

# Decimal Place Value & Operations: teacher script

Use with the Lesson presenter (room page -> Lesson presenter). Slides show only student cues; this script has what to say. Students need the printed lesson worksheet and a pencil.

**Presenter keys:** Right/left arrows change slides. N shows short notes. T pauses the timer. P picks a student. F is fullscreen.

**Response routine:** Students write each answer on their worksheet, then show it with fingers (1 = A, 2 = B, 3 = C, 4 = D). Scan the room before revealing.

## SLIDE 1: TODAY'S TARGET

1 min

|          |                                                                                                                                                     |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Say      | Today's learning target is: "I can compare and round decimals and add, subtract, multiply, and divide decimals using place value." Read it with me. |
| Say      | Here is how you will know you have it: the success criteria. You will prove it on the exit ticket at the end of class.                              |
| Point to | The agenda and the key vocabulary. Tell students they need their notebook, guided notes page, and pencil.                                           |

## SLIDE 2: WARM-UP

0:00–0:08

|          |                                                                                                                                   |
|----------|-----------------------------------------------------------------------------------------------------------------------------------|
| Say      | Turn to Part 2 of your lesson worksheet. Answer the three questions in complete sentences. You have 5 minutes of silent work. Go. |
| Do       | Start the 8:00 timer. Circulate. At 5 minutes say: "Turn to your partner and compare answers for 2 minutes."                      |
| Look for | 1) 7/10, seven tenths. 2) 0.5, because 0.50 has 50 hundredths and 0.45 has 45 hundredths. 3) \$0.75.                              |
| Say      | Call on 2-3 students for questions 1 and 2, then reveal. Say: "We will come back to question 3 at the end of class."              |

## SLIDE 3: HOOK

1 min

|            |                                                                                                                                               |
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| Say        | Read the question on the screen: "Which is bigger: 0.5 or 0.45?" Circle your prediction in Part 3 of your worksheet and write why. Then vote. |
| Background | Write 0.5 and 0.45 on the board. "Which is bigger? 45 is more than 5, so 0.45 must be bigger... right?" Let students debate.                  |
| Do         | Tap +1 for each vote. Do not give the answer. Say: "By the end of the lesson, you will be able to check your prediction."                     |

**SLIDE 4: LEARN 1: PLACE VALUE****3 min**

|                  |                                                                                                                                                                                                                                                                      |
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| Say              | Each place is 10 times the place to its right. $0.4 = 4 \text{ tenths} = 40 \text{ hundredths}$ .                                                                                                                                                                    |
| Worksheet        | Say: "Part 5: fill in the blanks (A), do the task (B), write what your partner said (C), and answer the check (D)." Blank answers: Each place is 10 times the place to its right. $0.4 = 40 \text{ hundredths}$ . (tap "Show the missing words" after students try.) |
| Explore          | Point to the model: 1 flat = 1 whole, 1 rod = 1 tenth, 1 unit = 1 hundredth: 1.35. Ask: "What do you notice?" Students do: Write the value of each digit in 3.572.                                                                                                   |
| Turn and talk    | Say: "Why is 0.5 greater than 0.45 even though 45 is more than 5?" Start the 1:00 timer. Then pick a pair to share.                                                                                                                                                  |
| Check            | Read the question aloud. Students write, then show fingers. Scan, then reveal. Answer: (D) 8 hundredths. The 8 is in the hundredths place.                                                                                                                           |
| If < 80% correct | Go back to the Explore box and model a second example out loud, then re-ask the check with a partner discussion first. See "Misconceptions to watch for" at the end of this script.                                                                                  |

**SLIDE 5: LEARN 2: COMPARE DECIMALS****3 min**

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| Say              | Line up the decimal points and compare place by place from the left. Adding zeros can help: 0.50 vs. 0.45.                                                                                                                                                       |
| Worksheet        | Say: "Part 6: fill in the blanks (A), do the task (B), write what your partner said (C), and answer the check (D)." Blank answers: To compare decimals, line up the DECIMAL POINTS and compare from the LEFT. (tap "Show the missing words" after students try.) |
| Explore          | Point to the model: A number line from 0 to 1 in tenths. Ask: "What do you notice?" Students do: Order 0.6, 0.06, 0.66 from least to greatest.                                                                                                                   |
| Turn and talk    | Say: "What does each zero in 0.050 tell you?" Start the 1:00 timer. Then pick a pair to share.                                                                                                                                                                   |
| Check            | Read the question aloud. Students write, then show fingers. Scan, then reveal. Answer: (C) 0.7. 7 tenths is more than 6 tenths.                                                                                                                                  |
| If < 80% correct | Go back to the Explore box and model a second example out loud, then re-ask the check with a partner discussion first. See "Misconceptions to watch for" at the end of this script.                                                                              |

**SLIDE 6: LEARN 3: ROUND****3 min**

|           |                                                                                                                                                                                                                                                      |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Say       | Look at the digit to the right of the place you are rounding to. 5 or more rounds up; 4 or less stays.                                                                                                                                               |
| Worksheet | Say: "Part 7: fill in the blanks (A), do the task (B), write what your partner said (C), and answer the check (D)." Blank answers: To round, look at the digit to the RIGHT. 5 or more rounds up. (tap "Show the missing words" after students try.) |
| Explore   | Students do: Round 3.46 to the nearest tenth.                                                                                                                                                                                                        |

|                  |                                                                                                                                                                                     |
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| Turn and talk    | Say: "Why do we look only at one digit to decide how to round?" Start the 1:00 timer. Then pick a pair to share.                                                                    |
| Check            | Read the question aloud. Students write, then show fingers. Scan, then reveal. Answer: 7.9. The hundredths digit is 6, so round up.                                                 |
| If < 80% correct | Go back to the Explore box and model a second example out loud, then re-ask the check with a partner discussion first. See "Misconceptions to watch for" at the end of this script. |

