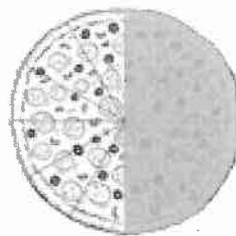


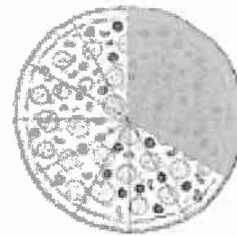
Comparing and Ordering Fractions and Mixed Numbers

You can compare fractions by finding a common denominator.

Samantha and her brother Jacob went out for pizza. Samantha ate $\frac{1}{2}$ of her pizza. Jacob ate $\frac{4}{12}$ of his pizza. Who ate more pizza?



Samantha's Pizza



Jacob's pizza

Because these fractions have different denominators, you need to find a common denominator. Then you can compare them.

Step 1. Write multiples of the two denominators until you get a common multiple.

2: 2, 4, 6, 8, 10, **12**

12: **12**, 24, 36, 48, 60 Use 12 as the common denominator.

Step 2. Since you multiply 2×6 to get 12, you must multiply 1×6 .

$$\frac{1}{2} = \frac{6}{12}$$

Step 3. Compare the fractions with common denominators.

$$\frac{6}{12} > \frac{4}{12}$$

So, Samantha ate more pizza.

Remember: If you don't know the multiples of the denominators, you can multiply the denominators together to get a common denominator.

Compare. Write $>$, $<$, or $=$ for each \bigcirc .

1. $\frac{2}{3} \bigcirc \frac{1}{6}$

2. $\frac{3}{4} \bigcirc \frac{1}{2}$

3. $\frac{5}{6} \bigcirc \frac{21}{24}$

Order the numbers from least to greatest. $\frac{3}{5}$, $\frac{3}{4}$, $\frac{4}{5}$

4. $\frac{4}{5}$, $\frac{3}{5}$, $\frac{3}{4}$ _____, _____, _____

5. $1\frac{5}{6}$, $1\frac{3}{6}$, $1\frac{2}{12}$ _____, _____, _____ $1\frac{2}{12}$, $1\frac{3}{6}$, $1\frac{5}{6}$

6. **Geometry** Sofia baked three kinds of pie. Sofia's Mom told her to bring $\frac{8}{16}$ of the apple pie, $\frac{4}{8}$ of the pecan pie, and $\frac{3}{6}$ of the pumpkin pie to school to share with her friends. Draw the pies and show which pie will have the greatest amount brought to school.

All three pies will have equal amounts brought to school, because $\frac{8}{16} = \frac{4}{8} = \frac{3}{6}$.

Comparing and Ordering Fractions and Mixed Numbers

Compare the numbers. Write $>$, $<$, or $=$ for each \bigcirc .

1. $\frac{6}{7} \bigcirc \frac{6}{8}$

2. $\frac{4}{9} \bigcirc \frac{2}{3}$

3. $1\frac{1}{10} \bigcirc 1\frac{1}{12}$

4. $2\frac{4}{5} \bigcirc 2\frac{5}{6}$

5. $3\frac{6}{9} \bigcirc 3\frac{2}{3}$

6. $\frac{2}{5} \bigcirc \frac{2}{8}$

Order the numbers from least to greatest. $\frac{4}{8}, \frac{5}{8}, \frac{4}{6}, \frac{3}{4}$

7. $\frac{4}{6}, \frac{4}{8}, \frac{3}{4}, \frac{5}{8}$

8. $4\frac{1}{4}, 4\frac{1}{8}, 5\frac{10}{11}, 4\frac{2}{12}$

9. $1\frac{3}{7}, 1\frac{3}{4}, 1\frac{2}{4}, 1\frac{8}{14}$

$1\frac{3}{7}, 1\frac{2}{4}, 1\frac{8}{14}, 1\frac{3}{4}$

$4\frac{1}{8}, 4\frac{2}{12}, 4\frac{1}{4}, 5\frac{10}{11}$

10. **Number Sense** How do you know that $5\frac{1}{4}$ is less than $5\frac{4}{10}$?

$$\underline{5\frac{1}{4} = 5\frac{5}{20}; 5\frac{4}{10} = 5\frac{8}{20}; 5\frac{5}{20} < 5\frac{8}{20}}$$

11. A mechanic uses four wrenches to fix Mrs. Aaron's car. The wrenches are different sizes: $\frac{5}{16}$ in., $\frac{1}{2}$ in., $\frac{1}{4}$ in., and $\frac{7}{16}$ in. Order the sizes of the wrenches from greatest to least.

$$\underline{\frac{1}{2} \text{ in.}, \frac{7}{16} \text{ in.}, \frac{5}{16} \text{ in.}, \frac{1}{4} \text{ in.}}$$

12. Which is greater than $6\frac{1}{3}$?

A $6\frac{1}{6}$

B $6\frac{1}{5}$

C $6\frac{1}{4}$

D $6\frac{1}{2}$

13. **Explain It** Compare $3\frac{3}{22}$ and $3\frac{2}{33}$. Which is greater? How do you know?

$$\underline{3\frac{3}{22} = 3\frac{9}{66}, \text{ which is greater than}}$$

$$\underline{3\frac{2}{33} = 3\frac{4}{66}}$$

Middle of the Road

For each pair of numbers below, find a number with a value in between the two given numbers. Write the number in the blank.

Number Sense

Then write a sentence explaining how you found your answer.

Your answers must be a fraction or a mixed number. There is more than one possible correct answer.

Possible answers 1–5:

1. $3\frac{1}{4}$, $3\frac{5}{8}$

$3\frac{1}{2}$

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

2. $\frac{3}{20}$, $\frac{1}{2}$

$\frac{1}{4}$

$\frac{3}{20} < \frac{5}{20} < \frac{10}{20}$

3. $5\frac{6}{7}$, $6\frac{2}{3}$

$6\frac{1}{3}$

$6 > 5$; $\frac{1}{3} < \frac{2}{3}$

4. $20\frac{9}{10}$, 21

$20\frac{19}{20}$

$20\frac{18}{20} < 20\frac{19}{20} < 20\frac{20}{20}$

5. $\frac{5}{7}$, $1\frac{1}{2}$

$1\frac{1}{7}$

$\frac{10}{14} < 1\frac{2}{14} < 1\frac{7}{14}$

Student explanations will vary.