit of tape measure. "It's practically begging for my trick."

They looked at each other. Wren looked at both of them.

"Are you two... fighting over my homework?" she asked.

"Friendly fighting," Nora said.



Nora went first, because she was already tapping at the air.

"My way is called *nudging*," she said. "Thirty-eight is so close to forty. So I borrow — I nudge it up to forty. That's two extra I've borrowed. Now the problem is easy: seventy-two minus forty is thirty-two." She held up a finger. "But I borrowed two to get there, so I have to give it back. Thirty-two plus two is thirty-four."

She closed her notebook with a soft snap. "Seventy-two minus thirty-eight is thirty-four. Two steps — nudge one number, then give back exactly what you borrowed. Tidy, honest, done."



Gus laid his tape measure flat.

"My way is called *keeping the gap*," he said. "I don't think of this as 'take away.' I think of it as the *distance* from thirty-eight up to seventy-two. And here's the magic: if I slide *both* numbers up by the same amount, the distance between them doesn't change one bit." He nudged both ends of his tape. "Thirty-eight wants to be forty — so I slide it up by two. But I slide seventy-two up by two as well, to keep the gap the same. Now it's seventy-four minus forty."

He sat back, pleased. "Seventy-four minus forty is thirty-four. No borrowing. No give-back. I just slid the whole problem onto friendlier ground."



There was a short, surprised silence. Then both characters started laughing.

"Of course we did," said Nora. "It's the same subtraction. There's only one right answer. We just took different roads to it."

"That's the part people miss," said Gus, reeling in his tape. "We act like rivals, but we're really doing the *same thing* — making an awkward problem friendly without changing the answer. I keep the gap the same by sliding both. Nora keeps the answer the same by giving back. Different trick. Same promise: *make it easier, change nothing that matters.*"

Wren looked back and forth between them. "So I don't have to pick the 'right' one. I just pick whichever feels easier for *this* problem."

"Now you've really got it," Nora said warmly. "Some days my give-back feels tidiest. Some days Gus's slide feels smoother. They're both true. They both work. The only mistake would be thinking there's just one road."



Later, after Wren had gone and the screen dimmed, Nora snapped the band around her notebook and Gus clipped his tape to his belt, and the two old friends sat in comfortable quiet.

"You know," Gus said, "for two people who argue this much, we agree on an awful lot."

"We agree on everything that matters," said Nora. "We just like the arguing."

Read it? Now hear Nudge Nora and Gap Gus's audio drama + go play — scan or visit:



<https://spark-and-anvil.org/cast/numbersense/nudge-and-gap>

Ernie and Sasha

round-and-rearrange — estimation and decomposition are the same friendliness move at different scales



- prompt: "Have you ever stood in front of something huge — a crowd, a jar, a pile — and felt your brain freeze the way Maya's did? What happened in your body right then?"
 - prompt: "Maya didn't win the jar, but she walked away feeling proud instead of sad. When have you felt proud of trying hard at something even though you didn't win?"

Ernie and Sasha and the Jellybean Jar at the Spring Fair

The spring fair came to Maya's school on the last Friday in April. The whole gym smelled like popcorn and fresh paint. There were ring tosses and a beanbag race and a face-painting booth where you could be a tiger or a galaxy. Maya wandered between the tables until she found the one she had heard about.

A giant glass jar of jellybeans sat in the middle of a card table. A handwritten sign said *Guess how many. Closest guess wins the jar.* Underneath the sign, in slightly smaller letters: *Tiebreaker: nearest WITHOUT going over.*

A small crowd of kids had gathered around. Maya pushed forward to look. The jar was almost as tall as her arm. It was packed all the way to the lid with jellybeans of every color. Three hundred kids would guess by the end of the day, the sign promised. Only one guess could win.

Maya stared at the jar.

Then she pulled her phone out of her pocket. Because her two favorite guides were on the NumberSense app. And if anyone was going to help her think about a jellybean jar, it was them.

She opened the app, hit the prompt button, and waited.

Estimator Ernie appeared first. He was eating a jellybean.

"Where are you?" he asked. "What are those colors behind you?"

"The spring fair," Maya whispered. "Look at the jar."

Ernie's face lit up so brightly that Maya thought he might leap right through the screen. "A guessing jar. A guessing jar! Oh, this is the best day. This is a perfect day. Sasha, get out here, this is a *jellybean jar*."

Splitter Sasha popped in next to him. Her three pompoms wobbled excitedly.

"What's the prize?" she asked.



"First we estimate," Ernie said. "We get a guess in the right neighborhood. Then we make it nicer."

Maya held up the phone so both of them could see the jar.

"Okay. Tell me what you see," Ernie said.

Maya squinted at the jar. "It's tall."

"How tall?"

"As tall as my arm. From my elbow to my fingertips."

"What's that, in inches?"

Maya thought about it. "Eighteen?"

"Sounds right," Ernie said. "Now. A jellybean is about an inch long. How many jellybeans tall is the jar?"

"Eighteen," Maya whispered.

"Good. Now look at the bottom of the jar. How wide is it?"

