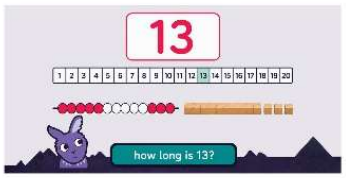


INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Teaching guidance & background

What it looks like

Estimating the approximate size, position, or distance of numbers using a linear representation

- ___ goes about here.
- ___ is closer to ___ than to ___.

Placing numbers in approximate locations on bounded number lines

- ___ is between ___ and ___.
- ___ is close to halfway.

Estimating where numbers such as 7 or 15 belong on a 0–20 number line

- ___ is closer to ___ than to ___.
- ___ is just before/after ___.

Estimating where numbers such as 42 or 78 belong on a 0–100 number line

- ___ is just past ___.
- ___ is close to ___ tens.

Using benchmark numbers, endpoints, and halfway points to estimate

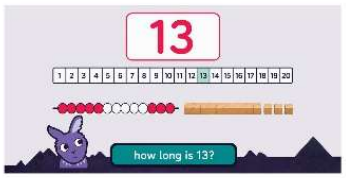
- I used ___ to help me estimate.
- Halfway between ___ and ___ is ___.

Judging relative size and numerical distance

- ___ is much larger than ___.
- ___ and ___ are close together.
- ___ is far away from ___.

Why does it matter?

- Patterns of performance on number line estimation are consistently associated with broader mathematics achievement.
- Bounded number line tasks require students to understand both number order and the relative spacing between numbers on a line.
- Research shows that younger children often give too much space to smaller numbers and bunch larger numbers together, before gradually developing more accurate proportional spacing.
- Students increasingly use proportional reasoning, benchmark numbers, and halfway points to estimate numerical locations more accurately.
- These linear number understandings matter because students use them when comparing quantities, interpreting place value, estimating, calculating mentally, and reasoning about numerical distance and relationships.



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Teaching guidance & background

Goal of instruction

The goal of instruction is to develop students' understanding of numerical magnitude: how numbers are ordered, how large numbers are in relation to other numbers, and how numerical distance can be represented using linear models. Instruction should use developmentally appropriate linear representations of number — beginning with concrete models and progressing to bounded number lines.

Effective instruction in numerical magnitude:

- builds knowledge of an ordered number list as a foundation for later number-line reasoning
- uses linear representations of number to make magnitude, order, and distance visible
- begins with number tracks or number paths for students who are still coordinating counting, order, and quantity
- introduces mathematically accurate number lines only when students are ready to reason about numbers as positions on a line
- progresses from smaller to larger number ranges

Gradually increase difficulty through:

- comparing quantities that can be subitised
- comparing quantities that can be matched, including through the use of linear representations
- comparing quantities when item size may be misleading
- using knowledge of counting to compare small numbers
- using knowledge of number relationships to compare and estimate positions in increasing ranges (0–10, 0–20, 0–100):
  - locating numbers between benchmark numbers
  - estimating numbers on bounded number lines
  - using proportional reasoning, halfway points, and known number relationships
- supports students to move from counting-by-ones towards using benchmark numbers, distance, place value and numerical relationships to reason more efficiently

Teachers explicitly model magnitude reasoning using a Teacher Modelling / Guided Practice / Supported Independent Practice approach. Instruction should include modelling how to identify start and end points, locate benchmark numbers such as 5, 10, 50, and halfway points, and explain where numbers sit in relation to other numbers.

Teacher Modelling

Should make the reasoning visible. Teachers should think aloud while using a linear representation, for example: "I know 10 is at the end of this number path. 5 is halfway to 10, so 7 is past halfway and closer to 10 than to 0."

Guided Practice

Should include multiple opportunities to respond, immediate feedback, and regular checks for understanding to ensure students are considering number size, order, and relative distance rather than simply counting or placing numbers randomly.

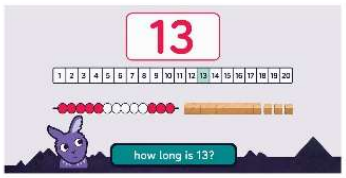
Supported Independent Practice

And review activities should provide repeated practice estimating, locating, ordering, comparing, and explaining number positions across increasing number ranges to build fluency, accuracy, flexible reasoning, and long-term retention.

