

TEACHER + STUDENT RESOURCE

Grade 4 mathematics

Compare decimal amounts



NC.4.NF.7 | Number and Operations - Fractions

Current North Carolina Standard Course of Study
For 2026-27 and 2027-28; 2026-adopted standards begin 2028-29.

Seven teaching sections, 30 choice tasks, 30 drawing / performance tasks, original fraction models, worked keys, and individual evidence records. Select tasks across several sessions; the bank is not one sitting.

Purposeful visual supports • Equal units • Model-to-symbol reasoning

Free sample | Contents

NC.4.NF.7 | Fourth Grade mathematics

This sample contains 18 complete selected pages from the 86-page resource, plus this sample contents page. Original printed page numbers are retained. Gaps are intentional.

Included original pages: 1-14, 29-30, 59, 69

Representative activities

M01: sample PDF page(s) 15; original page(s) 14

M02: sample PDF page(s) 15; original page(s) 14

O01: sample PDF page(s) 16; original page(s) 29

O02: sample PDF page(s) 17; original page(s) 30

Selected teacher prompts and keys: original page(s) 59, 69

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

Contents and teaching plan

Pages 3-5: exact standard, targets, access, and model. Pages 6-12: seven lesson scripts. Page 13: reusable organizer. Pages 14-28: choice bank. Pages 29-58: performance bank. Pages 59-68: choice keys and error checks. Pages 69-83: worked performance keys. Pages 84-85: scoring and evidence record. Page 86: sources.

Session 1 (20-25 min): warm-up and I Do. Session 2 (25-30 min): We Do and partner work. Session 3 (20-25 min): independent work and targeted reteach. Session 4 (10-15 min): exit conferences. Select one M and one O from each section; return to other tasks later. Flexible times support instruction, not speed scoring.

Bank allocation in each format: warm-up 4; I Do 4; We Do 5; collaborative 5; independent 5; reteach 4; exit 3. Teacher modeling is practice rather than independent evidence.

Materials: pencils, colored pencils, blank paper, the supplied model spaces, and paper strips. Students may draw instead of cut; adults handle cutting. No tiny objects are needed. Print selected student pages separately from teacher keys.

Visual supports: hundred-square area grids and equally scaled 0-to-1 number lines. Shaded models support reading quantities; open tasks require students to construct and explain their own representations.

MP2: connect quantities and symbols. MP3: explain and critique a claim. MP4: model contexts. MP6: label units and equal partitions. Evidence comes from individual explanations and models.

TEACHER GUIDE

Standard and learning targets

Compare two decimals to hundredths by reasoning about their size using area and length models, and recording the results of comparisons with the symbols $>$, $=$, or $<$. Recognize that comparisons are valid only when the two decimals refer to the same whole.

A | I can compare decimals to hundredths with area models.

B | I can compare decimals to hundredths with length models.

C | I can record comparisons and explain why the same whole is necessary.

Collect a model, a matching symbolic statement, and a reason tied to equal units. Each task is tagged to a target in the teacher key. Required modeling and explanation are assessed through open tasks, not choice recognition alone.

Scope: decimals through hundredths; area AND length reasoning, comparison symbols, and the same-whole condition. Unequal unspecified reference wholes do not determine actual shaded-area comparisons.

TEACHER GUIDE

Access and misconceptions

Prerequisites: identify one whole, distinguish equal from unequal parts, count unit fractions, and connect place value to groups of ten. Review only what the learner needs before the selected task.

Read directions neutrally; allow enlarged models, oral responses, AAC, signing, pointing, and adult transcription. A learner may direct an adult to draw exact partitions or place points. The adult must not supply the partition, count, comparison, or equation being assessed.

Record access separately from answer-supplying help. If an adult names the correct hundredth or counts the groups, document it and seek a fresh independent response. Do not score handwriting, spelling, accent, or drawing neatness.

