# Varied Fluency Step 6: Add 2 or More Fractions

## **National Curriculum Objectives:**

Mathematics Year 4: (4F4) Add and subtract fractions with the same denominator

#### Differentiation:

Developing Questions to support adding 2 or more fractions with the same denominator where answers are less than 1.

Expected Questions to support adding 2 or more fractions with the same denominator where answers are greater than 1.

Greater Depth Questions to support adding two or more fractions where answers are greater than 1. Using some fractions with denominators that are double or half of the previous fraction. Answers expressed as improper fractions and mixed numbers.

More Year 4 Fractions resources.

Did you like this resource? Don't forget to <u>review</u> it on our website.



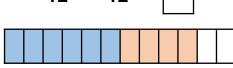
# **Add 2 or More Fractions**

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1a. Use the model to complete the following calculation.

1b. Use the model to complete the following calculation.

$$\frac{6}{12} + \frac{4}{12} = \boxed{\phantom{0}}$$



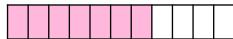




2a. Complete the calculation below.

$$\frac{3}{9} + \frac{1}{9} + \frac{4}{9} = \boxed{\phantom{0}}$$

2b. Complete the calculation below.







3a. Tick the correct answer. Use the empty number line to help you.

$$\frac{6}{15}+\frac{5}{15}=$$

3b. Tick the correct answer. Use the empty number line to help you.

$$\frac{3}{7} + \frac{2}{7} + \frac{1}{7} =$$





10 15

11 15



<u>5</u> 7

<u>6</u> 21 <u>6</u> 7

4a. Fill in the missing numbers below.

A. 
$$\frac{8}{14} + \frac{4}{14} = \frac{1}{14} + \frac{5}{14} = \frac{1}{14}$$

4b. Fill in the missing numbers below.

A. 
$$\frac{9}{16} + \frac{6}{16} = \frac{3}{16} + \frac{3}{16} = \frac{16}{16}$$

B. 
$$\frac{\boxed{}}{9} + \frac{6}{9} = \frac{4}{9} + \frac{3}{\boxed{}} = \boxed{}$$

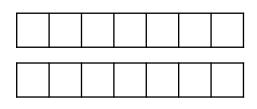
B. 
$$\frac{5}{10} + \frac{5}{10} = \frac{4}{10} + \frac{9}{10} = \frac{9}{10}$$

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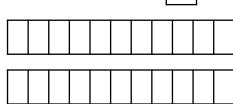
5a. Shade the model to complete the following calculation.

$$\frac{4}{7} + \frac{6}{7} = \boxed{\phantom{0}}$$



5b. Shade the model to complete the following calculation.

$$\frac{6}{11} + \frac{9}{11} = \boxed{\phantom{0}}$$





6a. Complete the calculation below.

$$\frac{3}{4} + \frac{2}{4} + \frac{1}{4} = \boxed{}$$

6b. Complete the calculation below.

$$\frac{5}{6} + \frac{4}{6} + \frac{7}{6} = \boxed{\phantom{0}}$$

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7a. Tick the correct answer. Use the empty number line to help you.

$$\frac{8}{12} + \frac{7}{12} + \frac{9}{12} =$$

7b. Tick the correct answer. Use the empty number line to help you.

$$\frac{11}{9} + \frac{5}{9} + \frac{7}{9} =$$



24 36 <u>24</u> 12 <u>26</u> 12

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<u>24</u> 9

23 27 <u>23</u>

8a. Fill in the missing numbers below.

A. 
$$\frac{7}{7} + \frac{6}{7} + \frac{2}{7} = \frac{5}{7} = \frac{1}{7}$$

B. 
$$\frac{12}{15} + \frac{11}{15} + \frac{17}{15} + \frac{32}{15} = \frac{32}{15}$$

8b. Fill in the missing numbers below.

A. 
$$\frac{16}{18} + \frac{7}{18} + \frac{2}{18} = \frac{11}{18} = \frac{11}{18}$$

B. 
$$+\frac{11}{1} + \frac{6}{1} = \frac{17}{1} + \frac{29}{1} = \frac{29}{8}$$

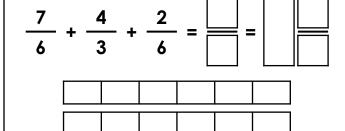
# **Add 2 or More Fractions**

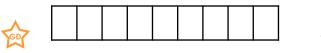
# Add 2 or More Fractions

9a. Shade the model to complete the following calculation.

$$\frac{3}{9} + \frac{4}{9} + \frac{10}{18} = \boxed{}$$

9b. Shade the model to complete the following calculation.





