

Order on the Number Line



Grade 6 | NC.6.NS.7

Teacher scripts and worked models

30 multiple-choice + 30 open/performance tasks

Original number lines, coordinate grids and workspaces

Worked keys, scoring guidance and evidence record

Current North Carolina standards for 2026-27 and 2027-28. Select tasks across several sessions; this bank is not one test.

Free sample | Contents

NC.6.NS.7 | Sixth Grade mathematics

This sample contains 19 complete selected pages from the 92-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-15, 30-31, 60, 75

Representative activities

M01: sample PDF page(s) 16; original page(s) 15

M02: sample PDF page(s) 16; original page(s) 15

O01: sample PDF page(s) 17; original page(s) 30

O02: sample PDF page(s) 18; original page(s) 31

Selected teacher prompts and keys: original page(s) 60, 75

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

Exact standard

Understand ordering of rational numbers.

- a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
- b. Write, interpret, and explain statements of order for rational numbers in real-world contexts.

Alignment note: All clauses above are taught and assessed in this packet. Current NC numbering is used; future 2028-29 standards are not substituted.

TEACHER GUIDE

Targets and coverage

T1: I can interpret inequalities using relative number-line positions.

Evidence: M01, M02, M03, M04, M05, M06, M07, M08, M10, M12, M13, M15, M18, M19, M20, M21, M22, M23, M24, M25, M26, M27, M28, M29, M30, O01, O03, O04, O05, O06, O08, O10, O11, O12, O13, O14, O15, O16, O17, O18, O19, O20, O21, O22, O24, O25, O26, O27, O28, O30

T2: I can write, interpret and justify rational-number order in context.

Evidence: M09, M11, M14, M16, M17, O02, O07, O09, O23, O29

Essential question: How do location, direction and distance help us justify a signed-number statement? MP2 connects contexts and symbols; MP3 critiques reasoning; MP4 models; MP5 chooses tools; MP6 attends to signs and scales.

TEACHER GUIDE

Plan and navigation

Use four sessions of about 25-35 minutes: 1, warm-up and I Do; 2, We Do and collaborative practice; 3, independent work; 4, reteach and exit. Select one choice and one open task per section initially. Keep the other items for spaced practice, conferences and new evidence.

Navigation: exact standard -> targets -> materials -> worked model -> organizer -> seven scripts -> choice bank -> open bank -> worked keys -> evidence and sources. Print selected student pages, not the whole teacher packet.

Warm-up: M01-M04 and O01-O04

I Do: M05-M08 and O05-O08

We Do: M09-M13 and O09-O13

Collaborative practice: M14-M18 and O14-O18

Independent practice: M19-M23 and O19-O23

Small-group reteach: M24-M27 and O24-O27

Exit ticket: M28-M30 and O28-O30

Every item has its own target and worked key. Choice recognition is not a substitute for the plotting, modeling, contextual explanation or justified comparison required in open tasks.

TEACHER GUIDE

Materials and access

Prerequisites: read signed decimals and fractions, identify zero, recognize equal intervals, and describe horizontal/vertical directions. For coordinate tasks, review ordered pairs without teaching the answers to assessment items.

Materials: pencil, ruler, supplied number lines/grids and blank organizers. For integer models, use paper circles with + and - marks or safe classroom counters; the printed model shows how. Adults handle any cutting. No specialized purchased tool is required.

Access: neutral read-aloud, enlargement, high-contrast copy, AAC/signing and dictated explanations are allowed. Preserve the construct: a student must direct placement of each point or model step. A scribe may carry out exact student directions and record them.

Answer-supplying cues include naming the quadrant, reversing the sign for the learner, pointing at the correct location or announcing an operation. Record the first response before a cue and score later supported evidence separately.

Vocabulary: rational number, opposite, additive inverse, zero, absolute value, magnitude, inequality, ordered pair, axis, quadrant, reflection, coordinate, distance, zero pair. Teach only the terms needed for the selected standard.

N/O means unobserved, inaccessible or insufficient evidence. Zero means an observed interpretable incorrect response. Do not score handwriting, reading fluency or accent; do not impose invented speed or mastery cutoffs.

Diagrams use mathematical scales, not physical ruler lengths. Each grid has half-unit small squares. Integer lines show 2-unit major ticks with room for student midpoint ticks. Contexts and data are invented for instruction.

WORKED TEACHER MODEL

Position explains order

Compare $-7/2$ and -2 . Say: " $-7/2 = -3.5$. I mark both values on a line with half-unit intervals. -3.5 lies left of -2 , so $-3.5 < -2$. At these temperatures, -2 degrees Celsius is warmer. The larger digit 3 does not make -3.5 greater; direction from zero matters."



Anchor: left means less; right means greater. Absolute value measures distance from 0 and cannot be negative. Opposites have equal distances and opposite directions.

