

Math

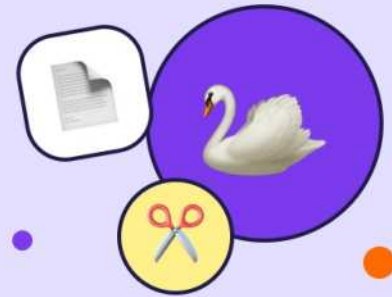
Grade 4

Origami math: fold fractions and symmetry

Fold a square of paper to see halves, fourths and eighths, then find lines of symmetry.



I can name equivalent fractions and find lines of symmetry.



1



Name the folded part

Each square is folded into equal parts. Write the fraction that is shaded.









2

**Fold and think**

Write the missing fraction or number.



1. Fold a square in half. Each part is _____ of the square.
2. Fold it in half again. Now there are _____ equal parts.
3. Fold it in half one more time. Each part is _____ of the square.
4. $\frac{2}{8}$ of the square is the same as _____ /4.

3

**Compare the folds**

Write $>$, $<$ or $=$ in each circle.

 $\frac{1}{2}$  $\frac{4}{8}$ $\frac{1}{8}$  $\frac{1}{4}$ $\frac{3}{4}$  $\frac{5}{8}$ $\frac{2}{4}$  $\frac{3}{8}$

4 Lines of symmetry

Draw a line from each shape to its number of lines of symmetry.

☐ Square ●

☐ Rectangle that is not a square ●

☐ Equilateral triangle ●

☐ Circle ●

● A. 3 lines

● B. Endless lines

● C. 4 lines

● D. 2 lines

5 Same size, new name

Write the missing number to make equal fractions.

1. $\frac{1}{2} = \frac{\quad}{8}$

2. $\frac{3}{4} = \frac{\quad}{8}$

3. $\frac{2}{3} = \frac{\quad}{6}$

4. $\frac{1}{4} = \frac{\quad}{12}$

5. $\frac{4}{8} = \frac{\quad}{2}$

6. $\frac{6}{8} = \frac{\quad}{4}$

7. $\frac{2}{6} = \frac{\quad}{3}$

6 Color the paper

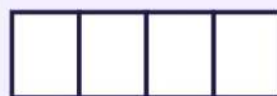
Color each paper strip to show the fraction.



$$\frac{5}{8}$$



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



$$\frac{2}{4}$$

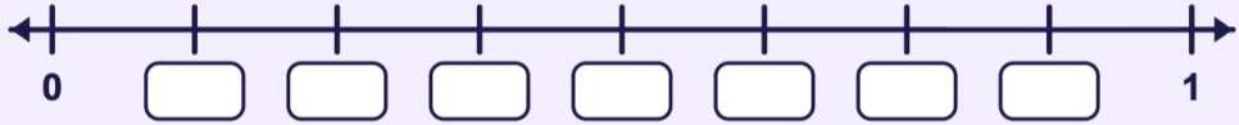


$$\frac{1}{3}$$

7

**Eighths on the line**

Write the missing fractions on the number line.



8

**Paper crane problems**

Read each problem and circle the right answer.

1. Lily folds $\frac{3}{8}$ of her paper on Monday and $\frac{2}{8}$ on Tuesday. What fraction did she fold in all?

A $\frac{5}{16}$ B $\frac{5}{8}$ C $\frac{1}{8}$

2. A pack has 12 sheets of paper. Omar uses $\frac{1}{4}$ of them. How many sheets does he use?

A 3

B 4

C 8

3. Which fraction is equal to $\frac{1}{2}$?

A $\frac{2}{3}$ B $\frac{3}{6}$ C $\frac{3}{8}$

4. Ben has 1 whole sheet and cuts off $\frac{3}{8}$. How much is left?

A $\frac{3}{8}$ B $\frac{4}{8}$ C $\frac{5}{8}$

9



Draw the folds

Draw a square. Draw its 2 diagonals and 2 middle lines to split it into 8 equal triangles. Shade $\frac{3}{8}$ of the square.



How did it go?



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Math

Grade 4

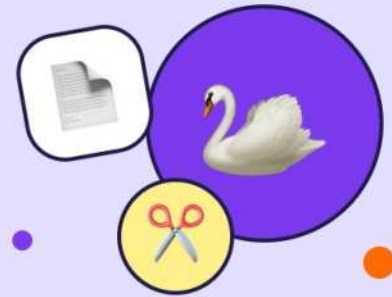
Answer key

Origami math: fold fractions and symmetry

Fold a square of paper to see halves, fourths and eighths, then find lines of symmetry.



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1



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Each square is folded into equal parts. Write the fraction that is shaded.



$$\frac{1}{2}$$



$$\frac{1}{4}$$



$$\frac{3}{8}$$



$$\frac{3}{4}$$

2



Fold and think

Write the missing fraction or number.



1. Fold a square in half. Each part is $\frac{1}{2}$ of the square.
2. Fold it in half again. Now there are 4 equal parts.
3. Fold it in half one more time. Each part is $\frac{1}{8}$ of the square.
4. $\frac{2}{8}$ of the square is the same as $\frac{1}{4}$.

3



Compare the folds

Write $>$, $<$ or $=$ in each circle.

 $\frac{1}{2}$ $=$ $\frac{4}{8}$ $\frac{1}{8}$ $<$ $\frac{1}{4}$ $\frac{3}{4}$ $>$ $\frac{5}{8}$ $\frac{2}{4}$ $>$ $\frac{3}{8}$

4 Lines of symmetry

Draw a line from each shape to its number of lines of symmetry.

C Square ●

D Rectangle that is not a square ●

A Equilateral triangle ●

B Circle ●

● **A.** 3 lines

● **B.** Endless lines

● **C.** 4 lines

● **D.** 2 lines

5 Same size, new name

Write the missing number to make equal fractions.

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

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4. $\frac{1}{4} = \frac{3}{12}$

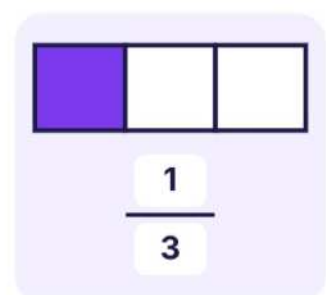
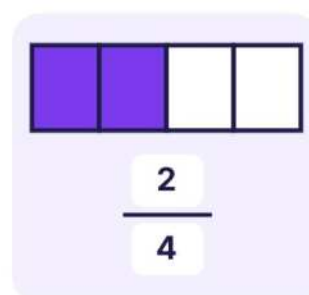
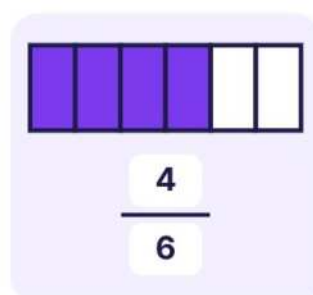
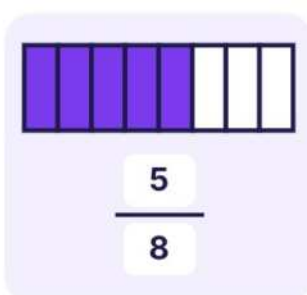
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6. $\frac{6}{8} = \frac{3}{4}$

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Color each paper strip to show the fraction.



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B $\frac{4}{8}$

C $\frac{5}{8}$

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Draw the folds

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How did it go?



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