

Adding, Subtracting & Multiplying Fractions: 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 add, subtract, and multiply fractions with unlike denominators and use them to solve real-world problems." 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) Examples: $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$. 2) $\frac{2}{3}$ ($\frac{10}{15}$ vs. $\frac{9}{15}$), or $\frac{2}{3} \sim 0.67 > 0.6$. 3) 12 and 6.
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

Say	Read the question on the screen: "You ate $\frac{1}{2}$ of a pizza and your friend ate $\frac{1}{3}$. Did you eat $\frac{2}{5}$ together?" Circle your prediction in Part 3 of your worksheet and write why. Then vote.
Background	Ask: "You ate $\frac{1}{2}$ of a pizza and your friend ate $\frac{1}{3}$. Did you eat $\frac{2}{5}$ of the pizza together?" Draw it and let students argue.
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: SAME-SIZE PIECES**3 min**

Say	To add or subtract fractions, the pieces must be the same size. Find a common denominator, often the least common multiple.
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: To add fractions, I need a COMMON DENOMINATOR. (tap "Show the missing words" after students try.)
Explore	Point to the model: $\frac{1}{2} + \frac{1}{4}$: rename $\frac{1}{2}$ as $\frac{2}{4}$, then add. Ask: "What do you notice?" Students do: Draw a bar, shade $\frac{1}{2}$ and $\frac{1}{4}$, and write the total as fourths.
Turn and talk	Say: "Why can't you just add the denominators: $\frac{1}{2} + \frac{1}{4} = \frac{2}{6}$? Use a picture to explain." 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) 12. 12 is the least common multiple of 3 and 4.
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: RENAME, THEN ADD**3 min**

Say	Rewrite each fraction as an equivalent fraction, then add or subtract the numerators. The denominator stays the same.
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: Add the NUMERATORS. The DENOMINATOR stays the same. (tap "Show the missing words" after students try.)
Explore	Students do: Solve $\frac{1}{3} + \frac{1}{4}$. Show the common denominator.
Turn and talk	Say: "How do you choose the best common denominator?" 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: $\frac{7}{12}$. $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$.
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: MIXED NUMBERS**3 min**

Say	Add or subtract wholes and fractions. Regroup if needed: 1 whole = $\frac{4}{4}$.
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: When subtracting mixed numbers, I can REGROUP 1 whole as a fraction like $\frac{4}{4}$. (tap "Show the missing words" after students try.)
Explore	Point to the model: Regroup: $3\frac{1}{4} = 2\frac{5}{4}$. Ask: "What do you notice?" Students do: Solve $3\frac{1}{4} - 1\frac{3}{4}$ by regrouping 1 whole as $\frac{4}{4}$.

Turn and talk	Say: "When do you need to regroup a whole when subtracting mixed numbers?" 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: $1\frac{2}{4}$. $2\frac{5}{4} - 1\frac{3}{4} = 1\frac{2}{4} = 1\frac{1}{2}$.
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: MULTIPLY FRACTIONS

3 min

Say	Multiply numerators and multiply denominators: $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$. "Of" often means multiply. Estimate with benchmarks first.
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: To multiply fractions, multiply the NUMERATORS and the DENOMINATORS. (tap "Show the missing words" after students try.)
Explore	Point to the model: $\frac{1}{2}$ of $\frac{3}{4} = \frac{3}{8}$. Ask: "What do you notice?" Students do: Solve $\frac{1}{2} \times \frac{3}{4}$ and draw it as an area model.
Turn and talk	Say: "Why does multiplying by a fraction less than 1 make a number smaller?" 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: $\frac{1}{2}$. $\frac{6}{12} = \frac{1}{2}$.
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 $\frac{1}{2} + \frac{1}{3}$ aloud: "Halves and thirds are different sizes. Both fit into sixths. $\frac{1}{2} = \frac{3}{6}$, $\frac{1}{3} = \frac{2}{6}$. $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$. So $\frac{2}{5}$ was wrong; $\frac{5}{6}$ is close to 1, which makes sense."
Reveal	Problem: $\frac{1}{2} + \frac{1}{3}$. Step 1: Halves and thirds are different sizes. Both fit into sixths. Step 2: $\frac{1}{2} = \frac{3}{6}$ and $\frac{1}{3} = \frac{2}{6}$. Step 3: $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$. Check: $\frac{5}{6}$ is close to 1, and half a pizza plus a third is almost a whole. $\frac{2}{5}$ was wrong.

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	Common denominator for 3 and 4 is 12. $2\frac{1}{3} = 2\frac{4}{12}$ and $1\frac{3}{4} = 1\frac{9}{12}$. Add wholes and fractions: $3\frac{13}{12}$. $\frac{13}{12} = 1\frac{1}{12}$, so the answer is $4\frac{1}{12}$.

Answer	4 $\frac{1}{12}$
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SLIDE 10: YOU DO 2 min

Say	Now on your own: Part 11. Solve it with no talking. You have 2 minutes.
Answer	$\frac{5}{12}$. $\frac{9}{12} - \frac{4}{12} = \frac{5}{12}$.
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: FRACTION TRAIL QUEST 0:20–0:48

Say	Open Fraction Trail Quest 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

Ask	Why do we need a common denominator to add but not to multiply? When is multiplying by a fraction like finding part of a group? How did estimating help you catch a mistake today?
Say	Back to warm-up question 3 and our hook vote: were our predictions right? What evidence changed your mind?
Answer	12 and 6.

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

- "Add the tops and add the bottoms." $\frac{1}{2} + \frac{1}{3}$ is not $\frac{2}{5}$.
- "Multiplying always makes a number bigger." Multiplying by a fraction less than 1 makes it smaller.

- "You need a common denominator to multiply." Only for adding and subtracting.