

Order and Compare Lengths



Grade 1 | NC.1.MD.1

Teacher scripts, worked models, reusable materials, 30 choice tasks, 30 open performances, worked keys and individual evidence records.

Teach in short sessions across days. Print selected student pages; the full bank is not a single test.

Aligned to the verified current NC standard for 2026-27 and 2027-28. The standards adopted in 2026 for implementation in 2028-29 are outside this edition.

Free sample | Contents

NC.1.MD.1 | First Grade mathematics

This sample contains 20 complete selected pages from the 89-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-16, 31-32, 63, 73

Representative activities

M01: sample PDF page(s) 17; original page(s) 16

M02: sample PDF page(s) 17; original page(s) 16

O01: sample PDF page(s) 18; original page(s) 31

O02: sample PDF page(s) 19; original page(s) 32

Selected teacher prompts and keys: original page(s) 63, 73

Using this sample

Read the preparation and access guidance before using a selected activity.
Keep teacher keys and private preparation pages separate from student copies.
Use the original resource contents to see the scope of the complete packet.

Complete paid download

The complete resource includes the full PDF task bank and teaching materials.

TEACHER GUIDE

Standard and learning targets

NC.1.MD.1

Order three objects by length; compare the lengths of two objects indirectly by using a third object.

Learning targets

- Order three real objects from shortest to longest.
- Use a third object to compare two objects indirectly.
- Explain which endpoint evidence supports a conclusion, or why evidence is insufficient.

Every odd-numbered open task orders three actual objects. Every even-numbered open task compares separated objects indirectly. Diagrams are relative illustrations only; all actual measurement performances use the real prepared strips. No printed ruler accuracy is claimed.

Evidence to collect

Observe the child physically ordering three objects and comparing two separated objects with a third. Listen for aligned starts and endpoint reasoning. Written relation facts in choice items are recognition only; they do not replace the hands-on performances.

TEACHER GUIDE

Prepare and support access

Materials and prerequisites

Rigid straight paper or cardboard strips labeled A, B, C; a separate rigid transfer strip T; removable endpoint markers, blank paper, drawing tools. Adults cut safe strips with clearly unequal lengths for ordered sets. No ruler or standard unit is required. Directions describe relational setups, not promised printed inch/centimeter lengths.

Directly compare two lengths by matching one end and keeping objects straight. Separate length from color, width, and starting position.

Words to use

length, shortest, longest, between, endpoint, align, indirectly, transfer strip.

Access without supplying answers

Read directions neutrally. Accept speech, signing, AAC, pointing, drawing, dictated explanations or a partner moving materials at the learner's direction. Record who made mathematical decisions. Do not score reading, spelling, handwriting, accent or motor speed.

Distinguish access supports from mathematical cues. Record N/O for inaccessible, unobserved or insufficient evidence; a missing response is not a zero. Use large, safe materials. Adults handle cutting.

Teaching models are supported opportunities. For independent evidence, use a fresh task after the model, keep keys hidden and record the first response before coaching.

For mental work, an explanation may use objects after the initial mental answer. A computed answer from counting aids is a different evidence context.

TEACHER GUIDE

Worked model | first method

Prepare A shorter than B and B shorter than C, but scramble their positions. Say: "I match the starting ends and keep each strip straight. A ends first, then B, then C. From shortest to longest: A, B, C." Move C to the left and ask whether moving it changed its length. Match starts again to check.

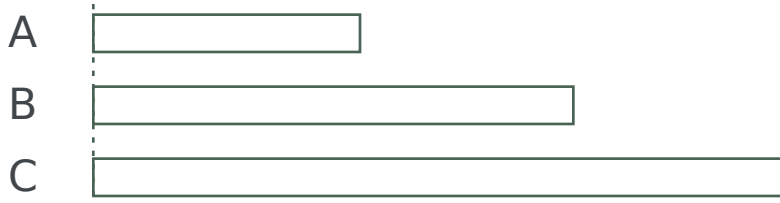


Illustration only. Demonstrate with real strips.

What to notice

Observe the child physically ordering three objects and comparing two separated objects with a third. Listen for aligned starts and endpoint reasoning. Written relation facts in choice items are recognition only; they do not replace the hands-on performances.