Concrete and visual materials

Such as number tracks, number paths, mathematically accurate number lines, open number lines, hundreds charts, and Base-10 materials should be used purposefully. In Foundation and Year 1, number tracks and number paths are often more accessible than complete number lines because students can count spaces or positions while developing the idea of ordered, linear number relationships.

This section supports consistent teacher language and student explanations. Representations are included because they should be paired with precise stem sentences; the goal is for students to see, say, show, and eventually write about number magnitude, order, position, and distance.



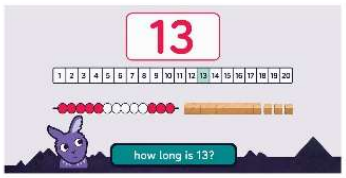
INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Vocabulary, representations & stem sentences

Relevant mathematical vocabulary

The purpose of this vocabulary list is to support teachers to model precise mathematical language and help students use simple, high-utility language during instruction.

Vocabulary	Simple Definition	Questions / Stem Sentences
number line	A line showing numbers in order	Where does the number belong on the number line?
estimate	To make a careful guess	Can you estimate where the number goes?
position	The place where something belongs	What position should the number be in?
more	A larger number	___ is more than ___ because the line is longer / because it is further along the path/line
less	A smaller number	___ is less than ___ because the line is shorter / because it is not as far along the path/line
between	In the middle of two numbers	Which numbers is it between?
halfway	The middle point	Is the number close to halfway?
benchmark	An important number used to help estimate	Can a benchmark number help you?
closer	Nearer to a number	Is it closer to 20 or 30?
further	More distant from a number	Which number is further along the line?
tens	Groups of ten	Which ten is the number closest to?
ones	Single units	How many ones are there?
before	A number that comes earlier	Which number comes before it?
after	A number that comes later	Which number comes after it?
explain	Tell how you worked it out	How did you decide where the number goes?



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Vocabulary, representations & stem sentences

Using stem sentences

Stem sentences should be used throughout instruction. They help all students participate, rehearse mathematical language, and explain their thinking.

Stem sentences can be used in three ways:

1. Choral response

The whole class says the sentence together.

2. Partner rehearsal

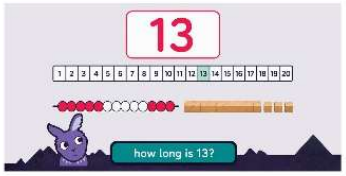
Students turn to a partner and complete the sentence before sharing.

3. Individual response after rehearsal

The teacher selects one or two students to share after all students have practised. This is preferable to relying on hands-up responses from only a few students.

Examples:

- ___ goes about here.
- ___ is closer to ___ than to ___.
- ___ is between ___ and ___.
- ___ is close to halfway.
- I used ___ to help me place ___.
- ___ is larger than ___ because the train/stack is longer.
- ___ belongs here because it is between ___ and ___.
- I started at ___ and jumped ___ spaces to land on ___.
- ___ is ___ tens away from ___.
- When I move ___, the number changes by ___.

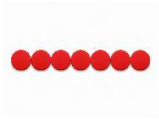
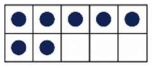


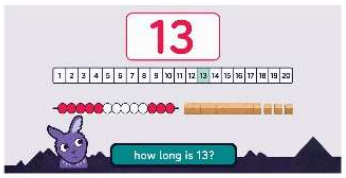
INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Vocabulary, representations & stem sentences

Representations and stem sentences for magnitude estimation

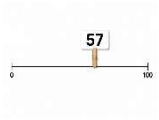
Choose representations that make linear magnitude visible. Larger numbers should be shown as physically longer or further along than smaller numbers. Move from concrete linear models to more abstract linear representations over time.

