

Reasoning and Problem Solving

Step 2: Equivalent Fractions 1

National Curriculum Objectives:

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

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain if a statement about equivalent fractions is true. Includes doubling the starting fraction. Using pictorial support.

Expected Explain if a statement about equivalent fractions is true. Includes denominators that are direct multiples of the starting fraction. Using pictorial support.

Greater Depth Explain if a statement about equivalent fractions is true. Includes denominators that share a common factor. Using some pictorial support.

Questions 2, 5 and 8 (Problem Solving)

Developing Find which fraction is the odd one out. Includes doubling the starting fraction. Using pictorial support.

Expected Find which fraction is the odd one out. Includes denominators that are direct multiples of the starting fraction. Using some pictorial support.

Greater Depth Find which fraction is the odd one out. Includes denominators that share a common factor. Using some pictorial support.

Questions 3, 6 and 9 (Reasoning)

Developing Find and explain a mistake when comparing fractions. Includes doubling the starting fraction. Using pictorial support.

Expected Find and explain a mistake when comparing fractions. Includes denominators that are direct multiples of the starting fraction. Using pictorial support.

Greater Depth Find and explain a mistake when comparing fractions. Includes denominators that share a common factor. No pictorial support.

More [Year 4 Fraction](#) resources.

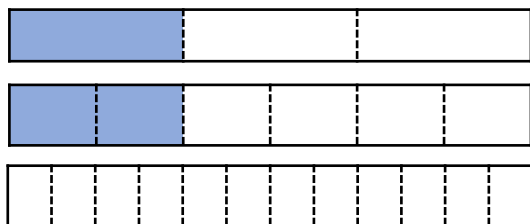
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Equivalent Fractions 1

1a. Maisie is investigating equivalent fractions. She says,



The next equivalent fraction will be $\frac{4}{11}$.



Is she correct? Explain your answer.



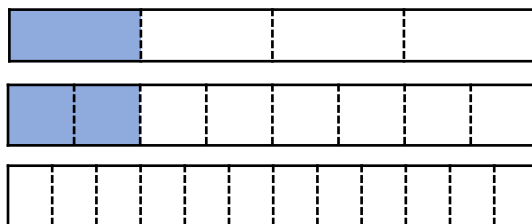
R

Equivalent Fractions 1

1b. Connor is investigating equivalent fractions. He says,



The next equivalent fraction will be $\frac{2}{12}$.

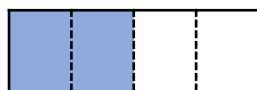
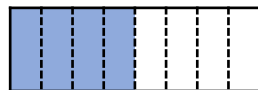
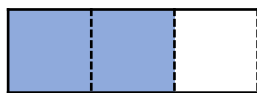
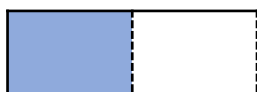


Is he correct? Explain your answer.



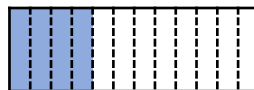
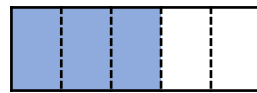
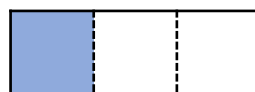
R

2a. Find the fraction that is the odd one out.



PS

2b. Find the fraction that is the odd one out.



PS

3a. Zac is investigating equivalent fractions. He thinks he has made equivalent fractions.

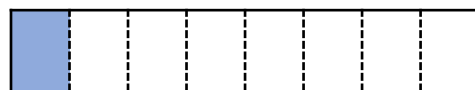
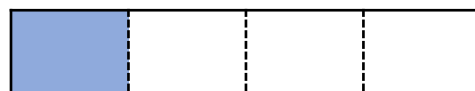


Is he correct? Prove it.



R

3b. Evie is investigating equivalent fractions. She thinks she has made equivalent fractions.



Is she correct? Prove it.



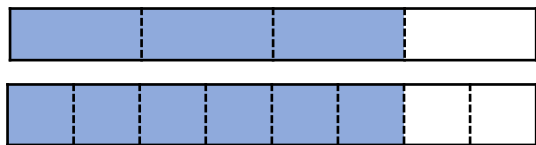
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Equivalent Fractions 1

4a. Noah is investigating equivalent fractions. He says,



The next equivalent fraction will be $\frac{10}{12}$.



Is he correct? Explain your answer.



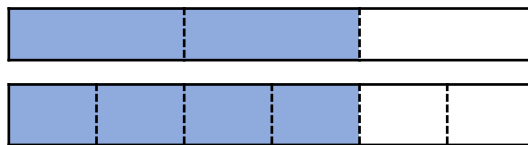
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Equivalent Fractions 1

4b. Charlie is investigating equivalent fractions. He says,



The next equivalent fraction will be $\frac{4}{9}$.

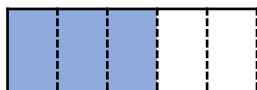


Is he correct? Explain your answer.



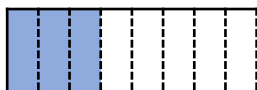
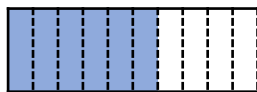
R

5a. Find the fraction that is the odd one out.



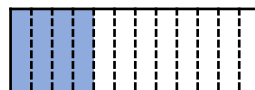
$$\frac{3}{5}$$

$$\frac{6}{10}$$



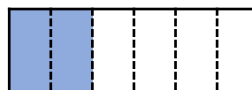
PS

5b. Find the fraction that is the odd one out.