"As wide as my hand."

"Four jellybeans?"

"Yeah, about four."

"So a flat layer at the bottom is roughly four by four," Ernie said. "That's sixteen jellybeans per layer. Eighteen layers tall. Multiply, and you get..."

Maya's brain froze. *Sixteen times eighteen*. In her head. Without a pencil.

Sasha leaned forward through the screen. "Hold on, hold on. Don't multiply yet, Maya. Let me make those numbers friendlier first."

She tapped a finger in the air, like she was poking the numbers themselves. "Sixteen is just ten plus six. And eighteen is twenty minus two. So sixteen times eighteen is the same as sixteen times twenty, minus sixteen times two. Sixteen times twenty is three hundred and twenty. Sixteen times two is thirty-two. Three hundred and twenty minus thirty-two is..."

"Two hundred eighty-eight," Maya said.



Maya turned the jar slowly with her free hand so both of them could see all sides. The jellybeans on the curved edge were not packed in neat layers. They were jostled together.

"How do we fix for round?" Maya asked.

Ernie tapped his chin. "Round jars hold a little more than square jars of the same height. Maybe a quarter more. Maybe a fifth. Let's say a fourth."

"Two hundred eighty-eight plus a fourth," Sasha said. "Sasha-friendly math. A fourth of two hundred and eighty-eight is..."

"Seventy-two!" Maya said. She had practiced that one. *Halve, halve again*.

"Look at you!" Sasha cheered. Her pom-poms went wild. "So two hundred eighty-eight plus seventy-two is..."

"Three hundred and sixty," Maya said.

Ernie grinned. "Three sixty. That's our first guess. We're in the right neighborhood."

But Maya was staring at the jar with a slightly worried face.

"What?" Ernie asked.

"The jellybeans look really small. Smaller than an inch. They look more like half an inch."

Ernie's grin got bigger. "Now THAT is a good observation. That changes everything. Sasha?"

Sasha was already nodding. "Half-size jellybeans means we can fit way more in. Twice as many per layer, and twice as many layers. Two times two is four. So we have to double-double our guess."

"Double-double?" Maya said.

"Multiply by four," Sasha said. "Friendly. Three hundred sixty times four. That's three hundred sixty, plus three hundred sixty, plus three hundred sixty, plus three hundred sixty. Or — friendlier — three hundred sixty times two is seven hundred twenty. Times two again is..."



"Tiebreaker," Sasha reminded them. "Closest *without going over*. So we should guess a little under our best guess. Just to be safe."

"How much under?" Maya asked.

Ernie thought about it. "Round to a friendly number that's a little below. One thousand four hundred is friendlier than one thousand four hundred forty. And it's safely under."

"But what if the real answer is, like, one thousand five hundred?" Maya asked. "Then I'd lose by being too low."

"You might," Ernie agreed. "That's the risk. Estimation isn't certainty. It's your best guess based on what you can see. And if the rule is *closest without going over*, you have to leave yourself a tiny cushion."

Sasha was nodding. "And one thousand four hundred is friendlier than, say, one thousand three hundred ninety-nine. Easier to remember. Easier to feel proud of."

Maya thought about it. The jar looked very full. The jellybeans were definitely small. She made a decision.



Maya walked home that afternoon with one slightly tired arm and a small flutter in her chest.

That evening, she opened the NumberSense app. She just wanted to talk to them.

Ernie appeared first, then Sasha right behind him.

"How do you feel?" Ernie asked.

"Good," Maya said. "I don't know if I'll win. But the guess felt right. We thought about every part of it."

"That's the whole game," Ernie said warmly. "You looked at the jar. You broke it into parts. You estimated the parts. You decomposed the math. You adjusted when you noticed something new. Then you backed off a hair for the tiebreaker. That's the entire estimating-and-decomposing toolkit, in one fair-day jellybean jar."

"It was a lot of moves," Maya said.

"And every one of them was friendly," Sasha said. Her pompoms wobbled gently. "That's the secret. Hard problems aren't actually hard. They're just made of friendly pieces stacked on top of each other. You and Ernie and me — we just untangled the friendly pieces."

Maya smiled.

"We'll see what happens at the end of the fair," Ernie said. "But here's the part I love. Even if you don't win the jar, you walked up to a jellybean jar today and you didn't freeze. You knew exactly what to do. That's the prize. That's the prize we've been training for."

Maya nodded. She closed the app and went to bed thinking about jellybeans.

Read it? Now hear Ernie and Sasha's audio drama + go play — scan or visit:



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- **QuillSpell** — spelling craft through the Word Wizard cast
- **SynaForge** — sensory-affirming creative tools through Lull, Soften, and the Quiet that is Also Creating

Methodology

This book uses story-based learning — the characters embody the ideas being taught — grounded in the work of Jerome Bruner (on narrative and cognition) and Sebastian Habgood (on weaving learning into the play itself), with a trauma-informed, emotionally-safe approach drawn from SAMHSA's trauma-informed care framework.

Trauma-informed design informed by Eggleston et al. (2025) and Stoltenburg et al. (2024).

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