Name & Surname: _____ Class: _____ Date: _____

Adding Fractions Together



Same whole, same denominator, easy adding!

About 45 minutes Level ★★★☆☆

Same Denominator Rule

Fractions can be added or subtracted only when they mean the **same whole**. When the **bottom numbers** match, all pieces are the **same size**.

- Keep the **denominator** the same.
- Add or subtract the **numerators** to count the pieces.
- Worked example: $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$ and $\frac{5}{8} - \frac{3}{8} = \frac{2}{8}$ of the same pan.

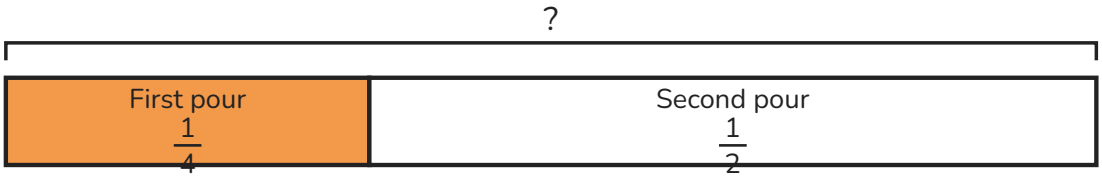


Task A

/4

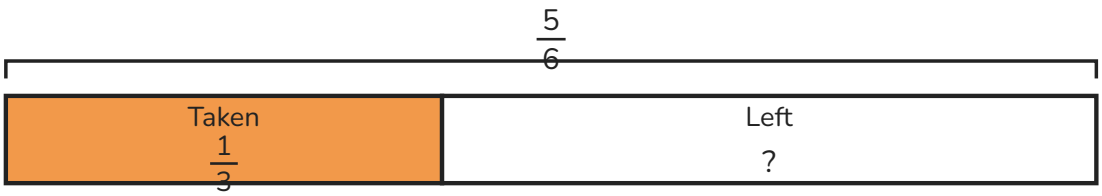
Use the bar model to show each same whole. Write an equation for each story.

1 A student poured $\frac{1}{4}$ of a **same pitcher** of lemonade and then $\frac{2}{4}$ of the pitcher. How much lemonade was poured in all?



Answer: _____ **of a pitcher**

2 A baker had $\frac{5}{6}$ of a **same pan** of bread. A customer took $\frac{2}{6}$ of the pan. How much of the pan is left now?



Answer: _____ **of a pan**

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Practice Like Denominators

Warm up your skills, then try two-step and word problems.

Key words

numerator: top number that counts pieces

denominator: bottom number that shows piece size

same whole: one single thing both fractions refer to

equation: number sentence with + or - and =

visual model: picture that shows fraction pieces

Task B

/10

Add and subtract fractions with the same denominator. Keep the pieces the same size.

WARM UP

1 Work out $\frac{2}{5} + \frac{1}{5}$ with the **same denominator**.

Answer: _____

2 Work out $\frac{6}{8} - \frac{2}{8}$. Keep the **denominator**.

Answer: _____

3 Work out $\frac{3}{10} + \frac{4}{10}$ for the **same whole**.

Answer: _____

PRACTICE

4 Work out $\frac{2}{12} + \frac{3}{12} + \frac{4}{12}$ with **like pieces**.

Answer: _____

5 Work out $\frac{9}{10} - \frac{4}{10} - \frac{1}{10}$. Find the **leftover pieces**.

Answer: _____

6 Find the missing part with the **same denominator**: $\frac{2}{8}$ + ?/8 = $\frac{5}{8}$

Answer: _____

7 Work out $\frac{7}{8} + \frac{6}{8}$. Give the answer as a **mixed number**.

Answer: _____

PROBLEM SOLVING

8 A student read $\frac{3}{12}$ of the **same book** in the morning and $\frac{5}{12}$ in the evening. How much was read in all? Write an **equation**.

Answer: _____

9 A trail is $\frac{10}{10}$ mile long. A student walked $\frac{6}{10}$ mile of the **same trail**. How much of the trail is left? Use **subtraction**.

Answer: _____

10 Explain how you know $\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$ without drawing. Mention the **denominator**.

Answer: _____

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Find the Mistake

Spot the wrong step and fix it like a teacher.

Task C /4

Find the wrong step in each solution. Explain the common mistake and write the correct answer.



Student A

Work out $\frac{3}{10} + \frac{4}{10}$ for the same whole.

1. $\frac{3}{10} + \frac{4}{10}$
2. $= \frac{7}{20}$
3. So the answer is $\frac{7}{20}$

The mistake is in step: _____

What went wrong?

.....

Correct answer: _____



Student B

Work out $\frac{7}{12} - \frac{5}{12}$ for the same whole.

1. $\frac{7}{12} - \frac{5}{12}$
2. $= \frac{2}{12}$
3. $= 2$

The mistake is in step: _____

What went wrong?

.....

Correct answer: _____

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Solve More Problems

Keep practicing with harder word problems and mixed numbers.

Task D /10

Solve each same whole problem. Write an equation to show your work.