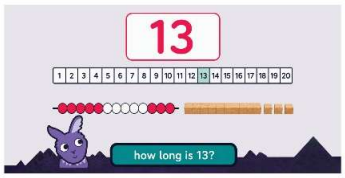
	Representation	Purpose	Example teacher prompt	Stem sentence
 Concrete quantities in a line e.g., counters, blocks, objects	**Concrete quantities in a line e.g., counters, blocks, objects**	Connect number words and numerals to visible quantities; show that larger numbers represent more	"Which line has more? How can you tell?"	"___ is more than ___ because ___."
 Connecting-cube trains or stacks	**Connecting-cube trains or stacks**	Make magnitude physically visible; larger numbers are longer or taller	"Build 6 and 9. Which number is larger? How do you know?"	"___ is larger than ___ because the train/stack is longer."
 Ten-frames in sequence	**Ten-frames in sequence**	Support magnitude, benchmarks of 5 and 10, and part–whole thinking	"Is 8 closer to 5 or 10? How do you know?"	"___ is close to ___ because ___."
Bead strings	**Bead strings**	Show counting, grouping, order, and distance along a continuous line	"Find 12. Is it closer to 10 or 20?"	"___ is closer to ___ than to ___."
 Number tracks	**Number tracks**	Support counting, order, and one-to-one correspondence before moving to number lines	"Start at 7. Add 3. How many now?"	"I started at ___ and added ___ to get to ___."
 Number paths	**Number paths**	Link each count to a visible space; bridge from counting spaces to reasoning about linear order	"Where is 14? What number comes before it? What number comes after it?" "What number would go here? How do you know?"	"___ belongs here because it is between ___ and ___."
 Physical number track or floor number path	**Physical number track or floor number path**	Support students to physically experience counting, order, movement, and distance along a linear representation	"Start on 6. Jump forward 3 spaces. Where do you land? How many spaces did you jump?"	"I started at ___ and jumped ___ spaces to land on ___."



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Vocabulary, representations & stem sentences

 Hundreds charts	**Hundreds charts**	Support number order, place-value patterns, and relative size within 100	"What happens when we move down one row? What happens when we move across?"	"When I move ___, the number changes by ___."
 Partially marked and 'bounded' number lines	**Partially marked and 'bounded' number lines**	Encourage use of endpoints, benchmarks, and halfway points rather than counting every mark	"The ends are 0 and 20. Where would 10 go? Where would 15 go?"	"I used ___ to help me place ___."
Base-10 materials arranged linearly	**Base-10 materials arranged linearly**	Connect magnitude, place value, and distance by showing tens as equal-length units	"Show 30 and 50 with tens. How many tens apart are they?"	"___ is ___ tens away from ___."



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Explicit instruction routines

Learning intention

We are learning to reason about the relative value, position, and distance of numbers.

Success criteria

- I can compare numbers using size, order, position, and distance.
- I can use linear representations to show which numbers are larger, smaller, close together, or far apart.
- I can use endpoints, benchmarks, halfway points, and nearby tens to help estimate where numbers belong.
- I can explain why a number belongs in a particular position.

Using these routines across Foundation and Year 1

ENSSA assesses this skill through the Number Line Estimation task, where students estimate where a number belongs on a bounded number line.

Foundation

Students work with numbers to at least 20. Begin with concrete and visual linear representations that make magnitude visible, such as cube trains, rows of counters, bead strings, number tracks, and number paths. Students should compare, order, locate, and explain numbers using language such as more, less, before, after, closer, further, and halfway.

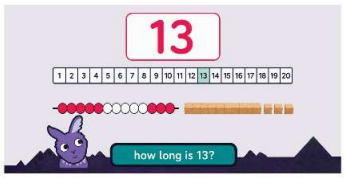
Year 1

Students extend this reasoning to numbers to at least 100. Continue using number tracks, number paths, hundreds charts, Base-10 materials, and bounded number lines to support students to use endpoints, halfway points, decade numbers, nearby tens, and relative distance when estimating where numbers belong.

The routines are cumulative. Year 1 students may still need review with physical or visual linear representations before estimating on a 0–100 number line.

