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 correct. Includes doubling the starting fraction. Using pictorial support.
Expected Explain if a statement about equivalent fractions is correct. Includes denominators that are direct multiples of the starting fraction. Using pictorial support.
Greater Depth Explain if a statement about equivalent fractions is correct. Includes denominators that share a common factor. Using some pictorial support.

Questions 2, 5 and 8 (Reasoning)
Developing Explain if a statement is true or false. Includes doubling the starting fraction. Using pictorial support.
Expected Explain if a statement is true or false. Includes denominators that are direct multiples of the starting fraction. Using some pictorial support.
Greater Depth Explain if a statement is true or false. Includes denominators that share a common factor. Using some pictorial support.

Questions 3, 6 and 9 (Problem Solving)
Developing Explore which equivalent fractions can be found based on an image. Includes doubling the starting fraction. Using pictorial support.
Expected Explore which equivalent fractions can be found based on an image. Includes denominators that are direct multiples of the starting fraction. Using pictorial support.
Greater Depth Explore which equivalent fractions can be found using on an image. Includes denominators that share a common factor. No pictorial support.

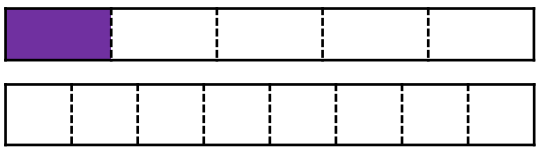
More Year 4 Fraction resources.

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

Equivalent Fractions 1

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

$\frac{1}{5}$ is equivalent to $\frac{2}{8}$.

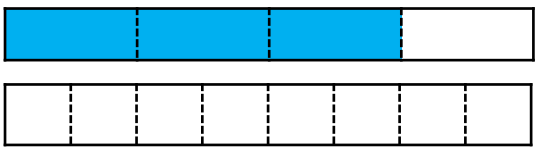


Is she correct? Explain your answer.

D R

1b. Hollie is investigating equivalent fractions. She says,

$\frac{3}{4}$ is equivalent to $\frac{6}{8}$.



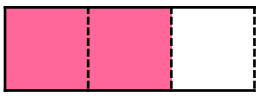
Is she correct? Explain your answer.

D R

2a. Which of the shaded fractions below are equivalent?

A.

B.



C.

D.

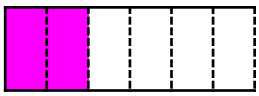
Explain how you know.

D R

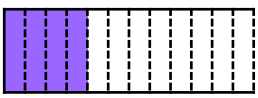
2b. Which of the shaded fractions below are equivalent?

A.

B.



C.

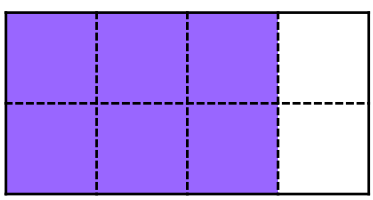


D.

Explain how you know.

D R

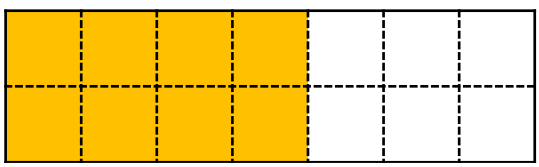
3a. Ryan is investigating equivalent fractions based on the shape below.



Which equivalent fractions could he have found? Find two possibilities.

D PS

3b. Steve is investigating equivalent fractions based on the shape below.



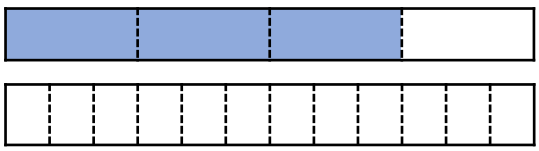
Which equivalent fractions could he have found? Find two possibilities.

D PS

Equivalent Fractions 1

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

$\frac{3}{4}$ is equivalent to $\frac{10}{12}$.



