Ordering rational numbers on number lines

6 questions | 14 marks

Equivalent correct methods earn the corresponding marks.

1. Compare $\frac{5}{6}$ and $\frac{3}{4}$ using equal parts. [2 marks]

$\frac{5}{6} = \frac{10}{12}$ and $\frac{3}{4} = \frac{9}{12}$.

Answer: $\frac{5}{6} > \frac{3}{4}$

2. Order 0.7, 0.67 and 0.705 from smallest to largest. [2 marks]

Compare 0.670, 0.700 and 0.705.

Answer: 0.67, 0.7, 0.705

3. On a number line from 0 to 1, give the left-to-right order of $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{2}$. [2 marks]

Divide the unit into four equal parts; these occupy the first, second and third marks.

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

4. Find a fraction strictly between $\frac{1}{3}$ and $\frac{1}{2}$. [2 marks]

$\frac{1}{3} = \frac{4}{12}$ and $\frac{1}{2} = \frac{6}{12}$.

Answer: For example, $\frac{5}{12}$.

5. Which is closer to 1: $\frac{7}{8}$ or 0.8? [3 marks]

The distances are $\frac{1}{8} = 0.125$ and 0.2.

0.125 is smaller.

Answer: $\frac{7}{8}$

6. Order race times 12.4 s, $12\frac{3}{8}$ s and 12.45 s from fastest to slowest. [3 marks]

$\frac{3}{8} = 0.375$.

A shorter time is faster; compare 12.375, 12.400 and 12.450.

Answer: $12\frac{3}{8}$ s, 12.4 s, 12.45 s