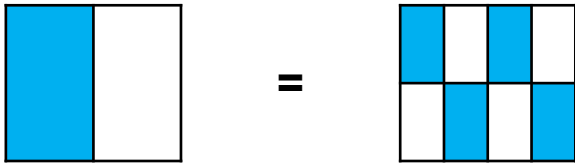


Equivalent Fractions

1a. Cole has coloured two grids to create an equivalent fraction.



The parts do not need to be together to create a fraction.

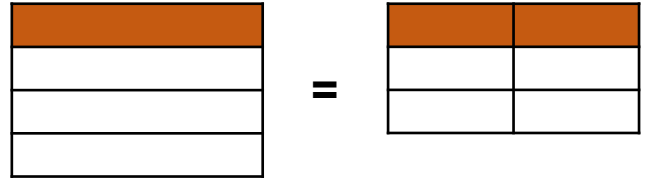
Is Cole correct? Explain your answer.



R

Equivalent Fractions

1b. Jennie has coloured two grids to create an equivalent fraction.



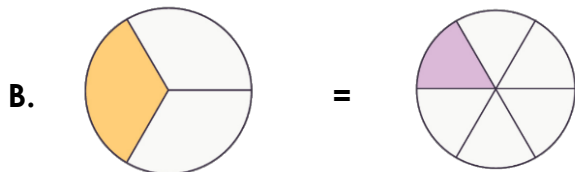
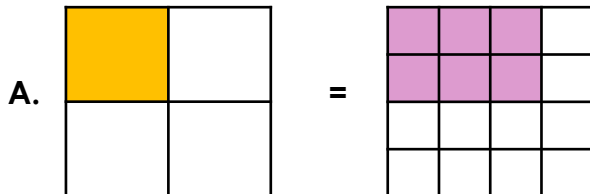
They are shaded in the same shape so they are equal.

Is Jennie correct? Explain your answer.



R

2a. Sylvia has drawn some equivalent fractions.

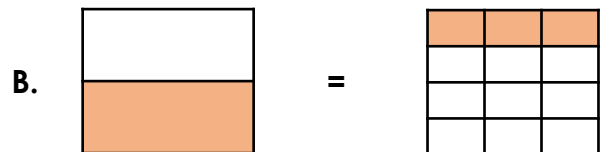
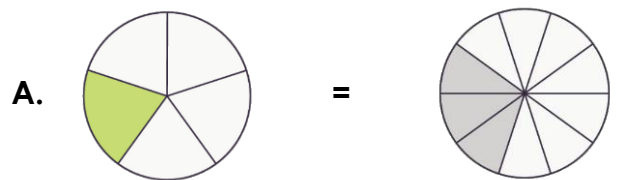


Find and explain any mistakes.



R

2b. Mark has drawn some equivalent fractions.

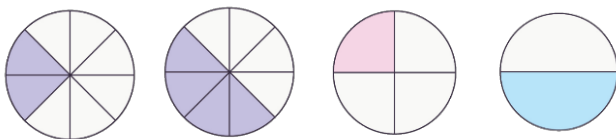


Find and explain any mistakes.



R

3a. Give 2 possible values for A and B. Use the images to help you.

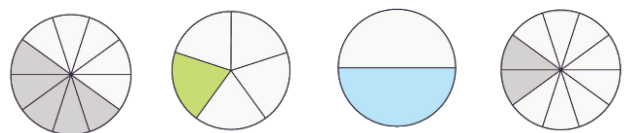


$$\frac{1}{A} = \frac{B}{8}$$



PS

3b. Give 2 possible values for A and B.



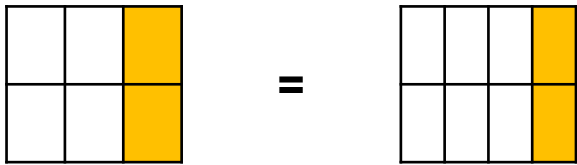
$$\frac{1}{A} = \frac{B}{10}$$



PS

Equivalent Fractions

4a. Amelia has coloured two grids to create an equivalent fraction.



Two parts are shaded in each grid so they show equivalent fractions.

