

Answer Key — Comparing & Ordering Fractions

Year 4 Mathematics · Number and algebra · WA4MNAFR1

Section A — Fluency (16 marks, 1 mark each)

1. <
2. >
3. <
4. =
5. =
6. >
7. <
8. <
9. >
10. >
11. >
12. <
13. >
14. <
15. =
16. >

Section B — Core (21 marks)

1. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. [2 marks correct order, 1 mark for correct working/reasoning]
2. $\frac{2}{5} = \frac{4}{10}$, which is more than $\frac{3}{10}$, so Liam eats more, by $\frac{4}{10} - \frac{3}{10} = \frac{1}{10}$. [2 marks finding common denominator, 2 marks correct difference]
3. $\frac{5}{6}$, $\frac{2}{3}$, $\frac{1}{2}$. [2 marks correct order, 1 mark for correct working/reasoning]
4. $\frac{3}{4} = \frac{6}{8}$, which is more than $\frac{5}{8}$, so blue paint uses more, by $\frac{6}{8} - \frac{5}{8} = \frac{1}{8}$ of a cup. [2 marks finding common denominator, 2 marks correct difference]
5. $\frac{3}{5} = \frac{6}{10}$, which is less than $\frac{7}{10}$, so $\frac{7}{10}$ is larger. [2 marks common denominator working, 1 mark correct conclusion]
6. Convert to twelfths: Ava $\frac{5}{6} = \frac{10}{12}$, Ben $\frac{3}{4} = \frac{9}{12}$, Cal $\frac{7}{12}$. Order: Ava, Ben, Cal. [3 marks correct conversions, 1 mark correct order]

Section C — Reasoning (9 marks) — sample responses, award marks for valid reasoning

1. The numerators only tell you how many parts you have, but the denominators tell you how big each part is — with different-sized parts, the numerators alone don't show which fraction is bigger. [2 marks]
2. A larger denominator means the whole is split into more, smaller parts, so $\frac{1}{8}$ is actually a smaller piece than $\frac{1}{4}$, not bigger. [2 marks]
3. Convert both to a common denominator (24ths): $\frac{5}{6} = \frac{20}{24}$ and $\frac{7}{8} = \frac{21}{24}$, so $\frac{7}{8}$ is larger. [2 marks]

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4. False. Ordering by numerator alone ignores the size of the parts, e.g. $\frac{1}{2}$ has a smaller numerator than $\frac{3}{8}$, but $\frac{1}{2}$ is actually larger since $\frac{1}{2} = \frac{4}{8}$, which is more than $\frac{3}{8}$. [2 marks valid example, 1 mark for correctly saying false]

Section D — Challenge (7 marks)

1. Any valid fraction works, e.g. $\frac{1}{3}$, since $\frac{1}{4} < \frac{1}{3} < \frac{1}{2}$. [2 marks]

2. Convert to 24ths: $\frac{3}{4} = \frac{18}{24}$, $\frac{5}{8} = \frac{15}{24}$, $\frac{2}{3} = \frac{16}{24}$, $\frac{7}{12} = \frac{14}{24}$. Order smallest to largest: $\frac{7}{12}$, $\frac{5}{8}$, $\frac{2}{3}$, $\frac{3}{4}$. [2 marks]

3. Using 36ths: flour $\frac{5}{6} = \frac{30}{36}$, sugar $\frac{7}{9} = \frac{28}{36}$, butter $\frac{3}{4} = \frac{27}{36}$. Flour uses the most. [2 marks correct conversions, 1 mark correct conclusion]