Homework/Extension
Step 14: Four Rules with Fractions

National Curriculum Objectives:

Mathematics Year 6: (6F2) Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
Mathematics Year 6: (6F4) Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
Mathematics Year 6: (6F5a) Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8]
Mathematics Year 6: (6F5b) Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Tick the calculations which are correct. Each calculation only uses one denominator and pictorial support is provided.
Expected Tick the calculations which are correct. Denominators are direct multiples and questions include some use of mixed numbers.
Greater Depth Tick the calculations which are correct. Denominators are non-direct multiples, and questions include some use of improper fractions and mixed numbers.

Questions 2, 5 and 8 (Varied Fluency)
Developing Sort calculations based on whether the answers are greater than or less than one half. Each calculation only uses one denominator.
Expected Sort calculations based on whether the answers are greater than or less than 1. Denominators are direct multiples.
Greater Depth Sort calculations based on whether the answers are greater than or less than 1. Denominators are non-direct multiples.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Solve a multi-step word problem. Each fraction has the same denominator and pictorial support is provided.
Expected Solve a multi-step word problem. Denominators are direct multiples and questions include an improper fraction.
Greater Depth Solve a multi-step word problem. Denominators are non-direct multiples and questions include an improper fraction.

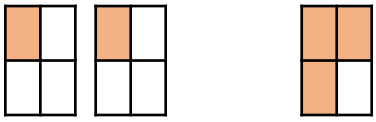
More Year 6 Fractions resources.

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

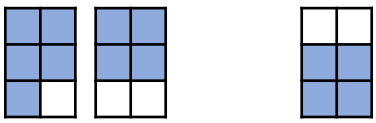
Four Rules with Fractions

1. Tick the calculations which are correct.

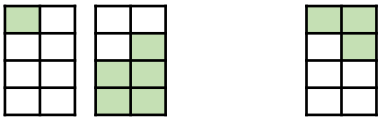
A. $\left(\frac{1}{4} + \frac{1}{4}\right) \times 3 = \frac{3}{4}$



B. $\left(\frac{5}{6} - \frac{4}{6}\right) \times 4 = \frac{4}{6}$



C. $\left(\frac{1}{8} + \frac{5}{8}\right) \div 2 = \frac{3}{8}$



D. $\left(\frac{4}{5} + \frac{1}{5}\right) \div 3 = \frac{1}{5}$

D

VF
HW/Ext

2. Place the calculations into the correct columns in the table below.

A. $\left(\frac{7}{8} - \frac{6}{8}\right) \times 2$ B. $\left(\frac{1}{7} + \frac{2}{7}\right) \div 3$ C. $\left(\frac{3}{4} \div 3\right) + \frac{2}{4}$

Answer > $\frac{1}{2}$	Answer < $\frac{1}{2}$

D

VF
HW/Ext

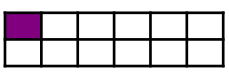
3. James the farmer is planting some seeds.

If James wants to combine all of the seeds below and share them equally between 5 vegetable patches, what fraction of the seeds would be in each patch?

Explain how you know.

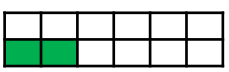
Beetroot Seeds

$\frac{1}{12}$



Lettuce Seeds

$\frac{2}{12}$



Onion Seeds

$\frac{7}{12}$

D

RPS
HW/Ext

Four Rules with Fractions

4. Tick the calculations which are correct.

A. $\left(\frac{3}{8} + \frac{3}{4}\right) \times 2 = 2\frac{1}{4}$

C. $\left(\frac{11}{12} + \frac{5}{6}\right) \div 3 + \frac{2}{3} = 1\frac{3}{12}$

B. $3\left(\frac{1}{5} - \frac{1}{10}\right) + \frac{2}{5} = \frac{15}{20}$

D. $4\left(\frac{1}{4} + \frac{3}{8}\right) \div 5 - \frac{3}{16} = \frac{1}{4}$

E

VF
HW/Ext

5. Place the calculations into the correct columns in the table below.

A. $\left(\frac{5}{6} - \frac{1}{12}\right) + \frac{3}{4}$

B. $2\left(\frac{1}{2} \times \frac{1}{8}\right) + \frac{3}{4}$

C. $\left(\frac{16}{20} \div 4\right) + \frac{3}{4}$

Answer > 1	Answer < 1

E

VF
HW/Ext

6. Harry the farmer is planting some seeds.

If Harry wants to combine all of the seeds below and share them equally between 5 vegetable patches, what fraction of the seeds would be in each patch?

Explain how you know.

Carrot Seeds	Pea Seeds	Pumpkin Seeds
		
$\frac{1}{3}$	$\frac{5}{12}$	$\frac{3}{6}$

E

RPS
HW/Ext

Four Rules with Fractions

7. Tick the calculations which are correct.

A. $\left(\frac{5}{7} - \frac{1}{3}\right) \times 5 = 1\frac{38}{42}$

C. $\left(\frac{7}{8} + \frac{1}{6}\right) \div 5 + \frac{5}{12} = \frac{40}{48}$

B. $2\left(\frac{4}{5} + \frac{7}{12}\right) + \frac{1}{3} = 3\frac{1}{10}$

D. $3\left(\frac{3}{4} \times \frac{4}{9}\right) \times 4 - \frac{21}{8} = \frac{18}{16}$

GD

VF
HW/Ext

8. Place the calculations into the correct columns in the table below.

A. $\left(\frac{11}{12} - \frac{5}{7}\right) \times 4$

B. $2\left(\frac{7}{8} \times \frac{2}{9}\right) + \frac{10}{12}$

C. $\left(\frac{9}{6} + \frac{2}{5}\right) \div 3$

Answer > 1	Answer < 1

GD

VF
HW/Ext

9. Edward the farmer is planting some seeds.

If Edward wants to combine all of the seeds below and share them equally between 4 vegetable patches, what fraction of the seeds would be in each patch?

Explain how you know.

Radish Seeds	Marrow Seeds	Tomato Seeds
		
$\frac{2}{3}$	$\frac{1}{5}$	$\frac{4}{8}$

GD

RPS
HW/Ext

Homework/Extension
Four Rules with Fractions

Developing

1. B and C should be ticked; A and D are incorrect.
2. A. Answer $< \frac{1}{2}$; B. Answer $< \frac{1}{2}$; C. Answer $> \frac{1}{2}$
3. There would be $\frac{2}{12}$ of the seeds in each vegetable patch: $(\frac{1}{12} + \frac{2}{12} + \frac{7}{12}) \div 5 = \frac{2}{12}$

Expected

4. A and C should be ticked; B and D are incorrect.
5. A. Answer > 1; B. Answer < 1; C. Answer < 1
6. There would be $\frac{3}{12}$ of the seeds in each vegetable patch: $(\frac{1}{3} + \frac{5}{12} + \frac{3}{6}) \div 5 = (\frac{4}{12} + \frac{5}{12} + \frac{6}{12}) \div 5 = \frac{3}{12}$

Greater Depth

7. A and B should be ticked; C and D are incorrect.
8. A. Answer < 1; B. Answer > 1; C. Answer < 1
9. There would be $\frac{41}{120}$ of the seeds in each vegetable patch: $(\frac{2}{3} + \frac{1}{5} + \frac{4}{8}) \div 4 = (\frac{80}{120} + \frac{24}{120} + \frac{60}{120}) \div 4 = \frac{41}{120}$