TEACHER GUIDE

Worked model | connections

Keep strips A and B on separate tables. Use a third rigid strip T equal in length to A: align T with A to verify both ends match, then carry T to B without changing T. If B extends beyond T from a matched start, B is longer than T and therefore longer than A. Record the two comparisons and the conclusion. Also discuss A shorter than T and B longer than T: B must be longer than A. If both are shorter than T, more evidence is needed.

Respond to a misconception

If far-right position determines longest, align starting ends and retest. If the learner stretches or bends the transfer strip, replace it with rigid material. If two objects are both shorter than T, the fact alone does not establish their relative lengths; take another comparison rather than guessing.

Explain, do not imitate

Ask: "What in your model shows that?" Let learners point to the quantity or endpoint their words describe. Compare two methods only after each is clear. Accept equivalent correct reasoning; do not require memorized wording.

Mathematical practices: represent quantities and relations, choose tools for a purpose, explain a claim with evidence, check a result, and revise an incorrect comparison or model.

TEACHER GUIDE

Plan short sessions

Day 1: warm-up and I Do. Day 2: We Do and partner work. Day 3: independent evidence and exit. Day 4 or later: targeted reteach and a fresh opportunity. Split any block further for attention or access needs. The times below apply to selected core tasks, not every bank item.

Warm-up: 8 minutes. Core M01 and O01; reusable bank M01-M04 / O01-O04. 4 choice and 4 open tasks.

I Do: 12 minutes. Core M05 and O05; reusable bank M05-M08 / O05-O08. 4 choice and 4 open tasks.

We Do: 15 minutes. Core M09 and O09; reusable bank M09-M13 / O09-O13. 5 choice and 5 open tasks.

Collaborative practice: 13 minutes. Core M14 and O14; reusable bank M14-M18 / O14-O18. 5 choice and 5 open tasks.

Independent practice: 17 minutes. Core M19 and O19; reusable bank M19-M23 / O19-O23. 5 choice and 5 open tasks.

Small-group reteach: 10 minutes. Core M24 and O24; reusable bank M24-M27 / O24-O27. 4 choice and 4 open tasks.

Exit ticket: 5 minutes. Core M28 and O28; reusable bank M28-M30 / O28-O30. 3 choice and 3 open tasks.

Print only chosen tasks and mats. Navigation: teaching scripts follow; then anchor/materials, choice bank, open bank, observation records, keys, inquiry and sources. Stable IDs connect each page to the keys and coverage file.

In a later session choose unused cards with both operation directions or target types. Do not interpret performance on a just-modeled card as independent evidence.

TEACHER GUIDE

Warm-up | teach and notice

Core M01 / O01; optional bank through M04 / O04.

0-2 min: Invite learners to show a familiar quantity or fair length comparison. Say: "Show something you already know that could help."

2-5 min: Read M01 neutrally. Each learner chooses privately. Ask: "What helped you decide?" Record the first strategy.

5-8 min: Offer O01. Give access supports but do not complete the mathematics. Keep evidence of both the action and explanation.

Listen, record and extend

Target for this core: order three actual objects. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

I Do | teach and notice

Core M05 / O05; optional bank through M08 / O08.

0-3 min: Display materials for the first worked-model page. Say: "Watch how my model explains the answer."

3-8 min: Prepare A shorter than B and B shorter than C, but scramble their positions. Say: "I match the starting ends and keep each strip straight. A ends first, then B, then C. From shortest to longest: A, B, C." Move C to the left and ask whether moving it changed its length. Match starts again to check.

8-12 min: Read M05 and connect its worked key to the same reasoning. Use O05 as a supported demonstration. Ask a learner to explain one decision; label this as supported work.

Listen, record and extend

Target for this core: order three actual objects. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

We Do | teach and notice

Core M09 / O09; optional bank through M13 / O13.

0-3 min: Say: "Which part should we show first? Why?" Let learners propose a model or comparison.

3-9 min: Read O09. Pause before each mathematical decision. Test two suggestions using quantities or endpoint evidence.

9-15 min: Read M09. Ask each child to explain a choice, then compare it with the shared model. Have one learner retell the complete reasoning.

