Questions: Arithmetic on numerical fractions

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Summary

A selection of questions for the study guide on arithmetic on numerical fractions.

Before attempting these questions, it is highly recommended that you read Guide: Arithmetic on numerical fractions.

Q1

Calculate the following additions and subtractions by first finding a common denominator. Write your answer in its simplest form.

1.1. $\dfrac{3}{8} + \dfrac{1}{8}$

1.2. $-\dfrac{2}{7} + \dfrac{5}{7}$

1.3. $\dfrac{13}{20} - \dfrac{17}{20}$

1.4. $\dfrac{1}{3} + \dfrac{1}{6}$

1.5. $\dfrac{3}{4} - \dfrac{1}{2}$

1.6. $\dfrac{2}{5} + \dfrac{1}{10}$

1.7. $\dfrac{5}{6} - \dfrac{1}{3}$

1.8. $\dfrac{1}{2} + \dfrac{3}{10}$

1.9. $\dfrac{7}{10} + \dfrac{2}{15}$

1.10. $\dfrac{3}{8} + \dfrac{5}{10}$

1.11. $\dfrac{3}{4} - \dfrac{2}{5}$

1.12. $-\dfrac{2}{3} + \dfrac{3}{4}$

1.13. $\dfrac{9}{10} - \dfrac{1}{15}$

1.14. $-\dfrac{7}{12} - \dfrac{1}{15}$

1.15. $\dfrac{11}{14} + 1$

Q2

Calculate the following multiplications. Write your answer in its simplest form.

2.1. $\dfrac{1}{4} \cdot \dfrac{1}{3}$

2.2. $\dfrac{2}{5} \cdot \dfrac{3}{7}$

2.3. $\dfrac{3}{5} \cdot 10$

2.4. $\dfrac{5}{8} \cdot \dfrac{4}{15}$

2.5. $\dfrac{2}{3} \cdot \dfrac{9}{10}$

2.6. $-\dfrac{1}{7} \cdot \dfrac{3}{4}$

2.7. $\dfrac{6}{11} \cdot \dfrac{22}{3}$

2.8. $8 \cdot \dfrac{5}{12}$

2.9. $-\dfrac{7}{9} \cdot \dfrac{6}{5}$

2.10. $\dfrac{4}{5} \cdot -\dfrac{15}{16}$

2.11. $\dfrac{12}{13} \cdot \dfrac{1}{6}$

2.12. $-\dfrac{9}{10} \cdot -\dfrac{5}{12}$

Q3

Calculate the following divisions. Write your answer in its simplest form.

3.1. $\dfrac{1}{3} \div \dfrac{1}{6}$

3.2. $\dfrac{2}{5} \div \dfrac{3}{4}$

3.3. $\dfrac{3}{8} \div 2$

3.4. $\dfrac{4}{9} \div \dfrac{8}{3}$

3.5. $5 \div \dfrac{1}{4}$

3.6. $\dfrac{5}{7} \div \dfrac{10}{21}$

3.7. $-\dfrac{1}{2} \div \dfrac{3}{5}$

3.8. $\dfrac{6}{11} \div 3$

3.9. $\dfrac{7}{10} \div -\dfrac{14}{15}$

3.10. $-\dfrac{8}{9} \div \dfrac{2}{3}$

3.11. $\dfrac{11}{12} \div \dfrac{22}{9}$

3.12. $-\dfrac{4}{7} \div -8$

Q4

Calculate the following by first converting the mixed numbers into improper fractions. Write your answer in its simplest form.

4.1. $1\dfrac{1}{3} + 2\dfrac{1}{6}$

4.2. $3\dfrac{1}{2} - 1\dfrac{1}{4}$

4.3. $1\dfrac{1}{5} \cdot 2\dfrac{1}{2}$

4.4. $4\dfrac{1}{2} \div 1\dfrac{1}{8}$

4.5. $2\dfrac{3}{4} + 1\dfrac{1}{3}$

4.6. $5\dfrac{1}{8} - 2\dfrac{3}{4}$

4.7. $-1\dfrac{2}{5} \cdot \dfrac{3}{7}$

4.8. $3\dfrac{1}{4} \div -1\dfrac{5}{8}$

4.9. $-2\dfrac{1}{3} - 1\dfrac{3}{5}$

4.10. $\quad 1\dfrac{5}{6} \cdot 2\dfrac{2}{11}$

4.11. $\quad -4\dfrac{1}{5} \div -2\dfrac{1}{10}$

4.12. $\quad 3\dfrac{1}{9} + 1\dfrac{5}{6}$

After attempting the questions above, please click this link to find the answers.

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