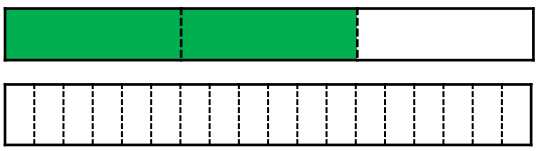
Is he correct? Explain your answer.

E

R

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

$\frac{2}{3}$ is equivalent to $\frac{11}{18}$.



Is he correct? Explain your answer.

E

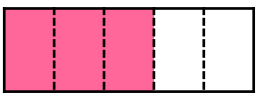
R

5a. Which of the shaded and written fractions below are equivalent?

A. 

B. $\frac{3}{5}$

C. $\frac{6}{10}$

D. 

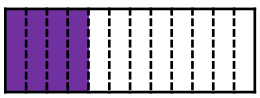
E. 

Explain how you know.

E

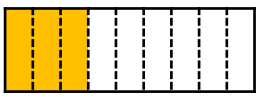
R

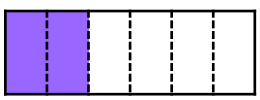
5b. Which of the shaded and written fractions below are equivalent?

A. 

B. $\frac{1}{3}$

C. $\frac{3}{12}$

D. 

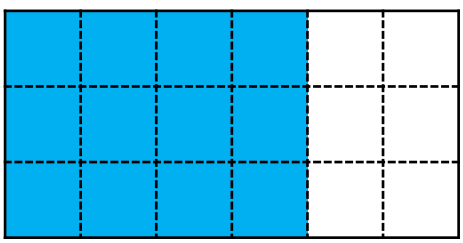
E. 

Explain how you know.

E

R

6a. Lola is investigating equivalent fractions based on the shape below.

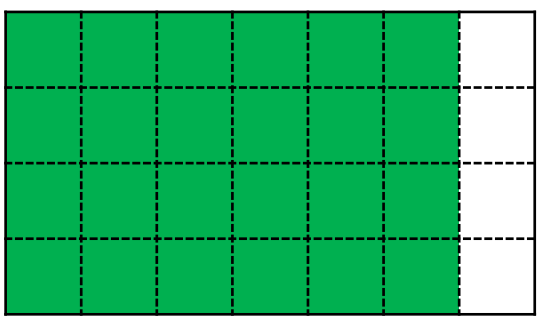


Which equivalent fractions could she have found? Find three possibilities.

E

PS

6b. Emily is investigating equivalent fractions based on the shape below.



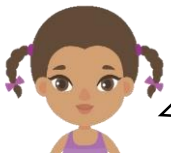
Which equivalent fractions could she have found? Find three possibilities.

E

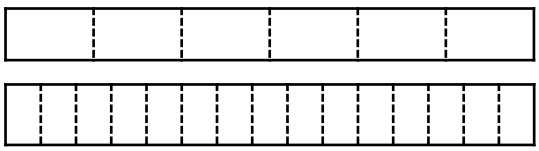
PS

Equivalent Fractions 1

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



$\frac{2}{6}$ is equivalent to $\frac{6}{15}$.

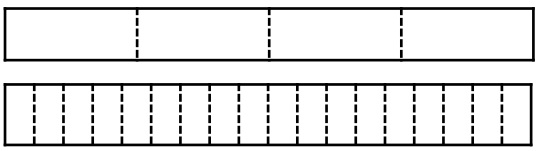


Is she correct? Explain your answer.

GD R

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

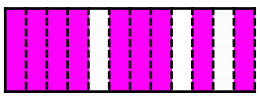
$\frac{3}{4}$ is equivalent to $\frac{16}{18}$.



Is he correct? Explain your answer.

GD R

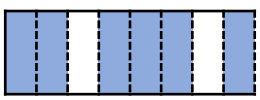
8a. Which of the shaded and written fractions below are equivalent?

A. 

B. $\frac{4}{6}$

C. $\frac{3}{5}$

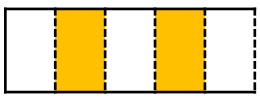
D. 

E. 

Explain how you know.