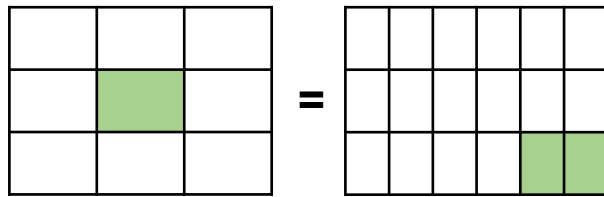
Is Amelia correct? Explain your answer.



R

Equivalent Fractions

4b. Conrad has coloured two grids to create an equivalent fraction.



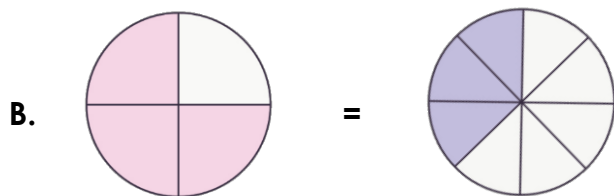
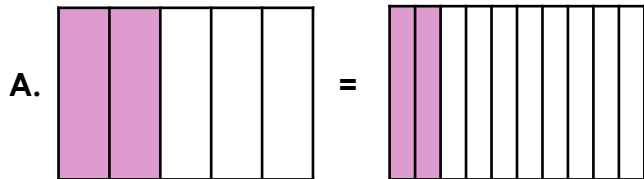
The shaded parts are equal.

Is Conrad correct? Explain your answer.



R

5a. Dwayne has drawn some equivalent fractions.

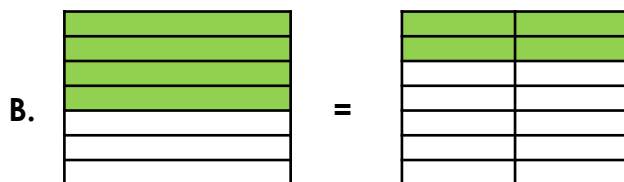
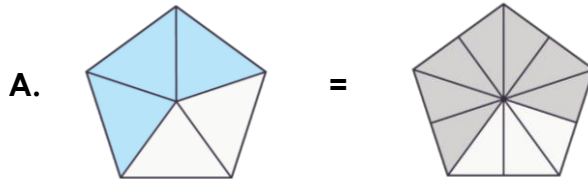


Find and explain any mistakes.



R

5b. Shelly has drawn some equivalent fractions.



Find and explain any mistakes.



R

6a. Give 2 possible values for A and B.

$$\frac{1}{A} = \frac{B}{24}$$

Diagram showing a fraction $\frac{1}{A} = \frac{B}{24}$. A purple arrow points from the denominator 'A' to the denominator '24' with a box containing 'x?'. Another purple arrow points from the numerator '1' to the numerator 'B' with a box containing 'x?'.



PS

6b. Give 2 possible values for A and B.

$$\frac{2}{A} = \frac{B}{36}$$

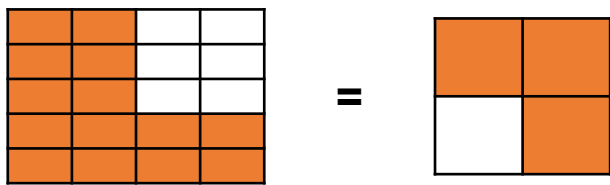
Diagram showing a fraction $\frac{2}{A} = \frac{B}{36}$. A purple arrow points from the denominator 'A' to the denominator '36' with a box containing 'x?'. Another purple arrow points from the numerator '2' to the numerator 'B' with a box containing 'x?'.



PS

Equivalent Fractions

7a. Danyaal has coloured two grids to create an equivalent fraction.



My fractions are equivalent to $\frac{9}{12}$.

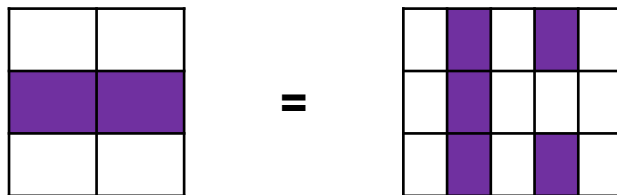
Is Danyaal correct? Explain your answer.