If more digits are treated as larger, compare 0.8 and 0.75 on equal-size grids. If trailing zeros appear to change value, overlay 0.4 and 0.40. If wholes differ, first identify their sizes before comparing actual portions.

Reteach: isolate one unit, then build the complete model. Extend: invent two representations for the same claim and explain why they agree. Use the optional two-session investigation on the scoring page. No invented speed cutoff or official mastery threshold is used.

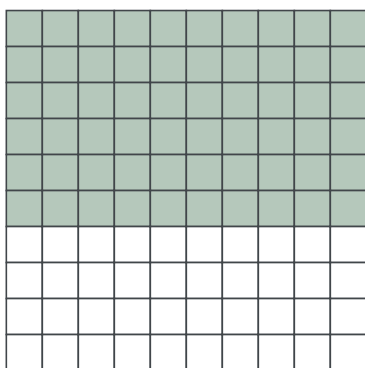
TEACHER MODEL

Think aloud and anchor

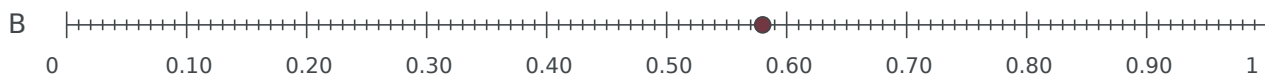
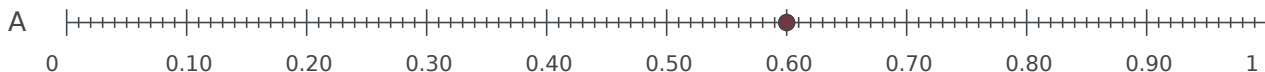
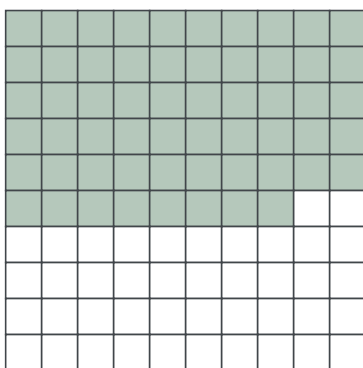
Compare equal-size units

Say: “I compare 0.6 and 0.58 using the SAME whole. Six tenths is 60 hundredths: $0.6 = 0.60$. The first amount has two more hundredths, so $0.60 > 0.58$. Its point is farther right on an equally scaled number line. More written digits do not mean a greater number. Different-size sheet wholes could change actual shaded areas, so I must first establish the common whole.”

A - one whole



B - one whole



**Anchor: same whole? → rename in hundredths → compare areas or positions
→ record $<$, $>$, or $=$ → explain equal units.**

LESSON SCRIPT | Warm-up

Model, discuss, record

Optional bank: M01-M04, O01-O04. Core: M01 and O01; transfer: O04.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Read the core choice item neutrally. Students state or point to a choice and describe the unit. Use their explanations to select the next model.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.82 = 82/100$ and $0.28 = 28/100$; $82 > 28$, so $0.82 > 0.28$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M01 = A, $>$. $0.82 = 82/100$ and $0.28 = 28/100$; $82 > 28$, so $0.82 > 0.28$ for the same whole.

Look for: Compare decimals to hundredths with area models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | I Do

Model, discuss, record

Optional bank: M05-M08, O05-O08. Core: M05 and O05; transfer: O08.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Use the complete think-aloud on page 5. Point to every counted part while speaking. Then model the selected open task below, linking each step to an equation.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.62 = 62/100$ and $0.58 = 58/100$; $62 > 58$, so $0.62 > 0.58$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M05 = A, $>$. $0.62 = 62/100$ and $0.58 = 58/100$; $62 > 58$, so $0.62 > 0.58$ for the same whole.

