

Foundation GCSE: Mixed Numbers

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.

1. Write $\frac{7}{3}$ as a mixed number.
2. Convert $2\frac{1}{4}$ to an improper fraction.
3. Write $\frac{11}{4}$ as a mixed number.
4. Convert $4\frac{2}{3}$ to an improper fraction.
5. Write $\frac{19}{5}$ as a mixed number.
6. Convert $5\frac{3}{8}$ to an improper fraction.
7. Write $\frac{28}{6}$ as a mixed number in its simplest form.
8. Convert $7\frac{4}{9}$ to an improper fraction.
9. Calculate and give your answer as a mixed number: $2\frac{1}{3} + 1\frac{1}{3}$.
10. Write $\frac{75}{10}$ as a mixed number in its simplest form.
11. Calculate: $3\frac{3}{4} + 2\frac{1}{2}$.
12. Convert $\frac{142}{12}$ to a mixed number in its simplest form.
13. Calculate: $5\frac{1}{6} - 2\frac{2}{3}$.
14. Work out $3 \times 2\frac{2}{5}$, giving your answer as a mixed number.
15. Calculate: $4\frac{3}{5} + 3\frac{7}{10}$.
16. Work out $1\frac{1}{2} \times 2\frac{2}{3}$, giving your answer in its simplest form.
17. Calculate: $6\frac{1}{4} - 2\frac{5}{6}$.
18. Work out $3\frac{1}{3} \div 1\frac{1}{9}$.
19. Find the missing mixed number: $\square - 2\frac{3}{4} = 4\frac{1}{2}$.
20. The perimeter of a regular pentagon is $18\frac{3}{4}$ cm. Find the exact length of one side as a mixed number.

Answers & Worked Solutions

1. $2\frac{1}{3}$
 $7 \div 3 = 2$ remainder 1.
2. $\frac{9}{4}$
 $(2 \times 4) + 1 = 9$.
3. $2\frac{3}{4}$
 $11 \div 4 = 2$ remainder 3.
4. $\frac{14}{3}$
 $(4 \times 3) + 2 = 14$.
5. $3\frac{4}{5}$
 $19 \div 5 = 3$ remainder 4.
6. $\frac{43}{8}$
 $(5 \times 8) + 3 = 43$.
7. $4\frac{2}{3}$
 $28 \div 6 = 4$ remainder 4, $\frac{4}{6}$ simplifies to $\frac{2}{3}$.
8. $\frac{67}{9}$
 $(7 \times 9) + 4 = 67$.
9. $3\frac{2}{3}$
Add whole numbers ($2+1=3$) and fractions ($\frac{2}{3}$).
10. $7\frac{1}{2}$
 $75 \div 10 = 7$ remainder 5, $\frac{5}{10} = \frac{1}{2}$.
11. $6\frac{1}{4}$
12. $11\frac{5}{6}$
 $3 + 2 = 5$, $\frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4}$, total $6\frac{1}{4}$.
13. $2\frac{1}{2}$
Convert to improper: $\frac{31}{6} - \frac{8}{3} = \frac{31-16}{6} = \frac{15}{6} = 2\frac{1}{2}$.
14. $7\frac{1}{5}$
 $3 \times \frac{12}{5} = \frac{36}{5} = 7\frac{1}{5}$.
15. $8\frac{3}{10}$
 $4 + 3 = 7$, $\frac{6}{10} + \frac{7}{10} = \frac{13}{10} = 1\frac{3}{10}$, total $8\frac{3}{10}$.
16. 4
 $\frac{3}{2} \times \frac{8}{3} = \frac{24}{6} = 4$.
17. $3\frac{5}{12}$
 $\frac{25}{4} - \frac{17}{6} = \frac{75-34}{12} = \frac{41}{12} = 3\frac{5}{12}$.
18. 3
 $\frac{10}{3} \div \frac{10}{9} = \frac{10}{3} \times \frac{9}{10} = \frac{9}{3} = 3$.
19. $7\frac{1}{4}$
 $4\frac{1}{2} + 2\frac{3}{4} = 6 + \frac{5}{4} = 7\frac{1}{4}$.
20. $3\frac{3}{4}$ cm
 $18\frac{3}{4} \div 5 = \frac{75}{4} \times \frac{1}{5} = \frac{15}{4} = 3\frac{3}{4}$.