Reasoning and Problem Solving
Step 15: Subtract 2 Mixed Numbers

National Curriculum Objectives:

Mathematics Year 5: (5F2a) Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]

Mathematics Year 5: (5F4) Add and subtract fractions with the same denominator and denominators that are multiples of the same number

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Identify and explain the odd one out from 3 mixed number subtraction calculations where the denominator is double or half of the starting fraction.
Expected Identify and explain the odd one out from 3 mixed number subtraction calculations where the denominators are direct multiples of each other.
Greater Depth Identify and explain the odd one out from 3 mixed number subtraction calculations where the denominators are not direct multiples of each other.

Questions 2, 5 and 8 (Problem Solving)
Developing Use the digit cards to complete the mixed number subtraction calculation where the denominator is double or half of the starting fraction.
Expected Use the digit cards to complete the mixed number subtraction calculation where the denominators are direct multiples of each other.
Greater Depth Use the digit cards to complete the mixed number subtraction calculation where the denominators are not direct multiples of each other.

Questions 3, 6 and 9 (Reasoning)
Developing Explain the mistake made when subtracting 2 mixed numbers where the denominator is double or half of the starting fraction.
Expected Explain the mistake made when subtracting 2 mixed numbers where the denominators are direct multiples of each other.
Greater Depth Explain the mistake made when subtracting 2 mixed numbers where the denominators are not direct multiples of each other.

More Year 5 Fractions resources.

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

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Subtract 2 Mixed Numbers

Subtract 2 Mixed Numbers

1a. Circle the odd one out.

A. $3\frac{8}{10} - 2\frac{2}{5}$

B. $4\frac{3}{5} - 3\frac{4}{10}$

C. $2\frac{4}{10} - 1\frac{1}{5}$

Explain your reasoning.

1b. Circle the odd one out.

A. $4\frac{6}{8} - 2\frac{2}{4}$

B. $5\frac{3}{4} - 3\frac{4}{8}$

C. $3\frac{6}{8} - 1\frac{1}{4}$

Explain your reasoning.

2a. Use the digit cards to complete the calculation below.

| 2 | 1 | 6 |

$$5\frac{\Box}{3} - 1\frac{2}{\Box} = 4\frac{\Box}{3}$$

2b. Use the digit cards to complete the calculation below.

| 10 | 4 | 2 |

$$4\frac{\Box}{5} - 1\frac{4}{\Box} = 3\frac{\Box}{5}$$

3a. Raj completes the calculation below.

$$2\frac{2}{8} - 1\frac{3}{4}$$
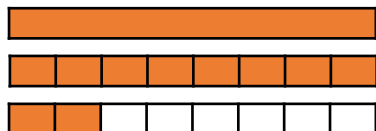
Raj says,
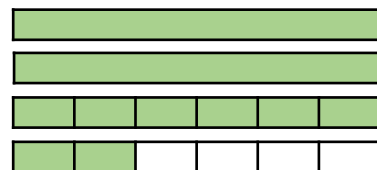
The answer is $1\frac{1}{8}$.

Explain the mistake that he has made.

3b. Jin completes the calculation below.

$$3\frac{2}{6} - 1\frac{2}{3}$$

Jin says,

The answer is 2.

Explain the mistake that she has made.

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Reasoning and Problem Solving – Subtract 2 Mixed Numbers – Year 5 Developing

4a. Circle the odd one out.

A. $6\frac{15}{35} - 2\frac{1}{7}$

B. $9\frac{6}{7} - 5\frac{12}{21}$

C. $5\frac{20}{28} - 1\frac{2}{7}$

Explain your reasoning.

E   R

4b. Circle the odd one out.

A. $9\frac{15}{27} - 4\frac{3}{9}$

B. $8\frac{5}{9} - 3\frac{16}{36}$

C. $6\frac{2}{3} - 1\frac{4}{9}$

Explain your reasoning.

E   R

5a. Use the digit cards to complete the calculation below.

| 28 | 1 | 3 | 21 | 4 |

$7\frac{\square}{4} - \square\frac{14}{\square} = 3\frac{\square}{4}$

E   PS

5b. Use the digit cards to complete the calculation below.

| 3 | 18 | 15 | 1 | 2 |

$8\frac{\square}{3} - \square\frac{5}{\square} = 5\frac{\square}{3}$

E   PS

6a. Ben completes the calculation below.