Look for: Compare decimals to hundredths with area models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | We Do

Model, discuss, record

Optional bank: M09-M13, O09-O13. Core: M09 and O09; transfer: O13.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Start the core open task together. Pause before the last step: “What should we draw or rename next? Why?” Compare two proposals before completing the shared model.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.04 = 4/100$ and $0.40 = 40/100$; $4 < 40$, so $0.04 < 0.40$ for the same whole. Mark A at $4/100$ of the unit and B at $40/100$. The farther-right point is greater; coincident points are equal. $0.04 = 0/10 + 4/100$.

Selected choice: M09 = D, $<$. $0.04 = 4/100$ and $0.40 = 40/100$; $4 < 40$, so $0.04 < 0.40$ for the same whole.

Look for: Compare decimals to hundredths with length models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | Collaborative practice

Model, discuss, record

Optional bank: M14-M18, O14-O18. Core: M14 and O14; transfer: O18.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Partner A constructs the model; Partner B checks equal units and asks a question. Switch roles on the transfer task. Each learner writes or dictates an individual explanation.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.19 = 19/100$ and $0.09 = 9/100$; $19 > 9$, so $0.19 > 0.09$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M14 = C, $>$. $0.19 = 19/100$ and $0.09 = 9/100$; $19 > 9$, so $0.19 > 0.09$ for the same whole.

Look for: Compare decimals to hundredths with area models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | Independent practice

Model, discuss, record

Optional bank: M19-M23, O19-O23. Core: M19 and O19; transfer: O23.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Give the core open task without mathematical hints. Read the directions if needed. Say: “Use a model to support your answer.” Collect each learner’s unaided evidence before discussion.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.09 = 9/100$ and $0.16 = 16/100$; $9 < 16$, so $0.09 < 0.16$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M19 = D, $<$. $0.09 = 9/100$ and $0.16 = 16/100$; $9 < 16$, so $0.09 < 0.16$ for the same whole.

Look for: Record comparisons and explain why the same whole is necessary. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | Small-group reteach

Model, discuss, record

Optional bank: M24-M27, O24-O27. Core: M24 and O24; transfer: O27.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Use the misconception on page 4 that matches the observed error. Build one unit first, then the complete quantity. Ask the learner to explain what changed and what stayed fixed.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.07 = 7/100$ and $0.12 = 12/100$; $7 < 12$, so $0.07 < 0.12$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M24 = A, $<$. $0.07 = 7/100$ and $0.12 = 12/100$; $7 < 12$, so $0.07 < 0.12$ for the same whole.

Look for: Compare decimals to hundredths with area models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

LESSON SCRIPT | Exit ticket

Model, discuss, record

Optional bank: M28-M30, O28-O30. Core: M28 and O28; transfer: O30.

0-2 min | Establish the whole. Say: “Point to one whole. What does one small piece or one interval represent?” Invite a quick sketch or pointing response.

2-7 min | Offer the core M and O tasks, then ask for one explanation linking the answer to the model. Compare this with earlier work; absence of interpretable evidence is N/O.

7-10 min | Ask: “Where is your answer in the model? How do you know the units match?” Discuss one distractor only after collecting any intended independent evidence.

Selected performance worked response: $0.84 = 84/100$ and $0.79 = 79/100$; $84 > 79$, so $0.84 > 0.79$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

Selected choice: M28 = B, $>$. $0.84 = 84/100$ and $0.79 = 79/100$; $84 > 79$, so $0.84 > 0.79$ for the same whole.

Look for: Compare decimals to hundredths with area models. Check the required model as well as the numerical result.

If stuck: ask the learner to identify one unit; use a simpler amount for instruction, then return to a new task. Early finisher: represent the same result another way and explain the agreement.

