Homework/Extension
Step 3: Equivalent Fractions 2

National Curriculum Objectives:

Mathematics Year 4: (4F2) **Recognise and show, using diagrams, families of common equivalent fractions**

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Fill in missing multipliers and divisors to complete the equivalent fractions. Includes doubling the starting fraction only.
Expected Fill in missing multipliers and divisors to complete the equivalent fractions. Includes denominators which are multiples of the starting fraction.
Greater Depth Fill in missing numbers in calculations to complete the equivalent fractions. Includes denominators which share a common factor.

Questions 2, 5 and 8 (Varied Fluency)
Developing Fill in missing boxes to show equivalent fractions. Includes doubling the starting fraction only.
Expected Fill in missing boxes to show equivalent fractions. Includes denominators which are multiples of the starting fraction.
Greater Depth Fill in missing boxes to show equivalent fractions. Includes denominators which share a common factor.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Find and explain a mistake when calculating equivalent fractions. Includes doubling the starting fraction only.
Expected Find and explain a mistake when calculating equivalent fractions. Includes denominators which are multiples of the starting fraction.
Greater Depth Find and explain a mistake when calculating equivalent fractions. Includes denominators which share a common factor.

More **Year 4 Fractions** resources.

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

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Equivalent Fractions 2

1. Fill in the missing multipliers and divisors to show how the numerator and denominator have been changed.

A. x ☐

$$\frac{1}{5} = \frac{2}{10}$$

x ☐

B. x ☐

$$\frac{1}{6} = \frac{2}{12}$$

x ☐

C. ÷ ☐

$$\frac{1}{7} = \frac{2}{14}$$

÷ ☐

D

2. Complete the equivalent fractions below.

A. $\frac{1}{3} = \frac{2}{☐} = \frac{4}{☐}$

B. $\frac{1}{11} = \frac{2}{☐} = \frac{☐}{44}$

C. $\frac{1}{9} = \frac{☐}{18} = \frac{☐}{36}$

D. $\frac{1}{4} = \frac{☐}{8} = \frac{4}{☐}$

D

3. Scarlett is finding a fraction that is equivalent to the fraction below.

$$\frac{1}{8}$$

She has shown her working out.

Scarlett

x 3

$$\frac{1}{8} = \frac{3}{16}$$

x 2

What mistake has Scarlett made? Explain your answer.

D

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Homework/Extension – Equivalent Fractions 2 – Year 4 Developing

Equivalent Fractions 2

4. Fill in the missing multipliers and divisors to show how the numerator and denominator have been changed.

A. x ☐

B. ÷ ☐

C. x ☐

D. ÷ ☐

$$\frac{1}{6} = \frac{2}{12}$$

$$\frac{1}{12} = \frac{4}{48}$$

$$\frac{1}{8} = \frac{7}{56}$$

$$\frac{1}{9} = \frac{6}{54}$$

x ☐

÷ ☐

x ☐

÷ ☐

E

VF
HW/Ext

5. Complete the equivalent fractions below.

A. $\frac{1}{4} = \frac{☐}{8} = \frac{3}{☐} = \frac{4}{☐}$

B. $\frac{1}{☐} = \frac{3}{15} = \frac{6}{☐} = \frac{9}{☐}$

C. $\frac{1}{3} = \frac{☐}{6} = \frac{☐}{12} = \frac{7}{☐}$

D. $\frac{1}{☐} = \frac{☐}{14} = \frac{3}{21} = \frac{6}{☐}$

E

VF
HW/Ext

6. Robert is finding fractions that are equivalent to the fraction below.

$$\frac{1}{6}$$

He has shown his working out.

Robert

x 3

$$\frac{1}{6} = \frac{4}{9}$$

x 3

x 6

$$\frac{1}{6} = \frac{7}{12}$$

x 6

What mistake has Robert made? Explain your answer.