R

Equivalent Fractions

7b. Lucie has coloured two grids to create an equivalent fraction.



I have shown fractions equivalent to $\frac{1}{3}$.

Is Lucie correct? Explain your answer.



R

8a. Carlisle has written some equivalent fractions.

$$A \quad \frac{5}{6} = \frac{25}{30}$$

$$B \quad \frac{7}{9} = \frac{21}{27}$$

$$C \quad \frac{8}{9} = \frac{56}{72}$$

$$D \quad \frac{49}{63} = \frac{7}{7}$$

Find and explain any mistakes.



R

8b. Davina has written some equivalent fractions.

$$A \quad \frac{4}{7} = \frac{28}{42}$$

$$B \quad \frac{5}{9} = \frac{30}{54}$$

$$C \quad \frac{21}{28} = \frac{15}{20}$$

$$D \quad \frac{18}{28} = \frac{36}{54}$$

Find and explain any mistakes.



R

9a. Give 2 possible values for A and B.

$$\frac{7}{A} = \frac{B}{32} = \frac{84}{C}$$



PS

9b. Give 2 possible values for A and B.

$$\frac{2}{A} = \frac{B}{48} = \frac{24}{C}$$



PS

Reasoning and Problem Solving Equivalent Fractions

Developing

1a. Cole is correct. He has shown $\frac{1}{2} = \frac{4}{8}$.
The parts do not need to be together.

2a. A. 2 shaded parts should be crossed out as $\frac{1}{4} = \frac{4}{16}$.

B. Another part should be shaded in as $\frac{1}{3} = \frac{2}{6}$

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

Expected

4a. Amelia is incorrect. Her fractions are not equal in size, but have the same numerator.

5a. A. 2 more parts should be shaded in as $\frac{2}{5} = \frac{4}{10}$

B. 3 more parts should be shaded in as $\frac{3}{4} = \frac{6}{8}$

6a. Various answers, for example:

$$\frac{1}{2} = \frac{12}{24} \quad \frac{1}{4} = \frac{6}{24} \quad \frac{1}{6} = \frac{4}{24}$$

Greater Depth

7a. Danyaal is partly correct. $\frac{3}{4}$ is equivalent to $\frac{9}{12}$ but $\frac{14}{20}$ is not.

8a. C $\frac{8}{9} = \frac{64}{72}$; D $\frac{49}{63} = \frac{7}{9}$

9a. Various answers, for example:

$$\frac{7}{8} = \frac{28}{32} = \frac{84}{96} \quad \frac{7}{16} = \frac{14}{32} = \frac{84}{192}$$

Reasoning and Problem Solving Equivalent Fractions

Developing

1b. Jennie is incorrect. The shading shows $\frac{1}{4} = \frac{2}{6}$ but these are not equivalent. $\frac{1}{4} = \frac{2}{8}$

2b. A. 1 shaded part should be crossed out as $\frac{1}{5} = \frac{2}{10}$.

B. 3 more parts should be shaded in as $\frac{1}{2} = \frac{6}{12}$

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

Expected

4b. Conrad is correct. $\frac{1}{9} = \frac{2}{18}$

5b. A. 1 shaded part should be crossed out as $\frac{3}{5} = \frac{6}{10}$

B. 4 more parts should be shaded in as $\frac{4}{7} = \frac{8}{14}$

6b. Various answers, for example:

$$\frac{2}{4} = \frac{18}{36} \quad \frac{2}{12} = \frac{6}{36} \quad \frac{2}{18} = \frac{4}{36}$$

Greater Depth

7b. Lucie is correct. She has shaded $\frac{2}{6}$ and $\frac{5}{15}$ which are both equivalent to $\frac{1}{3}$.

8b. A $\frac{4}{7} = \frac{28}{49}$; D $\frac{18}{28} = \frac{36}{56}$

9b. Various answers, for example:

$$\frac{2}{8} = \frac{12}{48} = \frac{24}{96} \quad \frac{2}{16} = \frac{6}{48} = \frac{24}{192}$$

$$\frac{2}{12} = \frac{8}{48} = \frac{24}{144}$$