STUDENT TOOL

Reusable reasoning organizer

Name: _____ Date: _____

Situation / given values: _____

**Context and zero reference / direction or zero pairs****Equation or comparison / interpretation / check**

TEACHER GUIDE

Warm-up script

Core: M01 and O01. Optional bank through M04/O04. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Read two signed values aloud without suggesting which is greater. Locate their side of zero.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

I Do script

Core: M05 and O05. Optional bank through M08/O08. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Model $-7/2$ and -2 . Explicitly connect the inequality symbol to left-right location and temperature meaning.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

We Do script

Core: M09 and O09. Optional bank through M13/O13. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Have learners write an inequality, then read it as a complete sentence tied to the number line.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Write, interpret and justify rational-number order in context. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

Collaborative practice script

Core: M14 and O14. Optional bank through M18/O18. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Partners exchange order statements, plot to check, and offer a counterexample to a faulty sign rule.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

Independent practice script

Core: M19 and O19. Optional bank through M23/O23. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Collect individual order statements and contextual interpretations before partner discussion.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

Small-group reteach script

Core: M24 and O24. Optional bank through M27/O27. Use a fresh item for later independent evidence.

1-3 minutes | Launch

If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

TEACHER GUIDE

Exit ticket script

Core: M28 and O28. Optional bank through M30/O30. Use a fresh item for later independent evidence.

1-3 minutes | Launch

Use a new rational pair. Require both a correct inequality and a sentence explaining its context.

4-8 minutes | Demonstrate or elicit

Say: "Show where you start. What does the sign tell you? What in your representation proves the result?" In I Do, demonstrate the worked model; in We Do, pause for students to supply each step. In independent/exit work, give neutral directions only.

3-6 minutes | Examine

Look for: Interpret inequalities using relative number-line positions. Ask: "Can you explain the scale, units and meaning of zero?" Check the model before accepting a correct numerical answer.

2-4 minutes | Respond

Document the exact response first. If absolute values are being ordered instead, plot equal-distance opposites and compare their signed positions. Have the learner retry a different item after instruction; do not erase the distinction between initial and supported evidence.

1-3 minutes | Close

Record the item, representation, reasoning, access supports and any cue. Early finishers create a counterexample to a tempting shortcut and verify it with a model. Each partner provides individual evidence before discussion.

STUDENT CHOICE

Choice practice 1-2

M01 Which number lies strictly between 0 and 4?

- A. 2
- B. 4
- C. 4.5
- D. -0.5

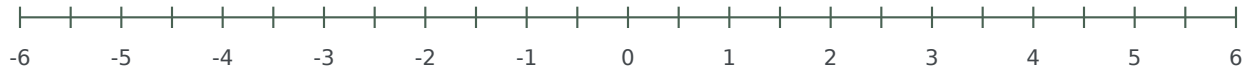
M02 Which inequality compares $-7/2$ and 3?

- A. $-7/2 > 3$
- B. $-7/2 < 3$
- C. $-7/2 = 3$
- D. These values cannot be ordered.

STUDENT PERFORMANCE

001 | Warm-up

Which inequality compares 0 and -1? Plot the given values on the blank number line, write the correct order statement, and justify it by relative position. Invent a temperature or elevation context and explain what the order means.



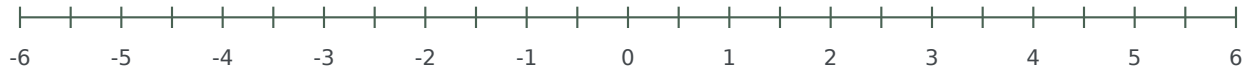
Model details / equations / zero pairs or context

Answer / explanation / check

STUDENT PERFORMANCE

002 | Warm-up

City A has temperature 0 degrees Celsius; City B has 0.5 degrees Celsius. Which inequality compares A with B? Plot the given values on the blank number line, write the correct order statement, and justify it by relative position.



Model details / equations / zero pairs or context

Answer / explanation / check

TEACHER ONLY

M worked keys 1-2

M01: A. 2

Target: Interpret inequalities using relative number-line positions.

$0 < 2 < 4$. 2 is the midpoint: $(0 + 4) / 2 = 2$. Endpoints do not count as strictly between.

Distractor checks: 4: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes. 4.5: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes. -0.5: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes.

M02: B. $-7/2 < 3$

Target: Interpret inequalities using relative number-line positions.

$-7/2 < 3$. $-7/2$ lies left of 3; farther right means greater. A negative value is below 0; among negatives the value closer to 0 is greater.

Distractor checks: $-7/2 > 3$: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes. $-7/2 = 3$: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes. These values cannot be ordered.: Place the original signed values on the line; read from left to right. Check strict endpoints and do not compare only magnitudes.

TEACHER ONLY

0 worked keys 1-2

001: $0 > -1$

Target: Interpret inequalities using relative number-line positions.

$0 > -1$. 0 lies right of -1; farther right means greater. A negative value is below 0; among negatives the value closer to 0 is greater. Example context: values are elevations in meters; the greater signed value is higher, even if it is closer to sea level.

Look for the actual labeled model and an independently given explanation. Accept equivalent correct representations and contexts. A correct answer without the requested performance is incomplete evidence.

002: $0 < 0.5$

Target: Write, interpret and justify rational-number order in context.

$0 < 0.5$. 0 lies left of 0.5; farther right means greater. City B is warmer.

Look for the actual labeled model and an independently given explanation. Accept equivalent correct representations and contexts. A correct answer without the requested performance is incomplete evidence.