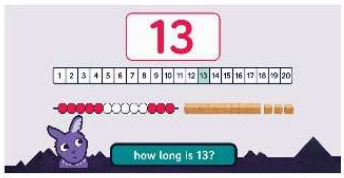
Explicit instruction routines

Context and Presentation	Teacher Modelling	Guided Practice / Correction Routine	Supported Independent Practice
Comparing quantities using objects in a line Build two quantities as cube trains, rows of counters, bead strings, or Base-10 lengths. Line up the starting points. Example: compare 5 and 9, then 8 and 13.	"I will build 8 and 13 using cube trains. I need to line up the starting points so I can compare the lengths." Build and align both trains. "The train of 13 is longer than the train of 8. That means 13 is larger than 8." "I can also see the distance between them. 13 has 5 more cubes than 8."	Students build 12 and 17 using cubes, counters, or a drawn linear model. Ask: "Which quantity is larger? How do you know? How many more does it have?" Correction: If students compare inaccurately, check the representation: "Are both quantities starting in the same place? Are the objects touching or evenly spaced? Which quantity extends further?"	Students compare pairs such as 6 and 9, 14 and 18, or 25 and 52, using a linear representation. Students explain: "___ is larger than ___ because the train/line is longer." Fade from physical objects to drawn bars, marked paths, or numerals with representations used to prove thinking.
Moving along a number track or number path Use a physical floor track, desk	"I start on 6. I am going to jump forward 3 spaces." "I do not count the space I am standing on. I count each	Students start on 4 and jump forward 5 spaces. Ask: "Where did you start? How many spaces did you move?	Students complete movement tasks using a floor track, desk path, individual number track, or counter.



Explicit instruction routines

number path, or displayed number track. Students start on a number and move forward or backward. Example: start on 6, jump forward 3.	jump." Move and count: "1, 2, 3. I land on 9." "I started at 6 and jumped 3 spaces to land on 9."	Where did you land?" Correction: If students count the starting number as the first jump, model again: "You are already standing on the start number. The first jump lands on the next space."	Examples: start on 3 and jump forward 4; start on 8 and jump backward 2; start on 10 and jump backward 5. Students say: "I started at ___ and jumped ___ spaces to land on ___."
Comparing numbers using position on a number path Display a number path or number line with target numbers marked, such as 8 and 13 or 12 and 17.	"I can compare numbers by looking at where they sit on the path." Point to 8 and 13. "13 is further along the path than 8. That means 13 is larger than 8." "8 and 13 are not next to each other. There is distance between them."	Display 12 and 17. Ask: "Which number is larger? How do you know? Are the numbers close together or far apart?" Correction: If students choose the smaller number, point to both numbers: "Which number is further along the path? If it is further along, is it larger or smaller?"	Students compare pairs using a number path or number line, such as 6 and 9, 14 and 18, or 25 and 52. Students explain: "___ is larger than ___ because it is further along the line." Fade from pointing on a complete path to comparing numerals and using the path only to check.
Locating numbers using benchmarks within 0–10 or 0–20 Use a bounded number line or path with endpoints and a halfway point. Example: place 7 on a 0–10 line.	"I am going to place 7 on this line. First, I look at the start and end points. This line starts at 0 and ends at 10." "I know 5 is halfway between 0 and 10. Seven is greater than 5 and less than 10." "Seven is past halfway and closer to 10, so I will place it here."	Students place 3 on a 0–10 line. Ask: "What are the start and end points? What is halfway? Is 3 before or after halfway?" Correction: If a number is placed on the wrong side of halfway, return to benchmarks: "Is 7 less than or greater than 5? Should it go before or after halfway?"	Students place numbers such as 2, 6, 8, and 9 on a 0–10 line, or numbers within 20 on a 0–20 line. Students explain: "I placed ___ here because it is ___." Fade from marked endpoints and halfway points to partially marked or open lines when students are accurate.
Locating two-digit numbers on a 0–100 number line Year 1 focus. Use a bounded 0–100 number line with endpoints and benchmark points such as 50 and decade numbers. Example: place 46 or 72.	"I am going to place 46 on a 0–100 number line." "This line starts at 0 and ends at 100. I know 50 is halfway." "Forty-six is a little less than 50, so it belongs just before halfway." "I placed 46 just before halfway because it is close to 50 but less than 50."	Students place 72. Ask: "What are the start and end points? What is halfway? Is 72 before or after 50? Which ten is 72 close to?" Correction: If students place 72 before halfway, ask: "Is 72 greater or less than 50? So should it go before or after halfway?"	Students estimate and place numbers such as 28, 64, 81, and 95 on a 0–100 line. Students use 0, 50, 100, and nearby tens to explain: "I placed ___ here because it is after/before ___ and close to ___." Fade from benchmarked lines to less marked bounded number lines.
Estimating a missing number from relative spacing Show a section of a number line between two labelled endpoints, such as 20 and 30, with an unlabelled point near the middle or slightly past halfway.	"This line section starts at 20 and ends at 30." "I know halfway between 20 and 30 is 25." "This point is about halfway, so the number is probably close to 25." Label the point and explain the estimate.	Display a point between 40 and 50, slightly past halfway. Ask: "What are the numbers at each end? What is halfway? Is the point before or after halfway? Is it closer to 40, 45, or 50?" Correction: If the estimate is unreasonable, slow down: "Let's use the interval. What are the endpoints? What is halfway? Should our estimate be less than or greater than halfway?"	Students label marked points on number line sections using endpoints and halfway points. Students explain: "The point is close to ___ because ___." Fade from teacher-marked halfway points to students identifying the halfway point themselves.
Brief review using linear representations Use short daily routines once students have been introduced to the number range and representation. Examples: linear board games, before/after flash, which number is more, visual magnitude match.	"We are going to practise using number order and magnitude." Example: display 4 and 6. "Which number is more? 6 is more than 4 because it comes after 4." Use a number path, ten-frame, or dot card to prove the comparison if needed.	Students respond chorally, on mini-whiteboards, with fingers, or to a partner. Ask: "Which number is more? Which is less? How do you know?" Correction: If many students are inaccurate, slow down and return to the relevant representation before continuing quick review.	Students complete 4–8 quick examples using previously taught number ranges. Use "a little bit often" cumulative review: compare numbers, locate before/after, identify which is further along, and explain relative distance. Use representations to support, prove, or correct rather than as the final goal.