Listen, record and extend

Target for this core: order three actual objects. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

Collaborative practice | teach and notice

Core M14 / O14; optional bank through M18 / O18.

0-2 min: Assign maker and checker roles. Say: "Each person will show a method and explain a check."

2-8 min: Use O14; then switch roles on O15. The checker asks "What is your evidence?" without supplying an answer.

8-13 min: Use M14 for individual explanations. Record each learner separately; partner agreement is not individual evidence.

Listen, record and extend

Target for this core: indirect physical comparison. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

Independent practice | teach and notice

Core M19 / O19; optional bank through M23 / O23.

0-3 min: Say: "Show your own thinking. I can read the words again." Give only access supports.

3-12 min: Observe O19; use another unused open card if a different target needs evidence. Record first actions, words and self-corrections.

12-17 min: Offer M19 as secondary recognition evidence. Ask "How did you decide?" Save the model, drawing or teacher notes.

Listen, record and extend

Target for this core: order three actual objects. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

Small-group reteach | teach and notice

Core M24 / O24; optional bank through M27 / O27.

0-2 min: Choose one misconception from a recorded response. Identify the missing idea rather than grouping only by total scores.

2-6 min: If far-right position determines longest, align starting ends and retest. If the learner stretches or bends the transfer strip, replace it with rigid material. If two objects are both shorter than T, the fact alone does not establish their relative lengths; take another comparison rather than guessing.

6-10 min: Offer O24, then a fresh card with less support. Ask: "What changed in your thinking?" Record remaining mathematical cues.

Listen, record and extend

Target for this core: indirect physical comparison. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

TEACHER GUIDE

Exit ticket | teach and notice

Core M28 / O28; optional bank through M30 / O30.

0-1 min: Read O28; make materials and response route accessible.

1-4 min: Collect an individual demonstration. Say: "Show the evidence for your answer." Use a choice task only if useful time remains.

4-5 min: Record a next teaching move. Mark N/O if no valid observation occurred and arrange a fresh opportunity, rather than guessing a score.

Listen, record and extend

Target for this core: indirect physical comparison. Record item/date, exact actions or words, self-correction, access support, mathematical cues and next step.

After recording: move or rotate a strip without changing its length. Retest the relation and explain which features matter.

DISPLAY FOR TEACHING

Our reasoning anchor

- Compare length, not position or width.
- Match one endpoint; keep objects straight.
- Order all three objects, checking both neighbors.
- For indirect comparison, keep the third object unchanged.
- Explain what each comparison proves.

Use this anchor for learning. Remove answer-supplying reminders during an independent observation and record any reminders that were provided.

STUDENT MATERIALS

Reusable work mat

Name: _____

My objects, shortest to longest:

A compared with T

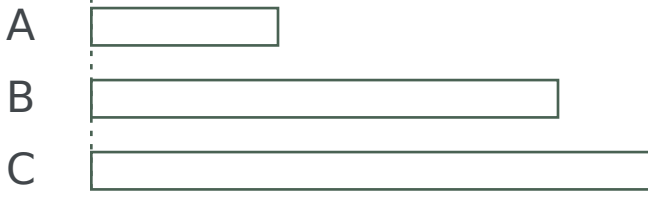
B compared with T

What can I conclude? Why?

STUDENT CHOICE BANK

M01-M02 | Listen and choose

M01 Which order is shortest to longest?



- A. A, B, C
- B. B, C, A
- C. C, B, A
- D. A, C, B

M02 A is shorter than T. B is shorter than T. What can we tell?

