

GRADE 7

Fractions & Mixed Numbers

Complete Fractions Practice Pack

6 Worksheets • Equivalent Fractions • Operations • Mixed Numbers • Reasoning

Worksheet 1 — Equivalent Fractions & Simplifying

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. Simplify $24/36$.
2. Simplify $45/60$.
3. Write three fractions equivalent to $5/8$.
4. Complete: $7/9 = \blacksquare/45$.
5. Complete: $11/15 = 44/\blacksquare$.
6. Are $18/24$ and $27/36$ equivalent? Show how you know.
7. Arrange in simplest form: $42/56$, $35/49$, $24/32$.
8. Find the missing numerator: $\blacksquare/28 = 5/7$.

Answer Key — Equivalent Fractions & Simplifying

1. $\frac{2}{3}$.
2. $\frac{3}{4}$.
3. Examples: $\frac{10}{16}$, $\frac{15}{24}$, $\frac{20}{32}$.
4. 35.
5. 60.
6. Yes; both simplify to $\frac{3}{4}$.
7. $\frac{3}{4}$, $\frac{5}{7}$, $\frac{3}{4}$; therefore $\frac{42}{56}$ and $\frac{24}{32}$ are equal and both are greater than $\frac{35}{49}$.
8. 20.

Worksheet 2 — Comparing & Ordering Fractions

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. Compare: $\frac{5}{8}$ ____ $\frac{3}{4}$.
2. Compare: $\frac{7}{12}$ ____ $\frac{5}{8}$.
3. Arrange from least to greatest: $\frac{2}{3}$, $\frac{5}{6}$, $\frac{3}{5}$, $\frac{7}{10}$.
4. Arrange from greatest to least: $\frac{11}{12}$, $\frac{4}{5}$, $\frac{7}{8}$, $\frac{5}{6}$.
5. Which is closer to 1: $\frac{7}{8}$ or $\frac{9}{10}$?
6. Find a fraction between $\frac{2}{5}$ and $\frac{1}{2}$.
7. Which is greater: $\frac{13}{18}$ or $\frac{7}{10}$? Explain.
8. Order: $1\frac{1}{4}$, $\frac{5}{4}$, $1\frac{2}{5}$, $\frac{6}{5}$.

Answer Key — Comparing & Ordering Fractions

1. $\frac{5}{8} < \frac{3}{4}$.
2. $\frac{7}{12} < \frac{5}{8}$.
3. $\frac{3}{5}$, $\frac{2}{3}$, $\frac{7}{10}$, $\frac{5}{6}$.
4. $\frac{11}{12}$, $\frac{7}{8}$, $\frac{5}{6}$, $\frac{4}{5}$.
5. $\frac{9}{10}$; it is $\frac{1}{10}$ from 1 versus $\frac{1}{8}$.
6. Examples: $\frac{9}{20}$.
7. $\frac{13}{18}$; cross-products $130 > 126$.
8. $1\frac{1}{4} = \frac{5}{4}$, then $\frac{6}{5}$, then $1\frac{2}{5}$.

Worksheet 3 — Adding & Subtracting Fractions

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. $\frac{3}{8} + \frac{5}{12}$

2. $\frac{7}{10} - \frac{1}{4}$

3. $\frac{5}{6} + \frac{7}{9}$

4. $\frac{11}{12} - \frac{5}{18}$

5. $2\frac{1}{3} + 1\frac{3}{4}$

6. $5\frac{1}{2} - 2\frac{2}{3}$

7. A recipe needs $\frac{3}{4}$ cup of sugar and $\frac{2}{3}$ cup of flour. How much is needed altogether?

8. A ribbon is $5\frac{1}{4}$ m long. If $2\frac{3}{8}$ m is used, how much remains?

Answer Key — Adding & Subtracting Fractions

1. $19/24$.
2. $9/20$.
3. $29/18 = 1 \frac{11}{18}$.
4. $23/36$.
5. $4 \frac{1}{12}$.
6. $2 \frac{5}{6}$.
7. $17/12 = 1 \frac{5}{12}$ cups.
8. $2 \frac{7}{8}$ m.