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Review & practice

Daily review should be brief: about 5–10 minutes. Use active participation strategies so all students respond, every time. Check the Magnitude Estimation: Resources for a slide bank that can be used to support these review and practice routines.

Use these routines for brief whole-class review when students have already been introduced to the number range and are mostly accurate. Keep comparisons within numbers already taught. If many students are inaccurate, pause the review routine and use explicit instruction with concrete or visual supports.

Most of these routines use some version of a left to right number track, which is very powerful for building knowledge of number magnitudes. Make explicit that each space represents an equal jump, not one more.

Linear Board Game: Count and Compare

Purpose

Students practise counting moves along a linear board and linking movement to number order and magnitude.

Use for

Brief whole-class or small-group review of counting-on, number order, and more/less, or pairs practice when the format has been introduced.

Materials

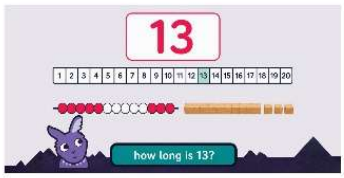
- Foundation: Large displayed linear board game or number path, 0–10 or 1–10; translucent counters; spinner or move cards showing 1, 2, or 3.
- Year 1 variation: 10×10 square 1–100 number grid, number 1 in bottom left and 100 in top right. Set a target start/target number.

Teacher note

Use a linear board with equal-size spaces arranged left to right (or 10×10 grid). All units on the track should represent the same length. Board games are excellent for building knowledge of numerical magnitude because there are many cues to a number's value. Turns with larger numbers take longer, have more individual steps, cover a longer distance and require more number words — all of these reinforce magnitude.

Easier variation

Step	Teacher move	Student response
1. Display	Show the linear board. "This board shows numbers in order. This is my track." Point to top track. "And this is your track." Point to bottom track. "When we roll/spin/choose a card, it tells us how many counters to add to our track."	Students track left to right.
2. Teacher Move	"My turn first." E.g. draw 2. "I will add 2 counters to the track. Count with me. 1, 2." Add 2 counters to the track.	"1, 2."
3. Land	"I am up to number 2. What number?"	"2."
4. Student move	"Now it is your turn." Choose a student to roll. Add an equivalent number of counters to the second track. "Count with me: 1, 2, 3."	
5. Land	"You are up to number 3. What number?"	"3."



