All Fraction Operations

Convert the following to equivalent fractions with the lowest common denominator:

1. $\frac{1}{3}, \frac{1}{6}$ **2.** $\frac{3}{4}, \frac{5}{16}$ **3.** $\frac{2}{5}, \frac{1}{25}$ **4.** $\frac{1}{4}, \frac{3}{5}$

5. $\frac{2}{3}, \frac{3}{5}$ **6.** $\frac{5}{6}, \frac{1}{7}$ **7.** $\frac{1}{6}, \frac{3}{8}$ **8.** $\frac{5}{6}, \frac{7}{15}$

9. $\frac{5}{12}, \frac{13}{15}$ **10.** $\frac{5}{8}, \frac{7}{12}$ 11. $\frac{4}{9}, \frac{1}{12}$ **12.** $\frac{1}{3}, \frac{5}{8}, \frac{7}{12}$

13. $\frac{2}{9}, \frac{3}{5}, \frac{7}{15}$ **14.** $\frac{5}{18}, \frac{7}{12}, \frac{4}{9}$ **15.** $\frac{5}{14}, \frac{5}{6}, \frac{1}{7}$ **16.** $\frac{1}{12}, \frac{21}{32}, \frac{3}{8}$

17. $Is\ \frac{3}{25}\ larger\ than \frac{5}{16}?$ **18.** $Is\ \frac{5}{27} smaller\ than \frac{3}{17}?$

19. $Write\ the\ following\ fractions\ in\ ascending\ order (smallest\ first): \frac{1}{2}, \frac{2}{9}, \frac{3}{4}, \frac{7}{18}, \frac{5}{12}$

20. $Write\ the\ following\ fractions\ in\ descending\ order (largest\ first): \frac{5}{16}, \frac{7}{12}, \frac{17}{24}, \frac{1}{2}, \frac{1}{3}$

Convert the following to improper fraction format:

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

5. $3\frac{3}{8}$ **6.** $2\frac{1}{7}$ **7.** $3\frac{7}{12}$ **8.** $1\frac{2}{15}$

9. $4\frac{2}{9}$ **10.** $2\frac{5}{8}$ **11.** $4\frac{2}{3}$ **12.** $1\frac{23}{36}$

13. $6\frac{2}{5}$ **14.** $5\frac{3}{4}$ **15.** $4\frac{7}{12}$ **16.** $8\frac{3}{8}$

Convert the following to mixed number format:

1. $\frac{5}{3}$ **2.** $\frac{3}{2}$ **3.** $\frac{7}{3}$ **4.** $\frac{13}{4}$

5. $\frac{16}{7}$ **6.** $\frac{11}{9}$ **7.** $\frac{27}{5}$ **8.** $\frac{29}{8}$

9. $\frac{19}{12}$ **10.** $\frac{49}{15}$ **11.** $\frac{36}{5}$ **12.** $\frac{22}{3}$

13. $\frac{35}{16}$ **14.** $\frac{37}{32}$ **15.** $\frac{23}{7}$ **16.** $\frac{40}{9}$

All Fraction Operations

Do the following additions with fractions (answer in simplest form):

1. $\frac{2}{3}\ and\ \frac{1}{6}$
2. $\frac{1}{4}\ and \frac{3}{16}$
3. $\frac{1}{3}+\frac{4}{9}$
4. $\frac{1}{4}+\frac{3}{5}$
5. $3+\frac{5}{6}$
6. $\frac{3}{4}+\frac{1}{6}$
7. $\frac{5}{6}+\frac{2}{7}$
8. $\frac{2}{3}\ and\ \frac{5}{9}$
9. $\frac{5}{8}+\frac{5}{12}$
10. $\frac{7}{12}\ and\ \frac{5}{18}$
11. $\frac{1}{3}+\frac{1}{4}+\frac{1}{5}$
12. $\frac{4}{9}+\frac{4}{15}+1$
13. $\frac{5}{12}+\frac{7}{18}+\frac{3}{4}$
14. $\frac{1}{9}+\frac{7}{12}+\frac{3}{4}$
15. $8\ more\ than\ \frac{3}{5}$
16. $\frac{5}{12}\ more\ than\ \frac{3}{8}$

Do the following additions with mixed numbers (answer in simplest form):