Worksheet 4 — Multiplying & Dividing Fractions

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. $\frac{3}{5} \times \frac{10}{9}$

2. $\frac{7}{8} \times \frac{12}{21}$

3. $\frac{5}{6} \times \frac{9}{10}$

4. $\frac{4}{7} \div \frac{2}{3}$

5. $\frac{5}{8} \div \frac{15}{16}$

6. $2\frac{1}{2} \times \frac{3}{5}$

7. $3\frac{3}{4} \div 1\frac{1}{2}$

8. A rectangular garden is $3\frac{1}{2}$ m long and $2\frac{2}{3}$ m wide. Find its area.

Answer Key — Multiplying & Dividing Fractions

1. $\frac{2}{3}$.

2. $\frac{1}{2}$.

3. $\frac{3}{4}$.

4. $\frac{6}{7}$.

5. $\frac{2}{3}$.

6. $1\frac{1}{2}$.

7. $2\frac{1}{2}$.

8. $\frac{28}{3} \text{ m}^2 = 9\frac{1}{3} \text{ m}^2$.

Worksheet 5 — Mixed Numbers & Real-Life Problems

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. Convert $17/4$ to a mixed number.
2. Convert $4 \frac{2}{5}$ to an improper fraction.
3. A runner completes $2 \frac{3}{4}$ km in the morning and $3 \frac{1}{2}$ km in the evening. How far altogether?
4. A tank contains $8 \frac{1}{2}$ L. If $3 \frac{3}{4}$ L is used, how much remains?
5. A baker has $6 \frac{2}{3}$ kg of flour and uses $1 \frac{5}{6}$ kg. How much remains?
6. Each small box holds $\frac{3}{4}$ kg. How many boxes can be filled from 6 kg?
7. A class spends $\frac{2}{5}$ of an hour reading and $\frac{3}{10}$ of an hour discussing. What fraction of an hour is that altogether?
8. A road is $12 \frac{1}{2}$ km long. A cyclist completes $\frac{7}{8}$ of the road. How far has the cyclist travelled?

Answer Key — Mixed Numbers & Real-Life Problems

1. $4\frac{1}{4}$.
2. $\frac{22}{5}$.
3. $6\frac{1}{4}$ km.
4. $4\frac{3}{4}$ L.
5. $4\frac{5}{6}$ kg.
6. 8 boxes.
7. $\frac{7}{10}$ hour.
8. $10\frac{15}{16}$ km.

Worksheet 6 — Fractions Challenge

Instructions: Simplify all final answers. Show common-denominator steps when adding or subtracting, and show the reciprocal step when dividing fractions.

1. Find x : $x/12 = 5/8$.
2. Find x : $3/5 + x = 7/6$.
3. A fraction is equivalent to $18/30$ and has denominator 45. Find its numerator.
4. A number is multiplied by $3/4$ and the result is $5 \frac{1}{4}$. Find the original number.
5. Which is greater: $2/3$ of 18 or $3/5$ of 20? By how much?
6. A recipe uses $2 \frac{1}{4}$ cups of flour for 3 batches. How much flour is needed for 8 batches at the same rate?
7. Find a fraction in simplest form that is greater than $3/5$ but less than $2/3$.
8. A student solves $7/8 - 2/3$ as $5/5$. Explain the error and give the correct answer.

Answer Key — Fractions Challenge

1. $x = 7.5 = 15/2$.
2. $x = 17/30$.
3. 27.
4. 7.
5. $2/3$ of 18 = 12; $3/5$ of 20 = 12; difference 0.
6. 6 cups.
7. Example: $19/30$.
8. The denominators cannot be subtracted directly. Use denominator 24: $21/24 - 16/24 = 5/24$.