6. Compare	"Here is 3," gesture, "and here is 2. Which is more, 3 or 2?"	"3."
7. Sentence stem	"Say it with me: ___ is more than ___."	"3 is more than 2."
8. Repeat	Continue for several short turns. Alternate turns. Compare each time and state which is more/less and who is farther along the track.	

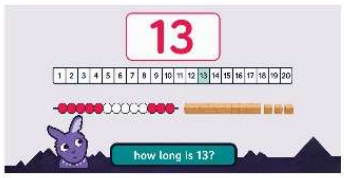
Harder variation

This version requires the teacher and students to use a game piece and start at "0" or to the left of the track prior to the first turn.

Step	Teacher move	Student response
1. Display	Show the linear board. "This board shows numbers in order. This is my track." Point to top track. "And this is your track." Point to bottom track. "When we roll/spin/choose a card, it tells us how far to move our piece along the track."	Students track left to right.
2. Teacher Move	"My turn first." E.g. draw 2. "I move 2 spaces along the track. Count with me. 1, 2." Move the game piece 2 spaces to land on "2".	"1, 2."
3. Land	"I am up to number 2. What number?"	"2."
4. Student move	"Now it is your turn." Choose a student to roll. Then move an equivalent number of spaces along the second track. "Count with me: 1, 2, 3."	
5. Land	"You are up to number 3. What number?"	"3."
6. Compare	"Here is 3," gesture, "and here is 2. Which is more, 3 or 2?"	"3."
7. Sentence stem	"Say it with me: ___ is more than ___."	"3 is more than 2."
8. Repeat	Continue for several short turns. Alternate turns. Compare each time and state which is more/less and who is farther along the track/closer to the destination. When ready, move both pawns along a single track.	

Correction routine

If students count the starting space as the first move: "Let's make sure we count each jump. Watch: jump 1, jump 2."



Which Number Is More?

Purpose

Students compare two numerals and identify which number represents the greater quantity.

Use for

Brief whole-class review once students can read the target numerals and have had experience linking numerals to quantities.

Materials

- Number recognition cards, displayed numeral cards, optional cardinality chart for checking.

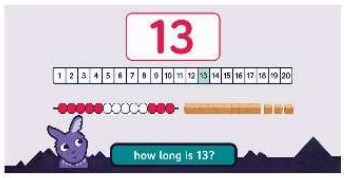
Teacher note

Use more / less and greater than / less than. Avoid "bigger" and "smaller," because those words can lead students to focus on the physical size of the written numeral rather than its value.

Step	Teacher move	Student response
1. Display	Show two numeral cards, for example 4 and 6.	Students look.
2. Read	"Read the numbers."	"4. 6."
3. Compare	"Which number is more, 4 or 6?" Hold up stop hand, pause, then lower hand.	"6."
4. Sentence	"Say the comparison sentence."	"6 is more than 4."
5. Less than	"Which number is less?"	"4 is less than 6."
6. Explain	"How do you know?"	"6 comes after 4." / "6 is farther along."
7. Repeat	Show another pair from the taught range.	Students compare.

Correction routine

If students choose incorrectly, display the number list or cardinality chart: "Let's find both numbers. Which one is farther along? Which one shows more?"



Visual Magnitude Match

Purpose

Students compare quantities using visual representations before or alongside numerals.

Use for

Quick review of non-symbolic or supported magnitude comparison.

Materials

- Five-frame cards for quantities within 5; ten-frame cards once students are working beyond 5.

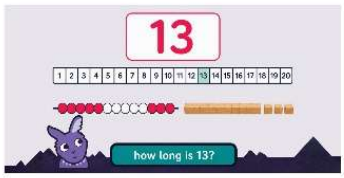
Teacher note

This routine is useful when students need to strengthen the link between number words and quantities before comparing numerals alone. Hold up two five-frame or ten-frame cards and ask which is more, so students connect the spoken number word to the represented quantity.