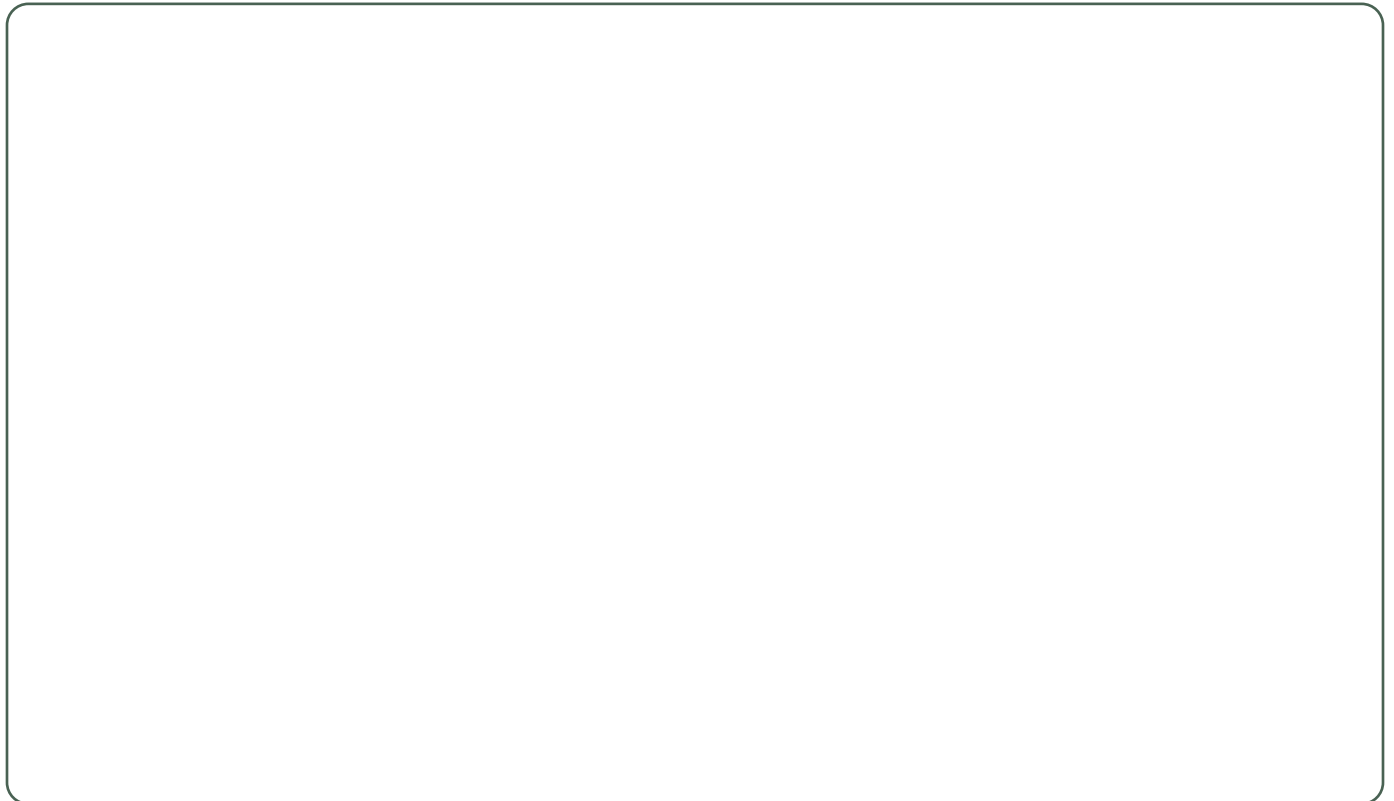
- A. We need more evidence
- B. A and B are equal in length
- C. B is longer than A
- D. A is longer than B

WARM-UP

001 | Show your thinking

Place the three real strips in order from shortest to longest.
Show why your order works.

Use the real strips your teacher prepared. Record what you showed.



Name: _____ Date: _____

WARM-UP

002 | Show your thinking

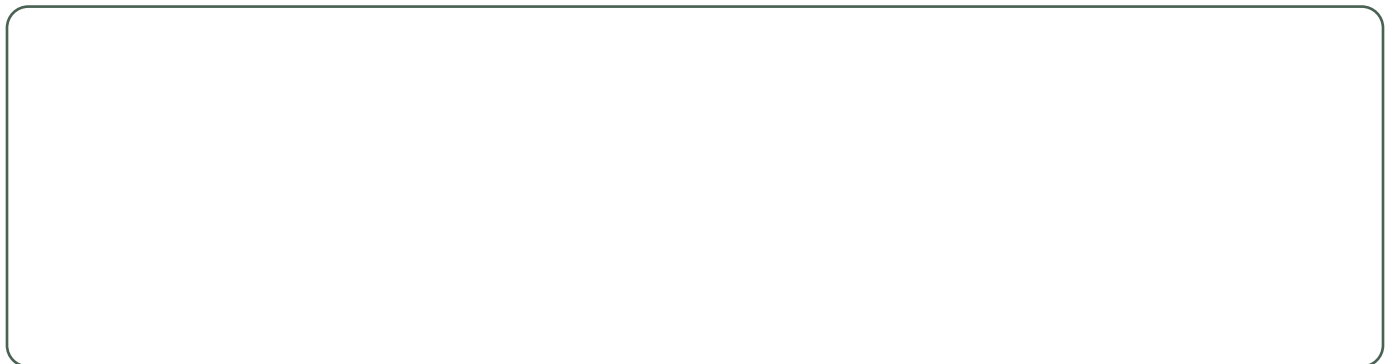
A and B stay on separate tables. Use the third strip T to compare their lengths. Show each comparison. Explain what you know about A and B.