## SLIDE 7: LEARN 4: OPERATIONS

3 min

|                  |                                                                                                                                                                                                                                         |
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| Say              | Add and subtract by lining up decimal points. Multiply as whole numbers, then count decimal places. Divide by a whole number: the decimal point goes straight up.                                                                       |
| Worksheet        | Say: "Part 8: fill in the blanks (A), do the task (B), write what your partner said (C), and answer the check (D)." Blank answers: When adding decimals, line up the DECIMAL POINTS. (tap "Show the missing words" after students try.) |
| Explore          | Students do: Solve $4.5 + 2.37$ and $1.2 \times 3$ .                                                                                                                                                                                    |
| Turn and talk    | Say: "Why must decimal points be lined up to add but not to multiply?" Start the 1:00 timer. Then pick a pair to share.                                                                                                                 |
| Check            | Read the question aloud. Students write, then show fingers. Scan, then reveal. Answer: 6.87. $4.50 + 2.37 = 6.87$ .                                                                                                                     |
| If < 80% correct | Go back to the Explore box and model a second example out loud, then re-ask the check with a partner discussion first. See "Misconceptions to watch for" at the end of this script.                                                     |

## SLIDE 8: WORKED EXAMPLE (I DO)

2 min

|             |                                                                                                                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Say         | Watch how I solve this. Write the final answer in Part 9 of your worksheet.                                                                                                                                                                                           |
| Think aloud | Solve $3.6 \times 0.4$ aloud: " $36 \times 4 = 144$ . There is one decimal place in 3.6 and one in 0.4, so two in all: 1.44. Estimate: about $4 \times 0.4 = 1.6$ . Close, makes sense."                                                                              |
| Reveal      | Problem: $3.6 \times 0.4$ .   Step 1: Multiply as whole numbers: $36 \times 4 = 144$ .   Step 2: Count decimal places: one in 3.6, one in 0.4 -> two in all.   Step 3: 1.44.   Check with an estimate: about $4 \times 0.4 = 1.6$ . 1.44 is close, so it makes sense. |

## SLIDE 9: WE DO

2 min

|       |                                                                                                                                                                                                                        |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Say   | Now we solve one together in Part 10. Read the problem with me.                                                                                                                                                        |
| Do    | Before revealing each step, ask: "What should we do next?" Take one answer, then tap "Show next step."                                                                                                                 |
| Steps | Multiply as whole numbers: $36 \times 4 = 144$ .   Count decimal places: 3.6 has 1, 0.4 has 1, total 2.   Place the point 2 places from the right: 1.44.   Estimate: about $4 \times 0.4 = 1.6$ , so 1.44 makes sense. |

|        |      |
|--------|------|
| Answer | 1.44 |
|--------|------|

## SLIDE 10: YOU DO 2 min

|        |                                                                                                                                          |
|--------|------------------------------------------------------------------------------------------------------------------------------------------|
| Say    | Now on your own: Part 11. Solve it with no talking. You have 2 minutes.                                                                  |
| Answer | 7.75. $12.50 - 4.75 = 7.75$ .                                                                                                            |
| Then   | Students who got it: launch the room. Students who missed it: 3-minute reteach at your table, then start the room at the Explorer level. |

## SLIDE 11: WORK TIME: BANK VAULT BREAKOUT 0:20–0:48

|             |                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Say         | Open Bank Vault Breakout on your device. Type your name, choose the level I assigned, and begin. Whisper voice with your partner only. |
| Do          | Start the 28:00 timer and leave this slide up. Circulate with the answer key.                                                          |
| Checkpoints | At 10 minutes: stage 2 done. At 20 minutes: stage 4 done; give a 5-minute warning for the final lock and turn-in.                      |
| Turn-in     | Students tap "Copy my work" and paste it into the Canvas assignment (Text Entry).                                                      |

## SLIDE 12: DEBRIEF 0:48–0:52

|        |                                                                                                                                                             |
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| Ask    | Why do we line up decimal points to add and subtract?   How can estimating help you place the decimal point?   Where do you see decimals outside of school? |
| Say    | Back to warm-up question 3 and our hook vote: were our predictions right? What evidence changed your mind?                                                  |
| Answer | \$0.75.                                                                                                                                                     |

## SLIDE 13: EXIT TICKET 0:52–1:00

|     |                                                                                                                               |
|-----|-------------------------------------------------------------------------------------------------------------------------------|
| Say | Clear your desk except a pencil. Work silently and on your own. For every answer, write "I know because..." and use evidence. |
| Do  | Hand out the exit ticket. Start the 8:00 timer. Collect and sort with page 3 (Mastered / Approaching / Beginning).            |

## MISCONCEPTIONS TO WATCH FOR

- "Longer decimals are bigger." 0.45 is less than 0.5.
- "Line up the digits on the right when adding." Line up the decimal points.

- "Multiplying always gives a bigger answer." Multiplying by a decimal less than 1 gives a smaller answer.