

Fractions in order

Compare and order fractions whose denominators are all multiples of the same number.



1

Order these pairs of fractions, smallest to largest.

- Write out the multiples of the denominators to find the lowest common multiple (LCM).
- Change each fraction to its equivalent.
- Order the fractions.

Example

$$\frac{3}{4} \rightarrow 4, 8, 12$$

$$\frac{1}{3} \rightarrow 3, 6, 9, 12$$

$$\frac{3}{4} = \frac{9}{12}$$

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

$$\frac{1}{3} < \frac{3}{4}$$



12 is the lowest multiple they have in common so I am going to change all the fractions to twelfths.

a	b	c	d
$\frac{9}{12}$ $\frac{1}{2}$	$\frac{2}{5}$ $\frac{3}{4}$	$\frac{7}{9}$ $\frac{2}{3}$	$\frac{11}{15}$ $\frac{1}{5}$
$\frac{5}{8}$ $\frac{3}{4}$	$\frac{2}{7}$ $\frac{1}{3}$	$\frac{5}{6}$ $\frac{2}{3}$	$\frac{16}{20}$ $\frac{3}{5}$

2

Order these sets of fractions, smallest to largest.

a	b	c
$\frac{9}{12}$ $\frac{1}{2}$ $\frac{1}{3}$	$\frac{2}{5}$ $\frac{3}{4}$ $\frac{1}{2}$	$\frac{7}{9}$ $\frac{2}{3}$ $\frac{14}{18}$
$\frac{11}{15}$ $\frac{1}{5}$ $\frac{2}{3}$	$\frac{5}{8}$ $\frac{3}{4}$ $\frac{10}{16}$	$\frac{2}{7}$ $\frac{1}{3}$ $\frac{5}{21}$
$\frac{5}{6}$ $\frac{2}{3}$ $\frac{1}{3}$	$\frac{16}{20}$ $\frac{3}{5}$ $\frac{7}{10}$	$\frac{3}{5}$ $\frac{7}{10}$ $\frac{1}{2}$

- Would you rather have $\frac{8}{9}$ or $\frac{5}{6}$ of a chocolate bar? Draw a diagram of a chocolate bar to show the difference between the two fractions.

- Would you rather work out $\frac{4}{5}$ or $\frac{3}{4}$ of a page of calculations? Explain your reason.

- Write a 'Would you rather...?' question like those given in Questions 2 and 3 for your partner.



3

Order these fractions, smallest to largest.

a	b	c
$\frac{4}{12}$ $\frac{6}{8}$ $\frac{3}{4}$	$\frac{18}{25}$ $\frac{3}{5}$ $\frac{9}{10}$	$\frac{2}{8}$ $\frac{9}{32}$ $\frac{1}{2}$
$\frac{23}{30}$ $\frac{4}{6}$ $\frac{1}{3}$	$\frac{8}{10}$ $\frac{73}{100}$ $\frac{11}{20}$	$\frac{4}{6}$ $\frac{5}{8}$ $\frac{1}{2}$
$\frac{3}{15}$ $\frac{2}{5}$ $\frac{1}{3}$	$\frac{24}{40}$ $\frac{5}{8}$ $\frac{3}{5}$	$\frac{9}{14}$ $\frac{1}{2}$ $\frac{5}{7}$

- Use division to find two fractions that are equal to these fractions. What can the denominator and the numerator be divided by?

$$\frac{8}{24} \quad \frac{12}{20} \quad \frac{8}{15} \quad \frac{24}{32}$$

- Explain how you worked out the answers in Question 2.

- Use multiplication to find two fractions that are equal to these fractions.

$$\frac{4}{9} \quad \frac{3}{7} \quad \frac{6}{8} \quad \frac{9}{11}$$

Hint
Multiply the denominator and the numerator by the same number.