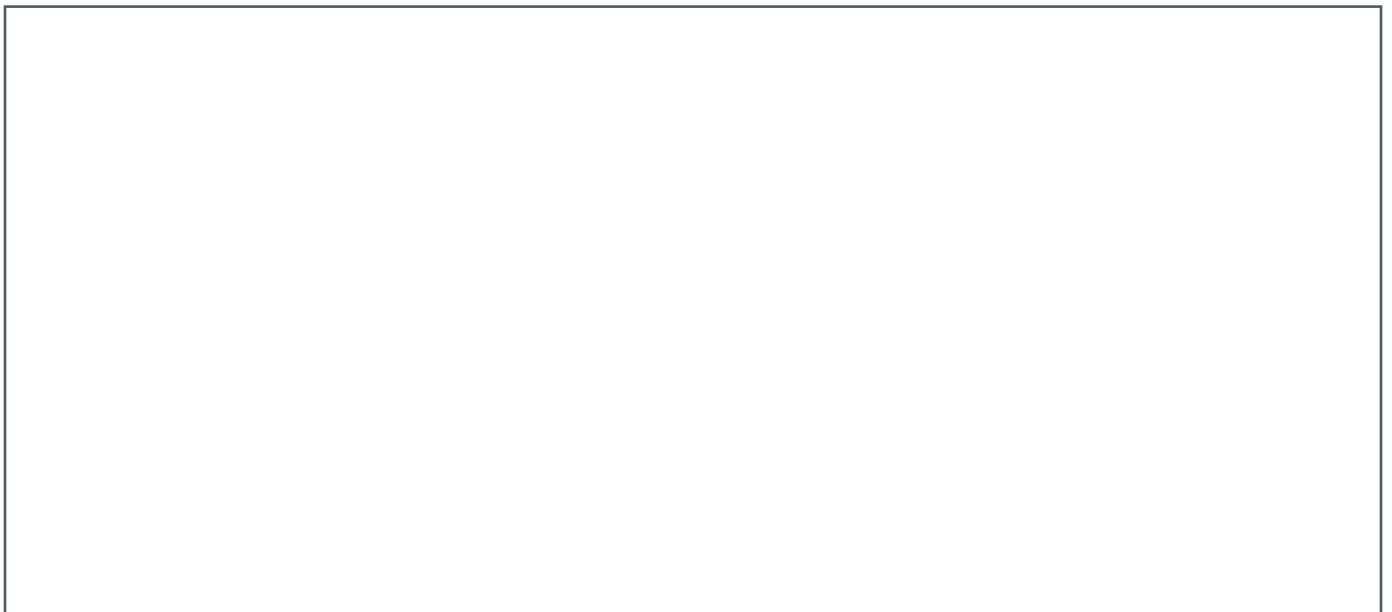
Record the item, individual model, symbolic statement, explanation, access support, any answer-supplying help, and the next teaching move. Timing is flexible.

REUSABLE STUDENT ORGANIZER

Name the whole first

Name: _____ Date: _____

Draw the model. Label the unit whole and equal parts. Connect the picture to a symbolic statement. Explain how you checked your work.

My model / units**My equation or comparison / explanation**

STUDENT CHOICE BANK

M01 and M02

M01 | Compare $A = 0.82$ and $B = 0.28$ of the same whole. Choose the correct relation.

- | | |
|---------------------|--------|
| A. $>$ | B. $<$ |
| C. Cannot determine | D. $=$ |

M02 | Both amounts use one unit length. Compare $A = 0.49$ with $B = 0.50$.

- | | |
|--------|---------------------|
| A. $<$ | B. Cannot determine |
| C. $>$ | D. $=$ |

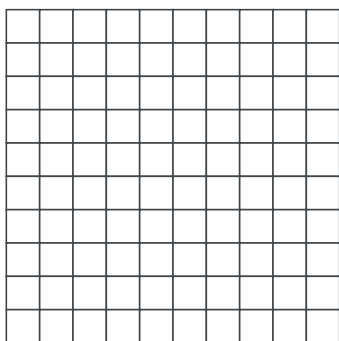
STUDENT PERFORMANCE | Warm-up

001 | Show your reasoning

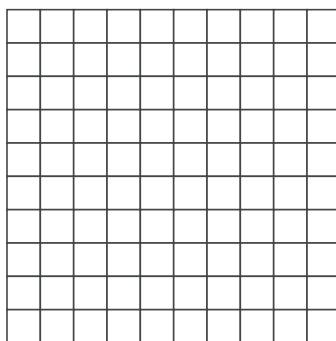
Name: _____ Date: _____

A learner compares 0.82 and 0.28 by comparing the written digits as whole numbers. Test this method with equal-size area models. Record the correct relation and explain the value of each decimal place.