WARM UP

1 Work out $\frac{1}{6} + \frac{4}{6}$ with the **same denominator**.

Answer: _____

2 Work out $\frac{8}{12} - \frac{3}{12}$. Keep the **denominator**.

Answer: _____

3 Work out $\frac{2}{4} + \frac{1}{4}$ for the **same whole**.

Answer: _____

PRACTICE

4 Work out $\frac{5}{10} + \frac{3}{10} + \frac{1}{10}$ with **like pieces**.

Answer: _____

5 Work out $\frac{11}{12} - \frac{4}{12} - \frac{2}{12}$. Find the **leftover pieces**.

Answer: _____

6 Find the missing part with the **same denominator**: $\frac{7}{10}$ - ?/10 = $\frac{2}{10}$

Answer: _____

7 Work out $\frac{5}{6} + \frac{4}{6}$. Give the answer as a **mixed number**.

Answer: _____

PROBLEM SOLVING

8 A student watered $\frac{4}{12}$ of the **same garden** bed and a helper watered $\frac{5}{12}$ of the bed. How much was watered in all?

Answer: _____

9 A pizza is cut into 8 equal slices of the **same pizza**. A student eats $\frac{3}{8}$ and a friend eats $\frac{2}{8}$. What fraction is left?

Answer: _____

10 Explain why you cannot add $\frac{2}{4}$ of one paper and $\frac{1}{4}$ of a different-size paper to get $\frac{3}{4}$. Use **same whole**.

Answer: _____

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True or False?

Decide what is true, then show fractions with pictures.

Task E Example done for you /4

Tick true or false. Remember the same whole rule and the denominator.

Statement	True	False
$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$ of the **same whole**.	✓	
$\frac{4}{9} + \frac{2}{9} = \frac{6}{18}$ because you add tops and **bottoms**.		
When adding fractions with the **same denominator**, you keep the denominator the same.		
$\frac{2}{4}$ of one small circle plus $\frac{1}{4}$ of a big circle equals $\frac{3}{4}$ of the **same whole**.		
$\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$ of the **same whole**.		

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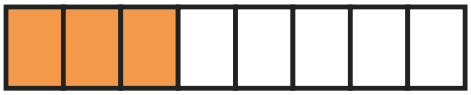
Adding Fractions Together

Task F

/4

Shade, name and compare using equal pieces of the same whole.

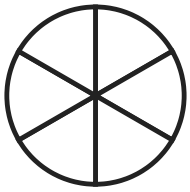
1



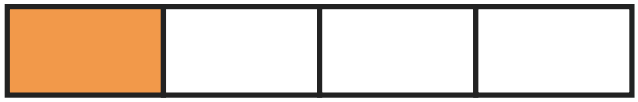
Fraction shaded: $\frac{\square}{\square}$

2

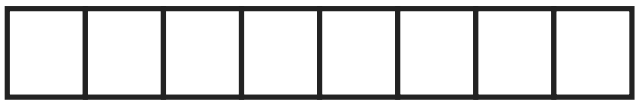
Shade $\frac{5}{6}$



3



$= \frac{1}{4}$



$= \frac{\square}{8}$

4



$\frac{3}{10}$



$\frac{7}{10}$

$\frac{3}{10}$ $\square$ $\frac{7}{10}$ Write <, > or =

How did I do?

Circle a face for each line.

I can add fractions with like denominators.

I can subtract fractions with like denominators.

I can solve word problems with models and equations.

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Answer sheet: Adding Fractions Together

Task A

1. $\frac{3}{4}$ of a pitcher
2. $\frac{1}{2}$ of a pan

Task B

1. $\frac{3}{5}$
2. $\frac{4}{8}$
3. $\frac{7}{10}$
4. $\frac{9}{12}$
5. $\frac{4}{10}$
6. $\frac{3}{8}$
7. $1\frac{5}{8}$
8. $\frac{8}{12}$
9. $\frac{4}{10}$
10. Both fractions are sixths of the same whole, so I add 4 + 1 to get 5 sixths and keep the denominator 6.

Task C

1. Step 2 is wrong: They added the denominators too. Keep the denominator 10 and add only the numerators 3 + 4. Correct answer: $\frac{7}{10}$
2. Step 3 is wrong: They dropped the denominator. The answer must stay in twelfths of the same whole. Correct answer: $\frac{2}{12}$

Task D

1. $\frac{5}{6}$
2. $\frac{5}{12}$
3. $\frac{3}{4}$
4. $\frac{9}{10}$
5. $\frac{5}{12}$
6. $\frac{5}{10}$
7. $1\frac{3}{6}$
8. $\frac{9}{12}$
9. $\frac{3}{8}$
10. They are not the same whole, so the fourths are different sizes and cannot be added directly.

Task E

1. True
2. False
3. True
4. False
5. True

Task F

1. $\frac{3}{8}$
2. Shade 5 of the 6 equal parts ($\frac{5}{6}$).
3. $\frac{1}{4} = \frac{2}{8}$ (shade 2 parts)
4. $\frac{3}{10} < \frac{7}{10}$

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