10a. Complete the calculation below.

10b. Complete the calculation below.

$$\frac{7}{10} + \frac{6}{20} + \frac{1}{5} + \frac{4}{10} = \boxed{}$$

$$\frac{4}{12} + \frac{3}{6} + \frac{4}{6} + \frac{10}{12} = \boxed{ }$$



11a. Tick the correct answer.

$$\frac{2}{4} + \frac{7}{8} + \frac{14}{16} =$$

11b. Tick the correct answer.

$$\frac{4}{10} + \frac{6}{5} + \frac{9}{10} + \frac{7}{5} =$$





$$3\frac{9}{15}$$
 
$$\frac{39}{30}$$

12a. Fill in the missing numbers below.

A. 
$$\frac{1}{3} + \frac{5}{6} = \frac{\boxed{\phantom{0}}}{12} + \frac{20}{24} = \boxed{\phantom{0}}$$

A. 
$$\frac{3}{4} + \frac{1}{8} = \frac{12}{16} + \frac{6}{8} = \frac{1}{16} = \frac{1}{16}$$

B. 
$$\frac{8}{6} + \frac{1}{12} = \frac{38}{24} + \frac{18}{12} = \frac{1}{12} = \frac{1}{12}$$

B. 
$$\frac{7}{2} + \frac{9}{4} = \frac{\boxed{\phantom{0}}}{8} + \frac{36}{16} = \frac{\boxed{\phantom{0}}}{\boxed{\phantom{0}}}$$

## **Varied Fluency** Add 2 or More Fractions

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#### **Developing**

1a. 
$$\frac{7}{8}$$

3a. 
$$\frac{11}{15}$$
  
4a. A.  $\frac{8}{14} + \frac{4}{14} = \frac{7}{14} + \frac{5}{14} = \frac{12}{14}$ 

B. 
$$\frac{1}{9} + \frac{6}{9} = \frac{4}{9} + \frac{3}{9} = \frac{7}{9}$$

#### **Expected**

5a. 
$$\frac{10}{7}$$

6a. 
$$\frac{6}{4}$$
7a.  $\frac{24}{12}$ 
8a. A.  $\frac{7}{7} + \frac{6}{7} + \frac{2}{7} = \frac{10}{7} + \frac{5}{7} = \frac{15}{7}$ 

B. 
$$\frac{9}{15} + \frac{12}{15} + \frac{11}{15} = \frac{17}{15} + \frac{15}{15} = \frac{32}{15}$$

## **Greater Depth**

9a. Various answers, for example:

$$\frac{12}{9} = 1 \frac{3}{9}$$

10a. Various answers, for example:

$$\frac{16}{10} = 1\frac{6}{10}$$

11a. 
$$2\frac{1}{4}$$

12a. A. 
$$\frac{1}{3} + \frac{5}{6} = \frac{4}{12} + \frac{20}{24} = \frac{7}{6} = 1 \frac{1}{6}$$

B. 
$$\frac{8}{6} + \frac{21}{12} = \frac{38}{24} + \frac{18}{12} = \boxed{37} = \boxed{3} \boxed{\frac{1}{12}}$$

#### <u>Developing</u>

1b. 
$$\frac{10}{12}$$

3b. 
$$\frac{\frac{6}{7}}{7}$$
4b. A.  $\frac{9}{16} + \frac{6}{16} = \frac{12}{16} + \frac{3}{16} = \frac{15}{16}$ 

B. 
$$\frac{4}{10} + \frac{5}{10} = \frac{4}{10} + \frac{5}{10} = \frac{9}{10}$$

### **Expected**

5b. 
$$\frac{15}{11}$$

8b. A. 
$$\frac{9}{18} + \frac{7}{18} + \frac{2}{18} = \frac{14}{18} + \frac{11}{18} = \frac{25}{18}$$

B. 
$$\frac{12}{8} + \frac{11}{8} + \frac{6}{8} = \frac{17}{8} + \frac{12}{8} = \frac{29}{8}$$

## **Greater Depth**

9b. Various answers, for example:

$$\frac{17}{6} = 2\frac{5}{6}$$

10b. Various answers, for example:

$$\frac{14}{6} = 2\frac{2}{6}$$

11b.  $3\frac{9}{10}$ 

12b. A. 
$$\frac{3}{4} + \frac{6}{8} = \frac{12}{16} + \frac{6}{8} = \frac{12}{8} = 1$$

B. 
$$\frac{7}{2} + \frac{9}{4} = \frac{28}{8} + \frac{36}{16} = \frac{23}{4} = 5 \frac{3}{4}$$