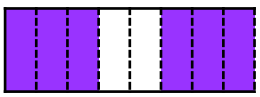
GD R

8b. Which of the shaded and written fractions below are equivalent?

A. 

B. $\frac{8}{12}$

C. $\frac{4}{10}$

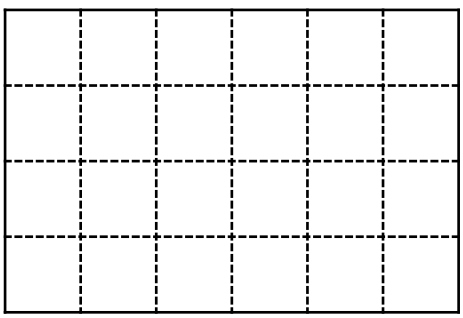
D. 

E. 

Explain how you know.

GD R

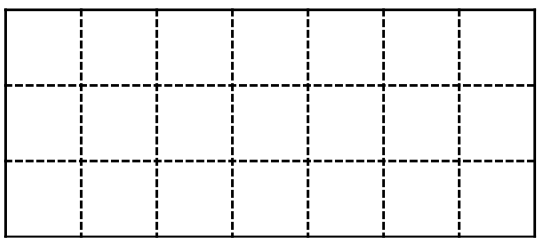
9a. Reece is investigating equivalent fractions based on $\frac{1}{4}$.



Which equivalent fractions could he have found? Find three possibilities.

GD PS

9b. Lizzie is investigating equivalent fractions based on $\frac{1}{7}$.



Which equivalent fractions could she have found? Find three possibilities.

GD PS

Reasoning and Problem Solving
Equivalent Fractions 1

Developing

1a. Zaina is not correct because $\frac{1}{5}$ is equivalent to $\frac{2}{10}$, not $\frac{2}{8}$.

2a. A, C and D are equivalent because they represent $\frac{1}{2}$. B is not equivalent because it represents $\frac{2}{3}$.

3a. $\frac{6}{8} = \frac{3}{4}$; $\frac{2}{8} = \frac{1}{4}$

Expected

4a. Noah is not correct because $\frac{3}{4}$ is equivalent to $\frac{9}{12}$, not $\frac{10}{12}$.

5a. A, B, C and D are equivalent because they represent $\frac{3}{5}$. E is not equivalent because it represents $\frac{3}{8}$.

6a. Various answers, for example:
$\frac{12}{18} = \frac{6}{9} = \frac{2}{3}$

Greater Depth

7a. Freya is not correct because $\frac{2}{6}$ is equivalent to $\frac{5}{15}$, not $\frac{6}{15}$.

8a. A and E represent $\frac{3}{4}$; B and D represent $\frac{2}{3}$. C is not equivalent to any option.

9a. Various answers, for example:
$\frac{1}{4} = \frac{6}{24} = \frac{3}{12}$

Reasoning and Problem Solving
Equivalent Fractions 1

Developing

1b. Hollie is correct because $\frac{3}{4}$ is equivalent to $\frac{6}{8}$.

2b. A, B and C are equivalent because they represent $\frac{1}{3}$. D is not equivalent because it represents $\frac{3}{5}$.

3b. $\frac{8}{14} = \frac{4}{7}$; $\frac{6}{14} = \frac{3}{7}$

Expected

4b. Charlie is not correct because $\frac{2}{3}$ is equivalent to $\frac{12}{18}$, not $\frac{11}{18}$.

5b. A, B, D and E are equivalent because they represent $\frac{1}{3}$. C is not equivalent because it represents $\frac{1}{4}$.

6b. Various answers, for example:
$\frac{24}{28} = \frac{6}{7} = \frac{12}{14}$

Greater Depth

7b. Abdul is not correct because 18 cannot be divided into quarters so $\frac{3}{4}$ will not have an equivalent fraction in eighteenths.

8a. False. A and C represent $\frac{2}{5}$; B and E represent $\frac{2}{3}$. D is not equivalent to any option.

9a. Various answers, for example:
$\frac{1}{7} = \frac{3}{21} = \frac{2}{14}$