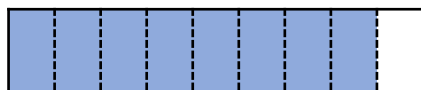
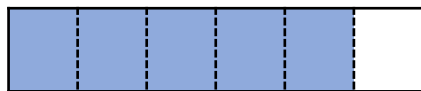
$$\frac{1}{3}$$

$$\frac{3}{12}$$



PS

6a. Lola is investigating equivalent fractions. She thinks she has made equivalent fractions.

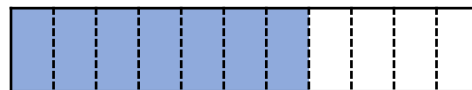
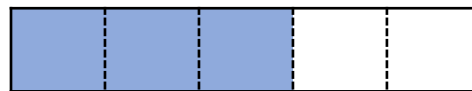


Is she correct? Prove it.



R

6b. Emily is investigating equivalent fractions. She thinks she has made equivalent fractions.



Is she correct? Prove it.



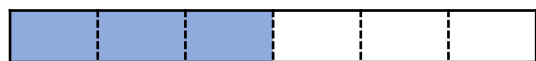
R

Equivalent Fractions 1

7a. Freya is investigating equivalent fractions. She says,



The next equivalent fraction will be $\frac{5}{10}$.



$$\frac{4}{8}$$

Is she correct? Explain your answer.



R

Equivalent Fractions 1

7b. Abdul is investigating equivalent fractions. He says,



The next equivalent fraction will be $\frac{3}{12}$.



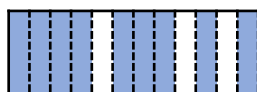
$$\frac{2}{6}$$

Is he correct? Explain your answer.



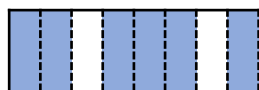
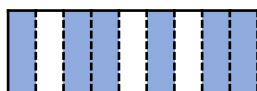
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8a. Find the fraction that is the odd one out.



$$\frac{4}{6}$$

$$\frac{3}{5}$$



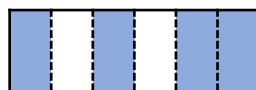
PS

8b. Find the fraction that is the odd one out.



$$\frac{8}{12}$$

$$\frac{4}{10}$$



PS

9a. Reece is investigating equivalent fractions. He thinks he has written two equivalent fractions.

$$\frac{2}{6}$$

$$\frac{4}{9}$$

Is he correct? Prove it.



R

9b. Lizzie is investigating equivalent fractions. She thinks she has written two equivalent fractions.

$$\frac{3}{9}$$

$$\frac{6}{12}$$

Is she correct? Prove it.



R

Reasoning and Problem Solving

Equivalent Fractions 1

Developing

1a. Maisie is not correct because the next equivalent fraction is $\frac{4}{12}$.

2a. $\frac{2}{3}$ is the odd one out because $\frac{1}{2}$, $\frac{2}{4}$ and $\frac{4}{8}$ are all equivalent fractions.

3a. Zac is not correct because $\frac{1}{5}$ is not equivalent to $\frac{2}{9}$. It is equivalent to $\frac{2}{10}$.

Expected

4a. Noah is not correct because $\frac{10}{12}$ is not equivalent to $\frac{3}{4}$.

5a. $\frac{3}{8}$ is the odd one out because $\frac{3}{5}$ and $\frac{6}{10}$ are equivalent fractions.

6a. Lola is incorrect because $\frac{8}{9}$ is not equivalent to $\frac{5}{6}$. An equivalent fraction she should have made is $\frac{10}{12}$.

Greater Depth

7a. Freya is correct because $\frac{3}{6}$ and $\frac{4}{8}$ are both halves. 5 is half of 10 so $\frac{5}{10}$ is the next equivalent fraction.

8a. $\frac{3}{5}$ is the odd one out because $\frac{4}{6} = \frac{6}{9}$ and $\frac{6}{12} = \frac{8}{12}$.

9a. Reece is not correct because $\frac{4}{9}$ is not equivalent to $\frac{2}{6}$. An equivalent fraction he could have written would be $\frac{1}{3}$, $\frac{3}{9}$ or $\frac{4}{12}$.

Reasoning and Problem Solving

Equivalent Fractions 1

Developing

1b. Connor is not correct because the next equivalent fraction is $\frac{3}{12}$.

2b. $\frac{3}{5}$ is the odd one out because $\frac{1}{3}$, $\frac{2}{6}$ and $\frac{3}{12}$ are all equivalent fractions.

3b. Evie is not correct because $\frac{1}{4}$ is not equivalent to $\frac{1}{8}$. It is equivalent to $\frac{2}{8}$.

Expected

4b. Charlie is incorrect because $\frac{4}{9}$ is not equivalent to $\frac{2}{3}$.

5b. $\frac{3}{12}$ is the odd one out because $\frac{1}{3}$, $\frac{2}{6}$, $\frac{3}{9}$ and $\frac{4}{12}$ are equivalent fractions.

6b. Emily is incorrect because $\frac{7}{11}$ is not equivalent to $\frac{3}{5}$. The equivalent fraction she should have made is $\frac{6}{10}$.

Greater Depth

7b. Abdul is incorrect because $\frac{3}{12}$ is not equivalent to $\frac{1}{3}$.

8b. $\frac{6}{8}$ is the odd one out because $\frac{2}{5} = \frac{4}{10}$ and $\frac{4}{6} = \frac{8}{12}$.

9b. Lizzie is incorrect because $\frac{6}{12}$ is not equivalent to $\frac{3}{9}$. An equivalent fraction she could have written would be $\frac{1}{3}$, $\frac{2}{6}$, or $\frac{4}{12}$.