A - one whole



B - one whole

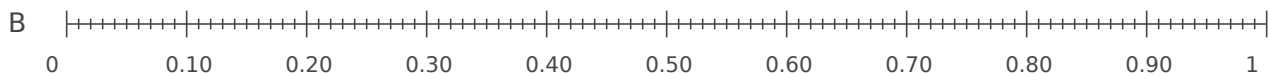
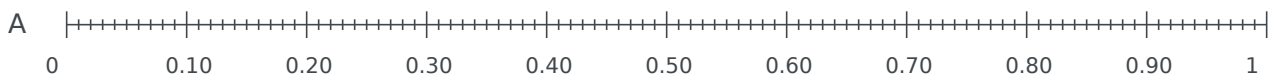
**A: model / first representation****B: second representation if requested / equation and explanation**

STUDENT PERFORMANCE | Warm-up

002 | Show your reasoning

Name: _____ Date: _____

Locate 0.49 and 0.50 on same-scale number lines. Write a comparison. Then write one of the numbers using a tenths-plus-hundredths decomposition and explain how it supports your result.

**A: model / first representation****B: second representation if requested / equation and explanation**

TEACHER KEY

Choice evidence 1-3

M01 | A: > | Target A

$0.82 = 82/100$ and $0.28 = 28/100$; $82 > 28$, so $0.82 > 0.28$ for the same whole.

Distractor checks: B (<): does not match the hundredths comparison. C (Cannot determine): overlooks the stated shared whole. D (=): does not match the hundredths comparison. Ask the learner to reconstruct the model; a choice alone does not prove the cause of an error.

M02 | A: < | Target B

$0.49 = 49/100$ and $0.50 = 50/100$; $49 < 50$, so $0.49 < 0.50$ for the same whole.

Distractor checks: B (Cannot determine): overlooks the stated shared whole. C (>): does not match the hundredths comparison. D (=): does not match the hundredths comparison. Ask the learner to reconstruct the model; a choice alone does not prove the cause of an error.

M03 | A: = | Target B

$0.4 = 40/100$ and $0.40 = 40/100$; $40 = 40$, so $0.4 = 0.40$ for the same whole.

Distractor checks: B (>): does not match the hundredths comparison. C (Cannot determine): overlooks the stated shared whole. D (<): does not match the hundredths comparison. Ask the learner to reconstruct the model; a choice alone does not prove the cause of an error.

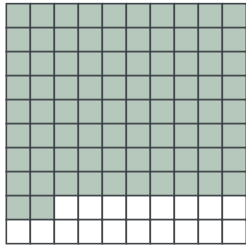
TEACHER KEY

Performance evidence 1-2

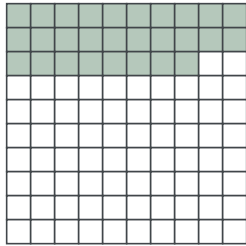
001 | Target A | Compare decimals to hundredths with area models.

$0.82 = 82/100$ and $0.28 = 28/100$; $82 > 28$, so $0.82 > 0.28$ for the same whole. Shade the stated number of hundredths in each 100-square whole; compare equal-size selected pieces.

A - one whole



B - one whole



002 | Target B | Compare decimals to hundredths with length models.

$0.49 = 49/100$ and $0.50 = 50/100$; $49 < 50$, so $0.49 < 0.50$ for the same whole. Mark A at $49/100$ of the unit and B at $50/100$. The farther-right point is greater; coincident points are equal. $0.49 = 4/10 + 9/100$.

