



Fraction Self - Diagnostic - Answers - MathHub.Club

Name: _____ Score: _____ / 100

Answer Key

Converting Mixed Numbers and Improper Fractions

Convert each mixed number to an improper fraction:

1. $2\frac{3}{4} = \frac{11}{4}$

4. $4\frac{3}{8} = \frac{35}{8}$

2. $1\frac{5}{6} = \frac{11}{6}$

5. $5\frac{1}{3} = \frac{16}{3}$

3. $3\frac{2}{5} = \frac{17}{5}$

6. $6\frac{7}{8} = \frac{55}{8}$

Convert each improper fraction to a mixed number:

1. $\frac{11}{4} = 2\frac{3}{4}$

4. $\frac{29}{8} = 3\frac{5}{8}$

2. $\frac{17}{5} = 3\frac{2}{5}$

5. $\frac{22}{7} = 3\frac{1}{7}$

3. $\frac{19}{6} = 3\frac{1}{6}$

6. $\frac{35}{11} = 3\frac{2}{11}$

Equivalent Fractions

1. Yes

2. Yes

3. Yes

4. No ($7/8$ is not equivalent to $14/16$)

5. Yes

6. Yes

Simplify Fractions

1. $\frac{6}{12} = \frac{1}{2}$

4. $\frac{8}{16} = \frac{1}{2}$

7. $\frac{21}{42} = \frac{1}{2}$

2. $\frac{10}{20} = \frac{1}{2}$

5. $\frac{9}{27} = \frac{1}{3}$

8. $\frac{16}{24} = \frac{2}{3}$

3. $\frac{15}{30} = \frac{1}{2}$

6. $\frac{14}{28} = \frac{1}{2}$

9. $\frac{25}{75} = \frac{1}{3}$

Operations on Proper Fractions

$$1. \frac{3}{4} + \frac{1}{5} = \frac{19}{20}$$

$$2. \frac{5}{6} - \frac{2}{7} = \frac{23}{42}$$

$$3. \frac{4}{9} + \frac{2}{3} = \frac{10}{9}$$

$$4. \frac{7}{8} - \frac{3}{10} = \frac{23}{40}$$

$$5. \frac{1}{2} + \frac{1}{3} = \frac{5}{6}$$

$$6. \frac{5}{6} - \frac{1}{4} = \frac{7}{10}$$

$$7. \frac{2}{5} + \frac{3}{7} = \frac{29}{35}$$

$$8. \frac{4}{9} - \frac{1}{6} = \frac{5}{18}$$

$$9. \frac{3}{8} + \frac{2}{5} = \frac{31}{40}$$

$$10. \frac{5}{6} - \frac{1}{3} = \frac{1}{2}$$

$$11. \frac{4}{7} + \frac{3}{8} = \frac{53}{56}$$

$$12. \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$$

$$13. \frac{3}{5} + \frac{2}{9} = \frac{37}{45}$$

$$14. \frac{7}{8} - \frac{5}{12} = \frac{11}{24}$$

$$15. \frac{2}{3} + \frac{1}{4} = \frac{11}{12}$$

Multiplication and Division Problems with Proper Fractions

$$1. \frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$$

$$2. \frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

$$3. \frac{5}{6} \times \frac{2}{3} = \frac{5}{9}$$

$$4. \frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$$

$$5. \frac{4}{5} \times \frac{3}{4} = \frac{3}{5}$$

$$6. \frac{7}{8} \times \frac{3}{4} = \frac{21}{32}$$

$$7. \frac{2}{3} \div \frac{4}{5} = \frac{5}{6}$$

$$8. \frac{1}{2} \div \frac{3}{4} = \frac{2}{3}$$

$$9. \frac{5}{6} \div \frac{2}{3} = \frac{5}{4} = 1\frac{1}{4}$$

$$10. \frac{3}{4} \div \frac{1}{2} = \frac{3}{2} = 1\frac{1}{2}$$

$$11. \frac{4}{5} \div \frac{3}{4} = \frac{16}{15} = 1\frac{1}{15}$$

$$12. \frac{7}{8} \div \frac{3}{4} = \frac{7}{6} = 1\frac{1}{6}$$

$$13. \frac{3}{5} \times \frac{2}{7} = \frac{6}{35}$$

$$14. \frac{4}{7} \times \frac{3}{5} = \frac{12}{35}$$

$$15. \frac{5}{8} \div \frac{4}{7} = \frac{35}{32} = 1\frac{3}{32}$$

Fraction Over Fraction Problems

$$1. \frac{\frac{2}{3}}{\frac{4}{5}} = \frac{5}{6}$$

$$2. \frac{\frac{5}{6}}{\frac{3}{4}} = \frac{10}{9} = 1\frac{1}{9}$$

$$3. \frac{\frac{1}{2}}{\frac{2}{3}} = \frac{3}{4}$$

$$4. \frac{\frac{3}{4}}{\frac{1}{2}} = \frac{3}{2} = 1\frac{1}{2}$$

Operations on Mixed Numbers

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

$$2. 3\frac{2}{5} - 1\frac{3}{4} = 1\frac{13}{20}$$

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

$$4. 5\frac{3}{4} \div 1\frac{1}{2} = 3\frac{5}{6}$$

$$5. 2\frac{1}{3} + 1\frac{2}{5} = 3\frac{11}{15}$$

$$6. 4\frac{3}{8} - 2\frac{1}{6} = 6\frac{13}{18}$$

$$7. 1\frac{5}{6} \times 3\frac{2}{3} = 1\frac{1}{2}$$

$$8. 2\frac{1}{4} \div 1\frac{1}{2} = 1\frac{1}{8}$$

$$9. 3\frac{2}{3} + 2\frac{3}{5} = 6\frac{4}{15}$$

Order of Operations

1. $\frac{4}{3} = 1\frac{1}{3}$

2. $\frac{61}{60} = 1\frac{1}{60}$

3. $-\frac{11}{15}$

4. $\frac{7}{5} = 1\frac{2}{5}$

5. $\frac{31}{20} = 1\frac{11}{20}$

6. $\frac{14}{15}$

7. $\frac{7}{10}$

8. $\frac{11}{15}$

9. $\frac{68}{45} = 1\frac{23}{45}$

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

Fraction Word Problems

1. $2\frac{1}{4}$ cups

2. $\frac{11}{12}$ liters

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

4. $\frac{17}{20}$ of total distance

5. $\frac{5}{24}$ meters

6. $\frac{7}{20}$ pound

7. 72 crayons

8. $\frac{5}{6}$ hours

9. $\frac{1}{8}$ dollars

10. $\frac{7}{15}$ gallons

Geometry Problems - Answers

1. Circumference = $4\frac{5}{7}$ meters

2. Area = $\frac{275}{504}$ square feet

3. Perimeter = $2\frac{4}{15}$ meters

4. Area = $1\frac{25}{63}$ square yards

5. Perimeter = $2\frac{3}{4}$ feet

6. Volume = $\frac{11}{672}$ cubic meters

7. Radius = $\frac{1}{4}$ centimeters

8. Perimeter = $1\frac{53}{105}$ meters

9. Area = $1\frac{51}{224}$ square meters

10. Area = $\frac{5}{12}$ square feet