E

RPS
HW/Ext

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Homework/Extension – Equivalent Fractions 2 – Year 4 Expected

Equivalent Fractions 2

7. Fill in the missing numbers in the calculations below.

A. [x ☐]

$$\frac{☐}{8} = \frac{27}{72}$$

[x ☐]

B. [÷ ☐]

$$\frac{5}{13} = \frac{15}{☐}$$

[÷ ☐]

C. [x ☐]

$$\frac{7}{☐} = \frac{21}{27}$$

[x ☐]

D. [÷ ☐]

$$\frac{3}{5} = \frac{☐}{75}$$

[÷ ☐]

VF
HW/Ext

8. Complete the equivalent fractions below.

A. $$\frac{☐}{☐} = \frac{☐}{12} = \frac{15}{☐} = \frac{5}{6}$$

B. $$\frac{6}{☐} = \frac{12}{20} = \frac{☐}{☐} = \frac{3}{☐}$$

C. $$\frac{☐}{☐} = \frac{☐}{21} = \frac{4}{14} = \frac{☐}{28}$$

D. $$\frac{7}{☐} = \frac{☐}{☐} = \frac{28}{☐} = \frac{21}{36}$$

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9. Chloe is deciding whether the fractions below are equivalent.

$$\frac{3}{18} = \frac{12}{54} = \frac{48}{90}$$

She has shown her working out.

Chloe

[x 4]

$$\frac{3}{18} = \frac{12}{54}$$

[x 4]

[÷ 36]

$$\frac{12}{54} = \frac{48}{90}$$

[÷ 36]

What mistakes has Chloe made? Explain your answer.

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Homework/Extension – Equivalent Fractions 2 – Year 4 Greater Depth

Developing

1. A: 2, 2; B: 2, 2; C: 2, 2

2. A. $\dfrac{1}{3} = \dfrac{2}{\boxed{6}} = \dfrac{4}{\boxed{12}}$; B. $\dfrac{1}{11} = \dfrac{2}{\boxed{22}} = \dfrac{\boxed{4}}{44}$; C. $\dfrac{1}{9} = \dfrac{\boxed{2}}{18} = \dfrac{\boxed{4}}{36}$; D. $\dfrac{1}{4} = \dfrac{\boxed{2}}{8} = \dfrac{4}{\boxed{16}}$

3. **Scarlett has multiplied the numerator by 3 and the denominator by 2. Both numbers need to be multiplied by either 2 or 3 as the same needs to be done to both the numerator and the denominator.**

Expected

4. A: 2, 2; B: 4, 4; C: 7, 7; D: 6, 6

5. A. $\dfrac{1}{4} = \dfrac{\boxed{2}}{8} = \dfrac{3}{\boxed{12}} = \dfrac{4}{\boxed{16}}$; B. $\dfrac{1}{\boxed{5}} = \dfrac{3}{15} = \dfrac{6}{\boxed{30}} = \dfrac{9}{\boxed{45}}$; C. $\dfrac{1}{3} = \dfrac{\boxed{2}}{6} = \dfrac{\boxed{4}}{12} = \dfrac{7}{\boxed{21}}$; D $\dfrac{1}{\boxed{7}} = \dfrac{\boxed{2}}{14} = \dfrac{3}{21} = \dfrac{6}{\boxed{42}}$

6. **Robert has not multiplied the numerators and denominators to find the equivalent fractions, he has added. He should have multiplied the numerator and denominator of the first fraction by 3 and the second fraction by 6 to find the equivalent fractions.**

Greater Depth

7. A: 3, x 9, x 9; B: 39, ÷ 3, ÷ 3; C: 9, x 3, x 3; D: 45, ÷ 15, ÷ 15

8. **Various answers, for example:**

A. $\dfrac{\boxed{25}}{\boxed{30}} = \dfrac{\boxed{10}}{12} = \dfrac{15}{\boxed{18}} = \dfrac{5}{6}$; B. $\dfrac{6}{\boxed{10}} = \dfrac{12}{20} = \dfrac{\boxed{21}}{\boxed{35}} = \dfrac{3}{\boxed{5}}$; C. $\dfrac{\boxed{2}}{\boxed{7}} = \dfrac{\boxed{6}}{21} = \dfrac{4}{14} = \dfrac{\boxed{8}}{28}$; D $\dfrac{7}{\boxed{12}} = \dfrac{\boxed{49}}{\boxed{84}} = \dfrac{28}{\boxed{48}} = \dfrac{21}{36}$

9. **Chloe has incorrectly multiplied 18 by 4, the denominator should be 72 not 54. For the second set of fractions, she has subtracted 36 from the denominator and the numerator, rather than dividing both by the same number.**