Finding The Missing Improper and Mixed Fractions

Solve the following problems by finding the missing improper or mixed fraction in each case. Show your working where appropriate.

Multiple Choice Questions

1. What is the missing number in the equation below?

$\frac{7}{2} =$

a) $3\frac{1}{2}$

b) $2\frac{5}{2}$

c) $2\frac{1}{2}$

d) $3\frac{2}{7}$

2. Which improper fraction is equivalent to $4\frac{3}{5}$?

a) $\frac{23}{5}$

b) $\frac{17}{5}$

c) $\frac{18}{5}$

d) $\frac{21}{5}$

3. Fill in the blank: $\frac{13}{4}$ = _____

a) $3\frac{1}{4}$

b) $3\frac{3}{4}$

c) $2\frac{1}{4}$

d) $4\frac{1}{4}$

4. Which mixed number is equal to $\frac{22}{7}$?

a) $3\frac{1}{7}$

b) $2\frac{4}{7}$

c) $3\frac{1}{2}$

d) $2\frac{5}{7}$

5. What is the improper fraction for $6\frac{2}{3}$?

a) $\frac{20}{3}$

b) $\frac{18}{3}$

c) $\frac{17}{3}$

d) $\frac{15}{3}$

Fill in the Blank Questions

1. $\frac{19}{5}$ = _____
2. $5\frac{2}{7}$ = _____
3. $\frac{25}{6}$ = _____
4. $2\frac{7}{8}$ = _____
5. $\frac{41}{9}$ = _____

Short Answer Questions

1. Explain the process of converting an improper fraction to a mixed number using $\frac{17}{4}$ as an example.
2. Convert $7\frac{5}{6}$ to an improper fraction and explain your working.
3. A recipe calls for $\frac{15}{4}$ cups of flour. How many whole cups and what fraction of a cup is this?
4. If a student has $3\frac{2}{5}$ litres of juice, how many fifths of a litre does this represent?
5. Why is it important to be able to convert between improper fractions and mixed numbers?

Answer Key

Multiple Choice Answers:

1. a) $3\frac{1}{2}$
2. a) $\frac{23}{5}$
3. a) $3\frac{1}{4}$
4. a) $3\frac{1}{7}$
5. a) $\frac{20}{3}$

Fill in the Blank Answers:

1. $3\frac{4}{5}$
2. $\frac{37}{7}$
3. $4\frac{1}{6}$
4. $\frac{23}{8}$
5. $4\frac{5}{9}$

Short Answer Sample Answers:

1. Divide 17 by 4 to get 4 with a remainder of 1, so $\frac{17}{4} = 4\frac{1}{4}$.
2. $7 \times 6 = 42$, $42 + 5 = 47$, so the improper fraction is $\frac{47}{6}$.
3. $\frac{15}{4}$ is 3 whole cups and $\frac{3}{4}$ cup.
4. $3 \times 5 = 15$, $15 + 2 = 17$, so $3\frac{2}{5}$ is $\frac{17}{5}$ or 17 fifths.
5. It is important because different situations require different forms for calculation or interpretation, such as measurement or division.