Ordering fractions

6 questions | 10 marks

Equivalent correct methods earn the corresponding marks.

1. Insert $<$, $>$ or $=$: $\frac{3}{7}$? $\frac{5}{7}$. [1 mark]

With the same denominator, compare three and five.

Answer: $<$

2. Insert $<$, $>$ or $=$: $\frac{3}{4}$? $\frac{6}{8}$. [1 mark]

Multiply the numerator and denominator of three quarters by two.

Answer: $=$

3. Which is larger: $\frac{5}{8}$ or $\frac{2}{3}$? Show a common denominator. [2 marks]

$\frac{5}{8} = \frac{15}{24}$ and $\frac{2}{3} = \frac{16}{24}$.

Sixteen twenty-fourths is greater.

Answer: $\frac{2}{3}$

4. Order $\frac{1}{3}$, $\frac{5}{6}$ and $\frac{1}{2}$ from smallest to largest. [2 marks]

In sixths the values are $\frac{2}{6}$, $\frac{3}{6}$ and $\frac{5}{6}$.

Answer: $\frac{1}{3} < \frac{1}{2} < \frac{5}{6}$

5. Order $2\frac{1}{4}$, $1\frac{3}{4}$ and $2\frac{1}{2}$ from smallest to largest. [2 marks]

The amount with one whole comes first.

For the two remaining amounts, one quarter is less than one half.

Answer: $1\frac{3}{4} < 2\frac{1}{4} < 2\frac{1}{2}$

6. Explain why $\frac{4}{9} < \frac{5}{8}$ using one half as a benchmark. [2 marks]

Half of nine ninths lies between four ninths and five ninths.

Half of eight eighths is four eighths, so five eighths exceeds it.

Answer: $\frac{4}{9}$ is below one half and $\frac{5}{8}$ is above one half.