Use the real strips your teacher prepared. Record what you showed.

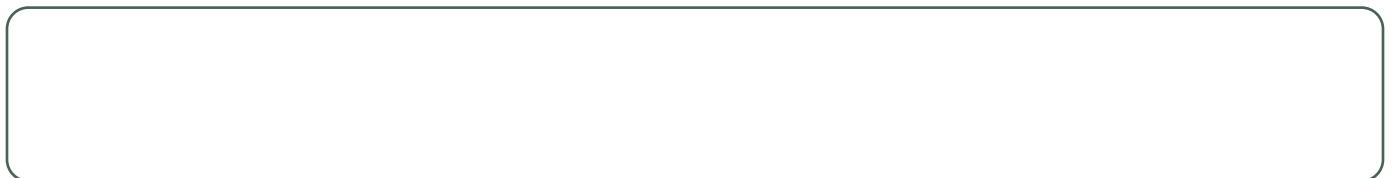
A compared with T



B compared with T



What can I conclude? Why?



Name: _____ Date: _____

TEACHER ONLY

M01-M03 | Worked keys

M01 | A. A, B, C

The starts align. Relative lengths for checking the artwork are $A=70$, $B=175$, $C=210$ drawing points. Endpoints give A, B, C. These are not student measurement units.

Check each other choice against the complete model or relationship above; it gives a different total, order or unsupported conclusion. Ask for reasoning before naming the correct option.

M02 | A. We need more evidence

A is shorter than T. B is shorter than T. Both can be shorter than T yet differ from each other or match. These facts alone do not decide.

Check each other choice against the complete model or relationship above; it gives a different total, order or unsupported conclusion. Ask for reasoning before naming the correct option.

M03 | B. B, C, A

The starts align. Relative lengths for checking the artwork are $A=245$, $B=70$, $C=175$ drawing points. Endpoints give B, C, A. These are not student measurement units.

Check each other choice against the complete model or relationship above; it gives a different total, order or unsupported conclusion. Ask for reasoning before naming the correct option.

TEACHER ONLY

001-002 | Worked keys

001 | order three actual objects

Preparation: Adult only: prepare three rigid straight strips labeled A/B/C so shortest-to-longest is A, B, C. Make lengths clearly distinct but keep widths alike. Scramble position; do not display this answer order. For the partner variant only, place the strips so neither their starting nor their far ends align; the child establishes a shared endpoint. Matching either the left or the right ends is valid.

The correct shortest-to-longest order is A, B, C. Match either the starting or the far ends and compare the other ends; check both neighboring pairs. Correctly matching right ends is as valid as matching left ends. Moving a strip does not change its length. Accept reversed physical placement only if the learner clearly states the requested order.

Accept equivalent valid models and explanations. Record actual performance and any mathematical support; the sample wording is not required.

002 | indirect physical comparison

Preparation: Adult only: place A and B on separate tables with equal lengths. Make a rigid third strip T exactly equal in length to A by matching/cutting before the session; confirm both endpoints. Keep A/B separated. Do not tell the learner T matches A; let the learner establish it. No numerical units or printed scale is required.

Match both endpoints of T and A first. Carry unchanged T to B and align one starting end. B also matches both endpoints of T; A and B have equal lengths. Observe both actual comparisons. Guessing the relation or bringing A and B together does not demonstrate indirect comparison.

Accept equivalent valid models and explanations. Record actual performance and any mathematical support; the sample wording is not required.