# Varied Fluency
# Step 7: Adding Fractions

## National Curriculum Objectives:

**Mathematics Year 6: (6F4) Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions**

## Differentiation:

**Developing Questions to support adding fractions, where some denominators are direct multiples of the same number (for example 1/2 + 1/4).**
**Expected Questions to support adding mixed numbers where denominators are direct multiples of the same number and fractions or improper fractions where the denominator is not a direct multiple of the same number (for example 2 1/2 + 2 3/8, or 4/3 + 1/4).**
**Greater Depth Questions to support adding mixed numbers, fractions and improper fractions where denominators are not direct multiples of the same number (for example 3 1/5 + 2 1/3).**

## More resources which follow the same small steps as White Rose.

## Did you like this resource? Don't forget to review it on our website.


© Classroom Secrets Limited 2018

# Adding Fractions

1a. Calculate the missing numerators and denominators.

i. $\frac{7}{9} + \frac{1}{18} = \frac{15}{\square}$

ii. $\frac{1}{2} + \frac{2}{6} = \frac{\square}{6}$

iii. $\frac{1}{3} + \frac{3}{12} = \frac{7}{\square}$

D VF

# Adding Fractions

1b. Calculate the missing numerators and denominators.

i. $\frac{1}{2} + \frac{1}{4} = \frac{\square}{4}$

ii. $\frac{2}{9} + \frac{2}{3} = \frac{8}{\square}$

iii. $\frac{1}{12} + \frac{3}{4} = \frac{10}{\square}$

D VF

2a. Calculate the missing numerators.

i. $\frac{\square}{16} + \frac{1}{4} = \frac{15}{16}$

ii. $\frac{\square}{10} + \frac{9}{20} = \frac{17}{20}$

D VF

2b. Calculate the missing numerators.

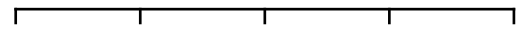
i. $\frac{\square}{3} + \frac{1}{9} = \frac{7}{9}$

ii. $\frac{\square}{12} + \frac{1}{3} = \frac{5}{12}$

D VF

3a. Use a number line to calculate one half plus one quarter.

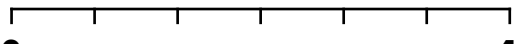
Express your answer in its simplest form.




D VF

3b. Use a number line to calculate two thirds plus one sixth.

Express your answer in its simplest form.




D VF

4a. Calculate the following.

Show your answers in their simplest form.

i. $\frac{1}{3} + \frac{4}{15} =$

ii. $\frac{4}{9} + \frac{5}{27} =$

D VF

4b. Calculate the following.

Show your answers in their simplest form.

i. $\frac{4}{7} + \frac{5}{28} =$

ii. $\frac{5}{11} + \frac{22}{44} =$

D VF




© Classroom Secrets Limited 2018

## Adding Fractions

**5a. Calculate the missing numerators and denominators.**

i. $\frac{3}{5} + \frac{7}{11} = \frac{\square}{55}$

ii. $\frac{1}{8} + \frac{3}{5} = \frac{29}{\square}$

iii. $\frac{2}{3} + \frac{3}{4} = \frac{17}{\square}$

E VF

## Adding Fractions

**5b. Calculate the missing numerators and denominators.**

i. $\frac{5}{3} + \frac{7}{4} = \frac{17}{\square}$

ii. $\frac{6}{5} + \frac{7}{6} = \frac{\square}{30}$

iii. $\frac{2}{2} + \frac{3}{7} = \frac{20}{\square}$

E VF

**6a. Calculate the missing numerators.**

i. $\frac{\square}{7} + \frac{1}{2} = \frac{13}{14}$

ii. $1\frac{\square}{9} + \frac{2}{3} = 2\frac{5}{9}$

E VF

**6b. Calculate the missing numerators.**

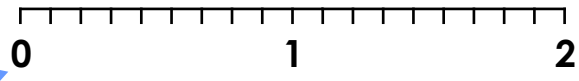
i. $\frac{\square}{9} + \frac{1}{5} = \frac{29}{45}$

ii. $\frac{\square}{10} + \frac{3}{5} = 1\frac{3}{10}$

E VF

**7a. Use a number line to calculate three thirds plus seven ninths.**

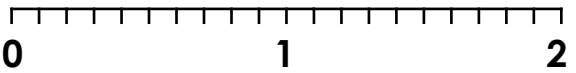
**Express your answer as a mixed number.**