$4\frac{5}{12} - 2\frac{3}{4}$
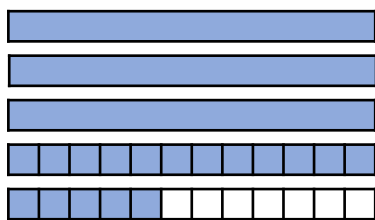
Ben says,
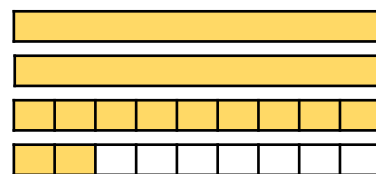
The answer is $2\frac{2}{12}$.

Explain the mistake that he has made.

E   R

6b. Lia completes the calculation below.

$3\frac{2}{9} - 1\frac{2}{3}$

Lia says,

The answer is $2\frac{0}{6}$.

Explain the mistake that she has made.

E   R

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Reasoning and Problem Solving – Subtract 2 Mixed Numbers – Year 5 Expected

Subtract 2 Mixed Numbers

7a. Circle the odd one out.

A. $7\frac{3}{4} - 3\frac{2}{3}$

B. $9\frac{5}{6} - 5\frac{2}{4}$

C. $6\frac{6}{8} - 2\frac{4}{6}$

Explain your reasoning.

R

7b. Circle the odd one out.

A. $8\frac{4}{6} - 5\frac{2}{9}$

B. $7\frac{5}{9} - 4\frac{2}{6}$

C. $9\frac{8}{9} - 6\frac{2}{4}$

Explain your reasoning.

R

8a. Use the digit cards to complete the calculation below.

| 3 | 6 | 15 | 4 | 5 | 1 |

$8\frac{\square}{6} - \square\frac{3}{\square} = 2\frac{\square}{\square}$

PS

8b. Use the digit cards to complete the calculation below.

| 4 | 3 | 2 | 7 | 1 | 10 |

$5\frac{\square}{5} - \square\frac{2}{\square} = 3\frac{\square}{\square}$

PS

9a. Jak completes the calculation below.

$$3\frac{1}{9} - 2\frac{4}{6}$$

Jak says,

The answer is $1\frac{3}{18}$.

Explain the mistake that he has made.

R

9b. Mia completes the calculation below.

$$4\frac{1}{3} - 2\frac{3}{4}$$

Mia says,

The answer is $\frac{24}{12}$.

Explain the mistake that she has made.

R

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Reasoning and Problem Solving – Subtract 2 Mixed Numbers – Year 5 Greater Depth

Developing

1a. A is the odd one out because it equals $1\frac{4}{10}$ or $1\frac{2}{5}$. B and C equal $1\frac{2}{10}$ or $1\frac{1}{5}$.

2a. $5\frac{2}{3} - 1\frac{2}{6} = 4\frac{1}{3}$

3a. Raj has subtracted the whole numbers then subtracted the numerators. If he had used the model he would have got the correct answer of $\frac{4}{8}$ or $\frac{1}{2}$.

Developing

1b. C is the odd one out because it equals $2\frac{4}{8}$ or $2\frac{1}{2}$. A and B equal $2\frac{2}{8}$ or $2\frac{1}{4}$.

2b. $4\frac{4}{5} - 1\frac{4}{10} = 3\frac{2}{5}$

3b. Jin has only subtracted the whole numbers. The correct answer is $1\frac{4}{6}$ or $1\frac{2}{3}$.

Expected

4a. C is the odd one out because it equals $4\frac{3}{7}$. A and B equal $4\frac{2}{7}$.

5a. $7\frac{3}{4} - 4\frac{14}{28} = 3\frac{1}{4}$

6a. Ben has subtracted the whole number and then subtracted the numerators. The correct answer is $1\frac{2}{3}$.

Expected

4b. B is the odd one out because it equals $5\frac{1}{9}$. A and C equal $5\frac{2}{9}$.

5b. $8\frac{2}{15} - 3\frac{5}{15} = 5\frac{1}{3}$

6b. Lia has subtracted the whole numbers, numerators and denominators but hasn't found a common denominator. The correct answer is $1\frac{5}{9}$.

Greater Depth

7a. B is the odd one out because it equals $4\frac{4}{12}$. A and C equal $4\frac{1}{12}$.

8a. $8\frac{4}{6} - 6\frac{3}{5} = 2\frac{1}{15}$

9a. Jak has subtracted the whole numbers and then the numerators. He has found a common denominator but then forgot to convert the numerators. The correct answer is $\frac{4}{9}$.

Greater Depth

7b. C is the odd one out because it equals $3\frac{7}{18}$ which cannot be simplified to 9ths. A and B can be simplified to $3\frac{4}{9}$ and $3\frac{2}{9}$.

8b. $5\frac{3}{5} - 2\frac{2}{4} = 3\frac{1}{10}$

9b. Mia has converted the fractions to improper fractions and has added them instead of subtracting. The correct answer is $1\frac{7}{12}$.

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