

Maths Mastery

**Compare and Order Fractions:
Denominators and Multiples**



Compare Fractions



To compare $\frac{11}{12}$ and $\frac{7}{8}$, you convert the fractions so they have the same denominator, which is the lowest common multiple. 24 is

the lowest common denominator thus:

$$\frac{11}{12} = \frac{22}{24} \text{ and } \frac{7}{8} = \frac{21}{24} ; \frac{22}{24} > \frac{21}{24} \text{ so } \frac{11}{12} > \frac{7}{8}$$

(In this case both fractions are a unitary fraction less than 1, and $\frac{1}{12}$ is smaller than $\frac{1}{8}$. This applies here but not in all cases.)

Answer could also be shown on a number line.

Order Fractions

These fractions have been ordered from smallest to largest:

$$\frac{1}{6} \quad \frac{2}{9} \quad \frac{5}{12} \quad \frac{5}{6} \quad \frac{7}{12} \quad \frac{8}{9}$$

Why do you think someone might have ordered the fractions like this?

They were ordered by the numerator.

Create a set of fractions with denominators that are all multiples of one number. Put them in an order for someone to check if they are ordered from the smallest to largest fraction.

Lowest Common Multiple

Find the common factor for these denominators, and the lowest common multiple.

$$\frac{3}{10}$$

$$\frac{6}{25}$$

$$\frac{4}{15}$$

$$\frac{2}{5}$$

$$\frac{7}{20}$$

Common factor is 5

Lowest Common Multiple is 300

$$\frac{3}{10} = \frac{90}{300}$$

$$\frac{6}{25} = \frac{72}{300}$$

$$\frac{4}{15} = \frac{80}{300}$$

$$\frac{2}{5} = \frac{120}{300}$$

$$\frac{7}{20} = \frac{105}{300}$$

Number Line Compare

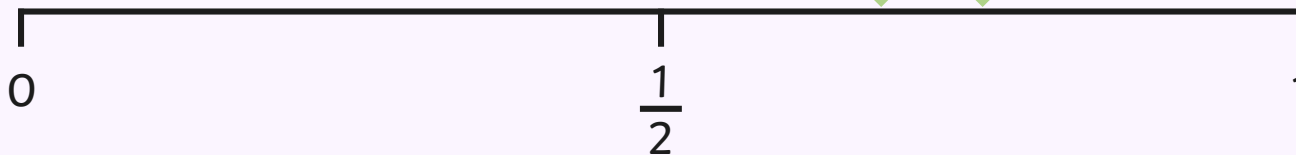
Draw a fraction number line. Estimate and mark where the following fractions would be on the number line.

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

$$\frac{2}{3}$$

$$\frac{2}{3}$$

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



Challenge a partner to draw other fractions on a similar number line.

Complete the Fractions

Complete these expressions so they are true.

Possible answers:

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

$$\frac{2}{\square} < \frac{2}{\square}$$

Find as many possible answers as you can.