1. $1\frac{1}{4}+1\frac{3}{8}$
2. $2\frac{1}{3}+3\frac{5}{12}$
3. $3\frac{1}{4}+\frac{5}{6}$
4. $5\frac{5}{6}+3\frac{3}{8}$
5. $11\frac{3}{8}+15\frac{11}{12}$
6. $7\frac{5}{9}+23\frac{5}{12}$
7. $8\frac{5}{12}+4\frac{7}{16}$
8. $13+2\frac{5}{12}$
9. $\frac{7}{9}+23\frac{11}{15}$
10. $31\frac{3}{4}+14\frac{7}{16}$
11. $15\frac{3}{8}+3\frac{3}{12}$
12. $3\frac{1}{4}+5\frac{5}{8}+8\frac{3}{32}$
13. $4\frac{1}{2}+5\frac{1}{3}+6\frac{1}{4}$
14. $13\frac{1}{6}+5\frac{4}{9}+7\frac{5}{12}$
15. $12\frac{7}{8}+9\frac{11}{12}+4\frac{3}{16}$
16. $2\frac{3}{4}more\ than\ 15\frac{5}{6}$
17. $21\frac{3}{8}\ more\ than\ 13\frac{5}{12}$

Subtract the following fractions (answer in simplest form):

1. $From\frac{3}{4}\ take\frac{1}{2}$
2. $Take\frac{2}{3}\ from\frac{11}{12}$
3. $\frac{3}{8}-\frac{1}{3}$
4. $\frac{1}{2}-\frac{3}{7}$
5. $\frac{4}{7}-\frac{2}{11}$
6. $5-\frac{5}{6}$
7. $\frac{5}{6}-\frac{1}{16}$
8. $\frac{7}{12}-\frac{3}{16}$
9. $\frac{7}{12}-\frac{3}{8}$
10. $\frac{5}{6}-\frac{3}{14}$
11. $\frac{4}{15}-\frac{2}{9}$
12. $\frac{5}{8}-\frac{1}{12}$
13. $\frac{5}{8}-\frac{5}{16}$
14. $\frac{5}{12}\ less\ than\frac{15}{16}$
15. $From\ \frac{7}{8}\ take\frac{5}{12}$
16. $Take\frac{1}{6}\ away\ from\frac{13}{16}$

All Fraction Operations

Subtract the following mixed numbers (answer in simplest form):

1. *Take* $1\frac{2}{3}$ *from* $2\frac{11}{12}$
2. *From* $5\frac{5}{6}$ *take* $2\frac{3}{4}$
3. $6\frac{2}{3} - 4\frac{1}{4}$
4. $15\frac{3}{5} - \frac{1}{7}$
5. $11 - 2\frac{1}{6}$
6. $12 - 3\frac{3}{7}$
7. $5\frac{11}{12} - 2\frac{5}{8}$
8. $14\frac{5}{6} - 5\frac{1}{9}$
9. $9\frac{1}{16} - 2\frac{5}{6}$
10. $8\frac{3}{16} - 4\frac{7}{12}$
11. $8\frac{1}{12} - 6\frac{4}{15}$
12. $7\frac{2}{9} - 2\frac{4}{15}$
13. $11\frac{7}{16}$ *less than* $17\frac{5}{12}$
14. *From* $8\frac{5}{16}$ *take* $7\frac{1}{6}$
15. $6\frac{3}{7}$ *less than* $10\frac{1}{6}$
16. *Take* $5\frac{7}{8}$ *from* $8\frac{5}{12}$

Multiply the following Fractions (answer in simplest form):

1. $\frac{1}{2} \times \frac{2}{3}$
2. $3 \times \frac{2}{5}$
3. $\frac{1}{8} \times \frac{4}{5}$
4. $\frac{2}{5} \times \frac{15}{16}$
5. $5 \times \frac{3}{8}$
6. $\frac{8}{11} \times \frac{3}{12}$
7. $\frac{7}{10} \times \frac{5}{14}$
8. $\frac{18}{23} \times \frac{13}{27}$
9. $\frac{2}{3} \times \frac{1}{4} \times \frac{3}{5}$
10. $\frac{5}{12} \times \frac{9}{10} \times \frac{1}{3}$
11. $\frac{5}{6} \times 24 \times \frac{3}{15}$
12. $\frac{24}{25} \times \frac{15}{16} \times \frac{4}{5}$
13. *What is the product of* $\frac{14}{15}$ *and* $\frac{5}{7}$*?*
14. *Multiply:* $\frac{8}{11}, \frac{33}{40}$
15. $\frac{15}{21}$ *times* $\frac{7}{25}$
16. *Find the product of the following fractions:* $\frac{16}{18}, \frac{3}{8}$ *and* $\frac{2}{3}$.

