THIRD SPACE
LEARNING

Word Problems

11 fractions and decimals questions to develop reasoning and problem solving skills

Grade 3

Questions

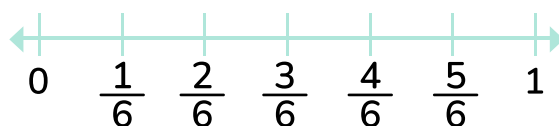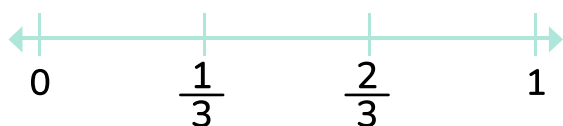Name: .... Date: ....

1 Use the number lines to compare the fractions. Select <, > or = to compare them.

$\dfrac{2}{3}$ ☐ $\dfrac{1}{6}$ $\dfrac{6}{6}$ ☐ $\dfrac{3}{3}$ $\dfrac{1}{4}$ ☐ $\dfrac{1}{3}$

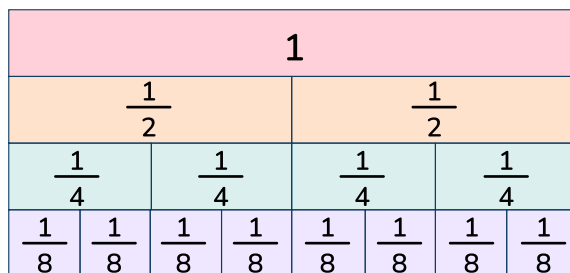**2** Order these unit fractions from smallest to largest on the number line below.

$\dfrac{1}{8}$ $\dfrac{1}{4}$ $\dfrac{1}{3}$ $\dfrac{1}{6}$ $\dfrac{1}{2}$

3 William is learning about equivalent fractions. He uses the fraction strips to help. State whether the two fractions are equivalent or not for each question below.

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

a $\frac{2}{4}$ and $\frac{2}{8}$

b $\frac{1}{2}$ and $\frac{4}{8}$

**c** $\frac{1}{4}$ and $\frac{2}{8}$

d $\frac{3}{4}$ and $\frac{5}{8}$

e $\frac{2}{4}$ and $\frac{4}{8}$

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4 A large cookie is cut into 6 equal pieces. Write a fraction that represents the entire cookie.

Answer

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5 Suzanne and Mike are painting the fence in their backyard. Suzanne has painted $\frac{3}{8}$ of the fence and Mike has painted $\frac{4}{8}$ of the fence. Use the number line to figure out who painted closer to half the fence. Explain your thinking.

0	$\frac{1}{8}$	$\frac{2}{8}$	$\frac{3}{8}$	$\frac{4}{8}$	$\frac{5}{8}$	$\frac{6}{8}$	$\frac{7}{8}$	1
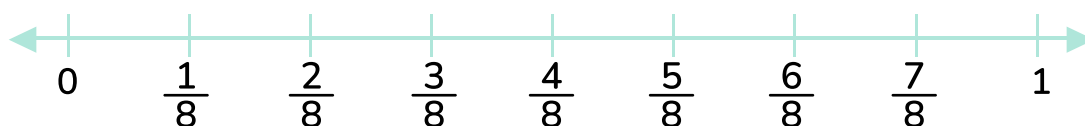
Answer

6 Michelle has a yellow ribbon that is 4 inches long and a blue ribbon that is 6 inches long. She uses $\frac{3}{6}$ of the yellow ribbon and $\frac{3}{6}$ of the blue ribbon. Does Michelle use the same amount of yellow ribbon as blue ribbon? Explain using words or pictures.

Answer

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7 A pizza pie is cut into 8 equal pieces. Jane eats 3 slices of the pizza. Write a fraction that represents the amount of pizza she did not eat? Use pictures and words to explain your answer.
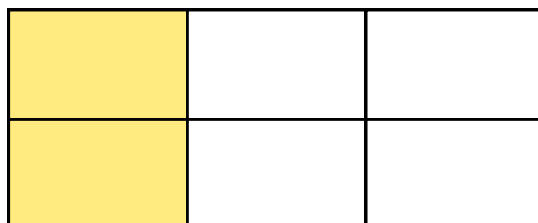
Answer

8 Heather says she can compare $\frac{3}{4}$ and $\frac{3}{6}$ without using fraction strips. She says that a whole divided into 4 equal pieces will have larger parts that the same whole divided into 6 equal pieces. Three larger pieces have to be more than three smaller pieces, so $\frac{3}{4}$ has to be greater than $\frac{3}{6}$. Is Heather correct? Why or why not? Use words and pictures to explain.

Answer

9 Maddie and Evie made bracelets for each other with the same number of beads on each bracelet. $\frac{5}{6}$ of the beads on Maddie's bracelet are pink. $\frac{3}{6}$ of the beads on Evie's bracelet are pink. Which bracelet has a fraction of pink beads closer to 1 than 0? Explain your answer in words, pictures, or using a number line.

Answer

10 Connor colored part of the figure below yellow. Write two fractions that can describe the yellow part as a fraction of the whole.