Step	Teacher move	Student response
1. Display	Show two five-frame or ten-frame cards, for example 5 and 7.	Students look.
2. Ask	"Which is more, 5 or 7?" Emphasise each card as the number is spoken.	"7."
3. Sentence	"Say it."	"7 is more than 5."
4. Less than	"Which is less?"	"5 is less than 7."
5. Explain	"How do you know?" (Turn and talk/choose 1-2 students to share)	"7 has 5 and 2 more." / "7 has more dots."
6. Repeat	Show another known pair.	Students compare.

Correction routine

If students guess, align the two representations and say: "This card has 5. This card has 5 and some more. The card with more dots shows the greater number."



Number List: Left Is Less, Right Is More

Purpose

Students connect position on a number list or number path to magnitude. This routine also supports number-sequence language such as before, after, one more, and one less.

Use for

Whole-class review once students are familiar with a number list or number path.

Materials

- Number list, number path, or number strip.

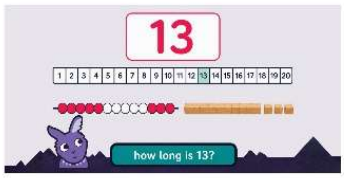
Teacher note

Students should learn that numbers decrease as they move left and increase as they move right, and that magnitude is the distance from zero to the number's position, not just a point on the line.

Step	Teacher move	Student response
1. Display	Show a number list or number path.	Students look.
2. Target	Point to 6. "What number?"	"6."
3. One less	Move one space left. "What number is one less than 6?"	"5."
4. One more	Move one space right. "What number is one more than 6?"	"7."
5. Compare	"Which is more, 5 or 7?"	"7."
6. Sentence	"Say it."	"7 is more than 5."
7. Repeat	Use several known target numbers.	Students respond chorally.

Correction routine

If students confuse direction, point and say: "When we move left, numbers get less. When we move right, numbers get more."



Linear Board Game: One More, One Less Move

Purpose

Students practise one more and one less through movement on a linear board.

Use for

Daily review once students can identify before and after numbers within the target range.

Materials

- Linear board 0–10 or 1–10, class token.

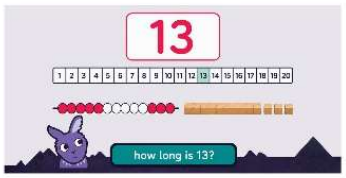
Teacher note

This routine links before/after to one less/one more. It also reinforces that movement to the right increases the number and movement to the left decreases it.

Step	Teacher move	Student response
1. Place token	Put the token on 6. "What number are we on?"	"6."
2. One more	Move one space right. "What is one more than 6?"	"7."
3. Sentence	"Say it."	"7 is one more than 6."
4. Return	Move the token back to 6.	Students track.
5. One less	Move one space left. "What is one less than 6?"	"5."
6. Sentence	"Say it."	"5 is one less than 6."
7. Repeat	Use several known target numbers.	Students respond chorally.

Correction routine

If students confuse direction, say: "Right is one more. Left is one less. Watch the token move, then say the number."



INSTRUCTIONAL GUIDANCE: MAGNITUDE ESTIMATION

Implementation summary

Summary

- The goal is to build students' understanding of numerical magnitude, number order, benchmark numbers, proportional spacing, and numerical distance using linear representations.
- Number line estimation is one useful measure of this understanding, but instruction should also include building, comparing, locating, moving along, and explaining quantities using concrete and visual linear models.
- Students need to explain how they estimated, compared, or located a number using benchmarks, relative size, and distance.
- Develop strong understanding of number sequence, quantity, benchmark numbers, proportional reasoning, and place value before expecting accurate estimation across larger number ranges.
- Progress gradually from concrete linear quantities and number paths within 10 and 20 toward bounded number lines and larger ranges within 100.
- Support students to move from counting-by-ones toward using benchmark numbers, halfway points, place value, and numerical relationships to reason more efficiently.
- Use frequent, brief practice sessions initially, then move to cumulative review once students are accurate.