Reasoning and Problem Solving
Step 7: Subtract 2 Fractions

National Curriculum Objectives:

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

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Explain the mistake in a word problem involving subtracting two fractions with the same denominator.
Expected Explain the mistake in a word problem involving subtracting two fractions with the same denominator. Use of improper fractions.
Greater Depth Explain the mistake in a word problem involving subtracting two fractions where some of the denominators are double or half of the starting fraction. Use of improper factions.

Questions 2, 5 and 8 (Problem Solving)
Developing Choose from 3 digit cards to solve a subtraction problem using two fractions with the same given denominator.
Expected Choose from 4 digit cards to solve a subtraction problem using two fractions with the same denominator. Use of improper fractions.
Greater Depth Choose from 5 digit cards to solve a subtraction problem using two fractions where some of the denominators are double or half the starting fraction. Use of improper fractions.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether the two subtraction calculations are the same. Using fractions less than one whole. Pictorial support provided.
Expected Explain whether the two subtraction calculations are the same. Using improper fractions of the same denominator. Pictorial support provided.
Greater Depth Explain whether the two subtraction calculations are the same. Using improper fractions where the denominator has been doubled or halved. No pictorial support provided.

More Year 4 Fractions resources.

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

Subtract 2 Fractions

1a. James runs $\frac{4}{6}$ of a mile in a race.
Sofia runs $\frac{3}{6}$ of a mile less than James.

Sofia runs $\frac{2}{6}$ of a mile.

James

Is he correct? Explain your answer.

D R

1b. Fozia cuts off $\frac{8}{9}$ of a metre of string.
Kevin cuts off $\frac{5}{9}$ of a metre less than Fozia.

Kevin cuts off $\frac{4}{9}$ of a metre.

Fozia

Is she correct? Explain your answer.

D R

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

2 3 5

$\frac{\square}{7} - \frac{\square}{7} = \frac{\square}{7}$

D PS

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

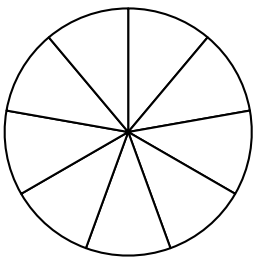
3 4 7

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

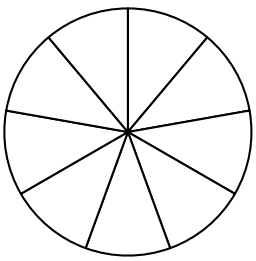
D PS

3a. Are these calculations the same?

$\frac{8}{9} - \frac{5}{9}$



$\frac{8}{9} - \frac{4}{9} - \frac{1}{9}$

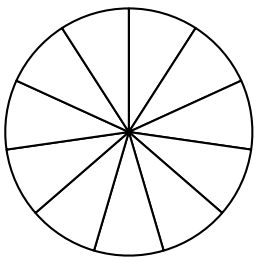


Use the shapes to prove your answer.

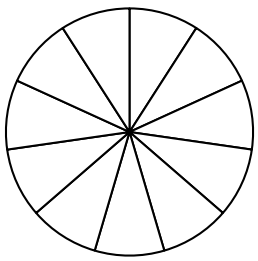
D R

3b. Are these calculations the same?

$\frac{9}{11} - \frac{6}{11}$



$\frac{9}{11} - \frac{3}{11} - \frac{4}{11}$



Use the shapes to prove your answer.

D R

Subtract 2 Fractions

4a. Rene walks $\frac{7}{5}$ miles to school.
Rabina walks $\frac{4}{5}$ less than Rene.

Rabina walks $\frac{2}{5}$ of a mile.

Rene

Is she correct? Explain your answer.

E R

Subtract 2 Fractions

4b. Freddie drinks $\frac{11}{10}$ of a litre of water.
Anna drinks $\frac{7}{10}$ of a litre less than Freddie.

Anna has drunk $\frac{4}{10}$ of a litre.

Freddie

Is he correct? Explain your answer.

E R

5a. Use the digit cards to complete this calculation. You can use each card more than once.

5	7	12	3

$$\frac{15}{\square} - \frac{\square}{\square} = \frac{\square}{\square}$$

E PS

5b. Use the digit cards to complete this calculation. You can use each card more than once.