Multiply the following Mixed numbers (answer in simplest form):

1. $1\frac{3}{8} \times \frac{4}{5}$
2. $\frac{8}{11} \times 1\frac{3}{4}$
3. $3\frac{3}{7} \times 1\frac{3}{4}$
4. $1\frac{7}{8} \times 3\frac{5}{9}$
5. $3\frac{3}{11} \times 2\frac{1}{6}$
6. $1\frac{7}{18} \times 15$
7. $1\frac{5}{13} \times 2\frac{1}{12}$
8. $3\frac{1}{3} \times 2\frac{2}{5}$
9. $1\frac{7}{8} \times 6$

All Fraction Operations

10. $1\frac{5}{7} \times 1\frac{5}{9} \times 2\frac{1}{2}$

11. $3\frac{3}{11} \times 2\frac{2}{5} \times 3\frac{1}{6}$

12. $1\frac{4}{17} \times 3\frac{3}{7} \times 1\frac{1}{8}$

13. $3\frac{3}{4} \times 1\frac{3}{5} \times 2\frac{1}{2}$

14. *What is the product of* $3\frac{1}{3}$ *and* $2\frac{3}{5}$?

15. *Multiply*: $1\frac{5}{7}, 2\frac{5}{6}$

16. *Find the product of the following fractions*: $3\frac{1}{8}, 2\frac{4}{5}$ *and* $3\frac{1}{2}$

Divide the following fractions (answer in simplest form):

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

2. $\frac{3}{8} \div \frac{1}{5}$

3. $\frac{5}{12} \div \frac{3}{4}$

4. $5 \div \frac{7}{18}$

5. $\frac{14}{15} \div \frac{7}{9}$

6. $\frac{12}{17} \div \frac{4}{5}$

7. $\frac{8}{21} \div 9$

8. $\frac{11}{20} \div 7$

9. $\frac{9}{13} \div \frac{6}{7}$

10. $\frac{7}{12} \div \frac{13}{15}$

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

12. $\frac{11}{15} \div \frac{4}{5} \div \frac{7}{12}$

13. $\frac{13}{16} \div \frac{21}{24} \div \frac{35}{52}$

14. *How many fractions of size* $\frac{3}{4}$ *can fit into a fraction of size* $\frac{21}{24}$?

15. *A board is measured to be* 25 *inches long, how many* $\frac{1}{4}$*'s of an inch is this*?

16. *What is the length of each piece if a string* $\frac{7}{16}$ *of an inch is cut into* 6 pieces?

Divide the following mixed numbers (answer in simplest form):

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

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

3. $2\frac{1}{8} \div 3\frac{1}{7}$

4. $8 \div 2\frac{5}{6}$

5. $1\frac{7}{12} \div 2\frac{3}{4}$

6. $3\frac{5}{9} \div 2\frac{3}{8}$

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

8. $2\frac{7}{12} \div 5$

9. $1\frac{3}{5} \div 3\frac{7}{8}$

10. $2\frac{1}{11} \div 3\frac{1}{4}$

11. $2\frac{3}{4} \div 1\frac{5}{12} \div 2\frac{3}{8}$

12. $3\frac{1}{4} \div 6 \div 2\frac{1}{3}$

13. $2\frac{5}{12} \div 1\frac{3}{8} \div 3\frac{1}{3}$

14. *How many pieces of* $1\frac{2}{3}$ *inch rope can be cut from a rope* $16\frac{1}{2}$ *inches in length*?

15. *What is the length of each piece if a board* $10\frac{1}{4}$ *inches is cut into* 6 *pieces*?

16. *How many pieces of board* $1\frac{3}{4}$ *inches in length does it take to get a length of* 12 *inches*?