Answer

Challenge Question!

Zoey and her friends shared a plate of cheese fries.

Eli ate $\frac{1}{8}$ of the cheese fries.

Mikey ate $\frac{1}{8}$ more than Sally.
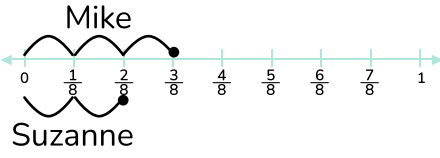
Sally ate the same amount of cheese fries as Eli.
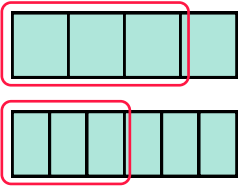
Zoey ate $\frac{1}{8}$ less than Mikey.
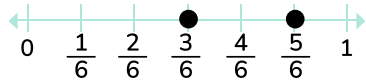
Who ate the most cheese fries?
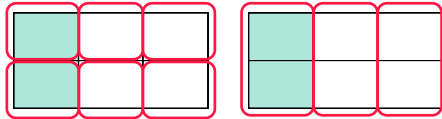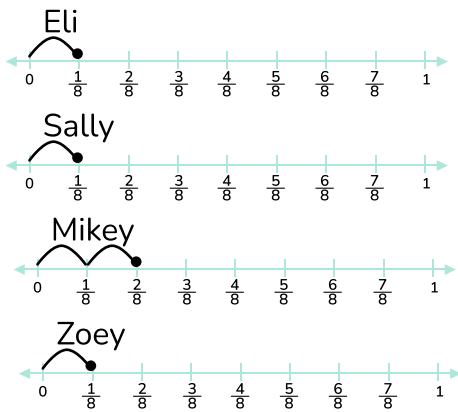
Answer

Answers

Question number	Question	Answers	Standard
1	Use the number lines to compare the fractions. Select <, > or = to compare them.	> = <	3.NF.A.3d
2	Can you order these unit fractions from smallest to largest on the number line below?	The correct order is: $\dfrac{1}{8}$ $\dfrac{1}{6}$ $\dfrac{1}{4}$ $\dfrac{1}{3}$ $\dfrac{1}{2}$ With unit fractions, the smaller the denominator the larger the fraction. All the unit fractions should fall between 0 and the midpoint.	3.NF.A.3d
3	Help William figure out which fraction pairs are equivalent. Decide if each pair is equivalent by answering yes or no. a) $\dfrac{2}{4}$ and $\dfrac{2}{8}$ b) $\dfrac{1}{2}$ and $\dfrac{4}{8}$ c) $\dfrac{1}{4}$ and $\dfrac{2}{8}$ d) $\dfrac{3}{4}$ and $\dfrac{5}{8}$ e) $\dfrac{2}{4}$ and $\dfrac{4}{8}$	a) Not equivalent b) Yes these are equivalent c) Yes these are equivalent d) Not equivalent e) Yes these are equivalent	3.NF.A.3a
4	A large cookie is cut into 6 equal pieces. Write a fraction that represents the entire cookie.	$\dfrac{6}{6}$	3.NF.A.3c

Question number	Question	Answers	Standard
5	Use the number line to figure out who painted closer to half the fence. Explain your thinking.	Suzanne painted closer to half the fence than Mike. From the number line you can see the $\frac{3}{8}$ is closer to $\frac{4}{8}$. Mike Suzanne	3.NF.A.2
6	Does Michelle use the same amount of yellow ribbon as blue ribbon? Explain using words or pictures.	$\frac{3}{6}$ is the same as $\frac{1}{2}$. Michelle is using $\frac{1}{2}$ of the yellow ribbon and $\frac{1}{2}$ of the blue ribbon. She used 2 inches of the yellow ribbon and 3 inches of the blue ribbon, so she used more blue ribbon.	3.NF.A.3
7	A pizza pie is cut into 8 equal pieces. Jane eats 3 slices of the pizza. Write a fraction that represents the amount of pizza she did not eat? Use pictures and words to explain your answer.	$\frac{5}{8}$ is the fraction she did not eat. 	3.NF.A.1
8	Is Heather correct? Why or why not? Use words and pictures to explain.	Heather is correct. From the picture, 4 equal parts of a whole are greater than 6 equal parts of the same whole. 3 out of 4 is circled and 3 out of 6 is circled. Comparing the two, $\frac{3}{4}$ is greater than $\frac{3}{6}$. 	3.NF.A.3

Question number	Question	Answers	Standard
9	Which bracelet has a fraction of pink beads closer to 1 than 0? Explain your answer in words, pictures, or using a number line.	From the number line, $\frac{5}{6}$ is closer to 1 than $\frac{3}{6}$ so Maddie's bracelet has a fraction of the pink beads closer to 1.	3.NF.A.2
10	Connor colored part of the figure below yellow. Write two fractions that can describe the yellow part as a fraction of the whole.	$\frac{2}{6}$ and $\frac{1}{3}$	3.NF.A.3a
Challenge Question	Who ate the most cheese fries?	Mikey ate the most.	3.NF.A.2

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