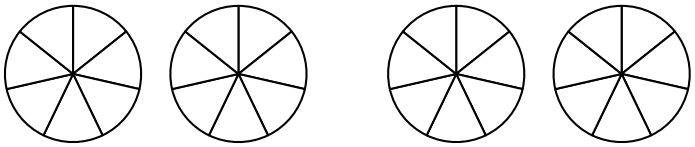
9	6	4	13

$$\frac{19}{\square} - \frac{\square}{\square} = \frac{\square}{\square}$$

E PS

6a. Are these calculations the same?

$$\frac{12}{7} - \frac{6}{7} \qquad \frac{12}{7} - \frac{4}{7} - \frac{4}{7}$$

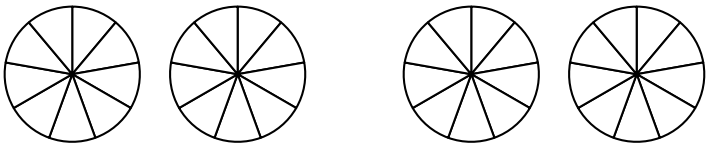


Use the shapes to prove your answer.

E R

6b. Are these calculations the same?

$$\frac{13}{9} - \frac{5}{9} \qquad \frac{13}{9} - \frac{2}{9} - \frac{3}{9}$$



Use the shapes to prove your answer.

E R

Subtract 2 Fractions

7a. Evie cycles $\frac{14}{10}$ miles around a park.
Jakub cycles $\frac{2}{5}$ less than Evie.

Jakub cycles $\frac{4}{5}$ of a mile.

Evie

Is she correct? Explain your answer.

GD R

8a. Use the digit cards to complete this calculation. You can use each card more than once.

4	2	6	0	8

$$\frac{\square}{4} - \frac{\square}{8} = \frac{\square}{\square}$$

GD PS

9a. Are these calculations the same?

$\frac{16}{20} - \frac{6}{10}$

$\frac{8}{10} - \frac{6}{20} - \frac{6}{20}$

Draw your own bar model to help you.

GD R

Subtract 2 Fractions

7b. Sam's rat weighs $\frac{16}{11}$ of a kilogram.
Lida's rat weighs $\frac{12}{22}$ less than Sam's.

Lida's rat weighs $\frac{1}{11}$ of a kilogram.

Sam

Is he correct? Explain your answer.

GD R

8b. Use the digit cards to complete this calculation. You can use each card more than once.

0	6	4	12	8

$$\frac{\square}{6} - \frac{\square}{12} = \frac{\square}{\square}$$

GD PS

9b. Are these calculations the same?

$\frac{6}{7} - \frac{10}{14}$

$\frac{12}{14} - \frac{3}{7} - \frac{6}{14}$

Draw your own bar model to help you.

GD R

Reasoning and Problem Solving
Subtract 2 Fractions

Developing

1a. James is incorrect because $\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$.

2a. $\frac{5}{7} - \frac{2}{7} = \frac{3}{7}$ or $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$

3a. Yes, both calculations equal $\frac{3}{9}$.

Expected

4a. Rene is incorrect because $\frac{7}{5} - \frac{4}{5} = \frac{3}{5}$.

5a. Various answers, for example: $\frac{15}{7} - \frac{12}{7} = \frac{3}{7}$

6a. No, the calculations are not the same: $\frac{12}{7} - \frac{6}{7} = \frac{6}{7}$ but $\frac{12}{7} - \frac{4}{7} - \frac{4}{7} = \frac{4}{7}$.

Greater Depth

7a. Evie is incorrect because $\frac{14}{10} - \frac{4}{10} = \frac{10}{10}$ (also accept simplified answers).

8a. Various answers, for example: $\frac{6}{4} - \frac{8}{8} = \frac{4}{8}$

9a. Yes, both equal $\frac{4}{20}$ or $\frac{2}{10}$.

Reasoning and Problem Solving
Subtract 2 Fractions

Developing

1b. Fozia is incorrect because $\frac{8}{9} - \frac{5}{9} = \frac{3}{9}$.

2b. $\frac{7}{8} - \frac{4}{8} = \frac{3}{8}$ or $\frac{7}{8} - \frac{3}{8} = \frac{4}{8}$

3b. No, the calculations are not the same: $\frac{9}{11} - \frac{6}{11} = \frac{3}{11}$ but $\frac{9}{11} - \frac{3}{11} - \frac{4}{11} = \frac{2}{11}$.

Expected

4b. Freddie is correct because $\frac{11}{10} - \frac{7}{10} = \frac{4}{10}$.

5b. Various answers, for example: $\frac{19}{4} - \frac{13}{4} = \frac{6}{4}$

6b. Yes, both equal $\frac{8}{9}$.

Greater Depth

7b. Sam is incorrect because $\frac{16}{11} - \frac{12}{22} = \frac{20}{22}$ (also accept simplified answers).

8b. Various answers, for example: $\frac{6}{6} - \frac{4}{12} = \frac{4}{6}$

9b. No, the calculations are not the same: $\frac{6}{7} - \frac{10}{14} = \frac{1}{7}$ or $\frac{2}{14}$ but $\frac{12}{14} - \frac{3}{7} - \frac{6}{14} = 0$.