All Fraction Operations

Answer Key:

Convert the following to equivalent fractions with the lowest common denominator:

1. $\frac{2}{6}, \frac{1}{6}$	**2.** $\frac{12}{16}, \frac{5}{16}$	**3.** $\frac{10}{25}, \frac{1}{25}$	**4.** $\frac{5}{20}, \frac{12}{20}$
5. $\frac{10}{15}, \frac{9}{15}$	**6.** $\frac{35}{42}, \frac{6}{42}$	**7.** $\frac{4}{24}, \frac{9}{24}$	**8.** $\frac{25}{30}, \frac{14}{30}$
9. $\frac{25}{60}, \frac{52}{60}$	**10.** $\frac{15}{24}, \frac{14}{24}$	**11.** $\frac{16}{36}, \frac{3}{36}$	**12.** $\frac{8}{24}, \frac{15}{24}, \frac{14}{24}$
13. $\frac{10}{45}, \frac{27}{45}, \frac{21}{45}$	**14.** $\frac{10}{36}, \frac{21}{36}, \frac{16}{36}$	**15.** $\frac{15}{42}, \frac{35}{42}, \frac{6}{42}$	**16.** $\frac{8}{96}, \frac{63}{96}, \frac{36}{96}$
17. No	**18.** No	**19.** $\frac{2}{9}, \frac{7}{18}, \frac{5}{12}, \frac{1}{2}, \frac{3}{4}$	**20.** $\frac{17}{24}, \frac{7}{12}, \frac{1}{2}, \frac{1}{3}, \frac{5}{16}$

Convert the following to improper fraction format:

1. $\frac{4}{3}$	**2.** $\frac{7}{5}$	**3.** $\frac{9}{4}$	**4.** $\frac{11}{6}$
5. $\frac{27}{8}$	**6.** $\frac{15}{7}$	**7.** $\frac{43}{12}$	**8.** $\frac{17}{15}$
9. $\frac{38}{9}$	**10.** $\frac{21}{8}$	**11.** $\frac{14}{3}$	**12.** $\frac{59}{36}$
13. $\frac{32}{5}$	**14.** $\frac{23}{4}$	**15.** $\frac{55}{12}$	**16.** $\frac{67}{8}$

Convert the following to mixed number format:

1. $1\frac{2}{3}$	**2.** $1\frac{1}{2}$	**3.** $2\frac{1}{3}$	**4.** $3\frac{1}{4}$
5. $2\frac{2}{7}$	**6.** $1\frac{2}{9}$	**7.** $5\frac{2}{5}$	**8.** $3\frac{5}{8}$
9. $1\frac{7}{12}$	**10.** $3\frac{4}{15}$	**11.** $7\frac{1}{5}$	**12.** $7\frac{1}{3}$
13. $2\frac{3}{16}$	**14.** $1\frac{5}{32}$	**15.** $3\frac{2}{7}$	**16.** $4\frac{4}{9}$

Do the following additions with fractions (answer in simplest form):

1. $\frac{5}{6}$	**2.** $\frac{7}{16}$	**3.** $\frac{7}{9}$	**4.** $\frac{17}{20}$
5. $3\frac{5}{6}$	**6.** $\frac{11}{12}$	**7.** $1\frac{5}{42}$	**8.** $1\frac{2}{9}$
9. $1\frac{1}{24}$	**10.** $\frac{31}{36}$	**11.** $\frac{47}{60}$	**12.** $1\frac{32}{45}$
13. $1\frac{5}{9}$	**14.** $1\frac{4}{9}$	**15.** $8\frac{3}{5}$	**16.** $\frac{19}{24}$

Do the following additions with mixed numbers (answer in simplest form):

1. $2\frac{5}{8}$	**2.** $5\frac{3}{4}$	**3.** $4\frac{1}{12}$	**4.** $9\frac{5}{24}$
5. $27\frac{7}{24}$	**6.** $30\frac{35}{36}$	**7.** $12\frac{41}{48}$	**8.** $15\frac{5}{12}$
9. $24\frac{23}{45}$	**10.** $46\frac{3}{16}$	**11.** $18\frac{5}{8}$	**12.** $16\frac{31}{32}$
13. $16\frac{1}{12}$	**14.** $26\frac{1}{36}$	**15.** $26\frac{47}{48}$	**16.** $18\frac{7}{12}$
17. $34\frac{19}{24}$			