E VF

**7b. Use a number line to calculate one half plus four fifths.**

**Express your answer as a mixed number.**




E VF

**8a. Calculate the following.**

**Show your answers as mixed numbers.**

i. $\frac{7}{6} + \frac{9}{8} =$

ii. $2\frac{2}{9} + 1\frac{3}{27} =$

E VF

**8b. Calculate the following.**

**Show your answers as mixed numbers.**

i. $\frac{11}{9} + \frac{3}{2} =$

ii. $2\frac{6}{9} + 1\frac{2}{3} =$

E VF




© Classroom Secrets Limited 2018

# Adding Fractions

**9a. Calculate the missing numerators and denominators.**

i. $\frac{8}{7} + \frac{4}{5} = 1\frac{\square}{35}$

ii. $\frac{4}{9} + \frac{9}{5} = 2\frac{11}{\square}$

iii. $2\frac{2}{9} + \frac{6}{7} = 3\frac{5}{\square}$

GD VF

# Adding Fractions

**9b. Calculate the missing numerators and denominators.**

i. $\frac{7}{3} + \frac{9}{10} = 3\frac{7}{\square}$

ii. $1\frac{4}{7} + \frac{7}{8} = 2\frac{\square}{56}$

iii. $\frac{7}{11} + \frac{8}{3} = 3\frac{10}{\square}$

GD VF

**10a. Calculate the missing numerators.**

i. $\frac{\square}{3} + \frac{3}{4} = 4\frac{1}{12}$

ii. $\frac{\square}{8} + \frac{4}{5} = 1\frac{37}{40}$

GD VF

**10b. Calculate the missing numerators.**

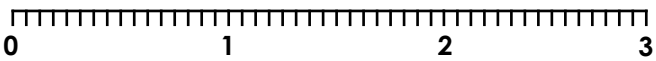
i. $\frac{\square}{10} + \frac{5}{6} = 2\frac{1}{3}$

ii. $\frac{\square}{11} + \frac{3}{4} = 1\frac{37}{44}$

GD VF

**11a. Use a number line to calculate five thirds plus two fifths.**

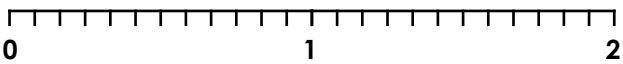
**Express your answer as a mixed number.**




GD VF

**11b. Use a number line to calculate five quarters plus one sixth.**

**Express your answer as a mixed number.**




GD VF

**12a. Calculate the following.**

**Show your answers as mixed numbers in their simplest form.**

i. $\frac{7}{5} + \frac{3}{8} =$

ii. $1\frac{2}{9} + 2\frac{7}{8} =$

GD VF

**12b. Calculate the following.**

**Show your answers as mixed numbers in their simplest form.**

i. $\frac{9}{4} + \frac{2}{3} =$

ii. $2\frac{2}{9} + 2\frac{1}{2} =$

GD VF




© Classroom Secrets Limited 2018

# Varied Fluency
# Adding Fractions

## Developing

1a. i. 18 ii. 5 iii. 12

2a. i. 11 ii. 4

3a. Three quarters

4a. i. $\frac{3}{5}$ ii. $\frac{17}{27}$

## Expected

5a. i. 68 ii. 40 iii. 12

6a. i. 3 ii. 8

7a. $1\frac{7}{9}$

8a. i. $\frac{55}{24} = 2\frac{7}{24}$ ii. $\frac{90}{27} = 3\frac{1}{3}$

## Greater Depth

9a. i. 33 ii. 45 iii. 63

10a. i. 10 ii. 9

11a. $2\frac{1}{15}$

12a. i. $1\frac{31}{40}$ ii. $4\frac{7}{72}$

# Varied Fluency
# Adding Fractions

## Developing

1b. i. 3 ii. 9 iii. 12

2b. i. 2 ii. 1

3b. Five sixths

4b. i. $\frac{3}{4}$ ii. $\frac{21}{22}$

## Expected

5b. i. 12 ii. 71 iii. 14

6b. i. 4 ii. 7

7b. $1\frac{3}{10}$

8b. i. $\frac{49}{18} = 2\frac{13}{18}$ ii. $\frac{39}{9} = 4\frac{1}{3}$

## Greater Depth

9b. i. 30 ii. 25 iii. 33

10b. i. 15 ii. 12

11b. $1\frac{5}{12}$

12b. i. $2\frac{11}{12}$ ii. $4\frac{13}{18}$

© Classroom Secrets Limited 2018