All Fraction Operations

Subtract the following fractions (answer in simplest form):

1. $\frac{1}{4}$	**2.** $\frac{1}{4}$	**3.** $\frac{1}{24}$	**4.** $\frac{1}{14}$
5. $\frac{30}{77}$	**6.** $4\frac{1}{6}$	**7.** $\frac{37}{48}$	**8.** $\frac{19}{48}$
9. $\frac{5}{24}$	**10.** $\frac{13}{21}$	**11.** $\frac{2}{45}$	**12.** $\frac{13}{24}$
13. $\frac{5}{16}$	**14.** $\frac{25}{48}$	**15.** $\frac{11}{24}$	**16.** $\frac{31}{48}$

Subtract the following mixed numbers (answer in simplest form):

1. $1\frac{1}{4}$	**2.** $3\frac{1}{12}$	**3.** $2\frac{5}{12}$	**4.** $15\frac{16}{35}$
5. $8\frac{5}{6}$	**6.** $8\frac{4}{7}$	**7.** $3\frac{7}{24}$	**8.** $9\frac{13}{18}$
9. $6\frac{11}{48}$	**10.** $3\frac{29}{48}$	**11.** $1\frac{49}{60}$	**12.** $4\frac{43}{45}$
13. $5\frac{47}{48}$	**14.** $1\frac{7}{48}$	**15.** $3\frac{31}{42}$	**16.** $2\frac{13}{24}$

Multiply the following Fractions (answer in simplest form):

1. $\frac{1}{3}$	**2.** $1\frac{1}{5}$	**3.** $\frac{1}{10}$	**4.** $\frac{3}{8}$
5. $1\frac{7}{8}$	**6.** $\frac{2}{11}$	**7.** $\frac{1}{4}$	**8.** $\frac{26}{69}$
9. $\frac{1}{10}$	**10.** $\frac{1}{8}$	**11.** 4	**12.** $\frac{18}{25}$
13. $\frac{2}{3}$	**14.** $\frac{3}{5}$	**15.** $\frac{1}{5}$	**16.** $\frac{2}{9}$

Multiply the following Mixed numbers (answer in simplest form):

1. $1\frac{1}{10}$	**2.** $1\frac{3}{11}$	**3.** 6	**4.** $6\frac{2}{3}$
5. $7\frac{1}{11}$	**6.** $20\frac{5}{6}$	**7.** $2\frac{23}{26}$	**8.** 8
9. $11\frac{1}{4}$	**10.** $6\frac{2}{3}$	**11.** $24\frac{48}{55}$	**12.** $4\frac{13}{17}$
13. 15	**14.** $8\frac{2}{3}$	**15.** $4\frac{6}{7}$	**16.** $30\frac{5}{8}$

Divide the following fractions (answer in simplest form):

1. $\frac{8}{9}$	**2.** $1\frac{7}{8}$	**3.** $\frac{5}{9}$	**4.** $12\frac{6}{7}$
5. $1\frac{1}{5}$	**6.** $\frac{15}{17}$	**7.** $\frac{8}{189}$	**8.** $\frac{11}{140}$
9. $\frac{21}{26}$	**10.** $\frac{35}{52}$	**11.** $2\frac{3}{16}$	**12.** $1\frac{4}{7}$
13. $1\frac{93}{245}$	**14.** $1\frac{1}{6}$	**15.** 100	**16.** $\frac{7}{96}$"

Divide the following mixed numbers (answer in simplest form):

1. $3\frac{3}{25}$	**2.** $\frac{9}{35}$	**3.** $\frac{119}{176}$	**4.** $2\frac{14}{17}$
5. $\frac{19}{33}$	**6.** $1\frac{85}{171}$	**7.** $\frac{2}{3}$	**8.** $\frac{31}{60}$
9. $\frac{64}{155}$	**10.** $\frac{92}{143}$	**11.** $\frac{264}{323}$	**12.** $\frac{13}{56}$
13. $\frac{29}{55}$	**14.** $9\frac{9}{10}$	**15.** $1\frac{17}{24}$"	**16.** $6\frac{6}{7}$