

Adding Fractions

1) $\frac{2}{3} + \frac{2}{5}$

8) $1\frac{2}{3} + 2\frac{2}{5}$

2) $\frac{2}{5} + \frac{3}{10}$

9) $3\frac{2}{15} + 1\frac{3}{10}$

3) $\frac{3}{8} + \frac{4}{5}$

10) $5\frac{3}{8} + 1\frac{1}{4}$

4) $\frac{5}{7} + \frac{1}{6}$

11) $7\frac{5}{6} + 6\frac{1}{7}$

5) $\frac{5}{6} + \frac{7}{12}$

12) $4\frac{3}{5} + \frac{7}{12}$

6) $\frac{4}{13} + \frac{1}{2}$

13) $5\frac{1}{3} + \frac{1}{2}$

7) $\frac{1}{4} + \frac{4}{7}$

14) $\frac{1}{7} + 3\frac{4}{5}$

Subtracting Fractions

$$1) \frac{2}{3} - \frac{2}{5}$$

$$8) 2\frac{2}{3} - 1\frac{2}{5}$$

$$2) \frac{1}{3} - \frac{5}{24}$$

$$9) 3\frac{7}{15} - 1\frac{3}{10}$$

$$3) \frac{4}{9} - \frac{5}{18}$$

$$10) 5\frac{5}{8} - 1\frac{1}{4}$$

$$4) \frac{5}{7} - \frac{1}{3}$$

$$11) 7\frac{5}{6} - 6\frac{1}{7}$$

$$5) \frac{5}{9} - \frac{1}{3}$$

$$12) 4\frac{3}{5} - \frac{7}{12}$$

$$6) \frac{2}{3} - \frac{1}{8}$$

$$13) 5\frac{1}{3} - \frac{1}{2}$$

$$7) \frac{4}{7} - \frac{4}{8}$$

$$14) 9\frac{1}{7} - 4\frac{4}{5}$$

Multiplying Fractions

$$1) \frac{2}{3} * \frac{2}{5}$$

$$8) \frac{12}{13} * \frac{26}{33}$$

$$2) \frac{1}{3} * \frac{5}{24}$$

$$9) \frac{7}{15} * \frac{3}{14}$$

$$3) \frac{4}{9} * \frac{5}{18}$$

$$10) \frac{5}{8} * \frac{4}{15}$$

$$4) \frac{5}{7} * \frac{1}{3}$$

$$11) \frac{5}{6} * \frac{2}{7}$$

$$5) \frac{5}{9} * \frac{3}{10}$$

$$12) \frac{3}{5} * \frac{7}{12}$$

$$6) \frac{2}{3} * \frac{3}{8}$$

$$13) \frac{1}{3} * \frac{1}{2}$$

$$7) \frac{4}{7} * \frac{21}{24}$$

$$14) \frac{1}{7} * \frac{4}{5}$$

Dividing Fractions

$$1) \frac{2}{3} \div \frac{2}{5}$$

$$8) \frac{12}{13} \div \frac{9}{26}$$

$$2) \frac{1}{3} \div \frac{5}{24}$$

$$9) \frac{7}{15} \div \frac{3}{14}$$

$$3) \frac{4}{9} \div \frac{5}{18}$$

$$10) \frac{5}{8} \div \frac{3}{4}$$

$$4) \frac{5}{7} \div \frac{1}{3}$$

$$11) \frac{5}{6} \div \frac{15}{18}$$

$$5) \frac{5}{9} \div \frac{5}{12}$$

$$12) \frac{3}{5} \div \frac{1}{15}$$

$$6) \frac{2}{3} \div \frac{8}{9}$$

$$13) \frac{1}{3} \div \frac{1}{2}$$

$$7) \frac{4}{7} \div \frac{8}{21}$$

$$14) \frac{1}{7} \div \frac{4}{5}$$

Answers

Adding Fractions

(LCD: least common denominator)

1) $\frac{2}{3} + \frac{2}{5}$ LCD: 15

$$\frac{2 \times 5}{3 \times 5} + \frac{2 \times 3}{5 \times 3}$$
$$\frac{10}{15} + \frac{6}{15} = \boxed{\frac{16}{15}} \text{ or } \boxed{1\frac{1}{15}}$$

8) $1\frac{2}{3} + 2\frac{2}{5}$ LCD: 15

$$1 + 2 = 3$$
$$\frac{2 \times 5}{3 \times 5} + \frac{2 \times 3}{5 \times 3}$$
$$\frac{10}{15} + \frac{6}{15} = \frac{16}{15} = 1\frac{1}{15}$$
$$1\frac{1}{15} + 3 = \boxed{4\frac{1}{15}}$$

2) $\frac{2}{5} + \frac{3}{10}$ LCD: 10

$$\frac{2 \times 2}{5 \times 2} + \frac{3}{10}$$
$$\frac{4}{10} + \frac{3}{10} = \boxed{\frac{7}{10}}$$

9) $3\frac{2}{15} + 1\frac{3}{10}$ LCD: 30

$$\frac{2 \times 2}{15 \times 2} + \frac{3 \times 3}{10 \times 3}$$
$$\frac{4}{30} + \frac{9}{30} = \frac{13}{30}$$
$$3 + 1 = 4$$
$$\boxed{4\frac{13}{30}}$$

3) $\frac{3}{8} + \frac{4}{5}$ LCD: 40

$$\frac{3 \times 5}{8 \times 5} + \frac{4 \times 8}{5 \times 8}$$
$$\frac{15}{40} + \frac{32}{40} = \boxed{\frac{47}{40}} \text{ or } \boxed{1\frac{7}{40}}$$

10) $5\frac{3}{8} + 1\frac{1}{4}$ LCD: 8

$$5 + 1 + \frac{3}{8} + \frac{1 \times 2}{4 \times 2}$$
$$5 + 1 + \frac{3}{8} + \frac{2}{8} = \boxed{6\frac{5}{8}}$$

4) $\frac{5}{7} + \frac{1}{6}$ LCD: 42

$$\frac{5 \times 6}{7 \times 6} + \frac{1 \times 7}{6 \times 7}$$
$$\frac{30}{42} + \frac{7}{42} = \boxed{\frac{37}{42}}$$

11) $7\frac{5}{6} + 6\frac{1}{7}$ LCD: 42

$$7 + 6 + \frac{5 \times 7}{6 \times 7} + \frac{1 \times 6}{7 \times 6}$$
$$13 + \frac{35}{42} + \frac{6}{42} = \boxed{13\frac{41}{42}}$$

5) $\frac{5}{6} + \frac{7}{12}$ LCD: 12

$$\frac{5 \times 2}{6 \times 2} + \frac{7}{12}$$
$$\frac{10}{12} + \frac{7}{12} = \frac{17}{12} \text{ or } \boxed{1\frac{5}{12}}$$

12) $4\frac{3}{5} + \frac{7}{12}$ LCD: 60

$$4 + \frac{3 \times 12}{5 \times 12} + \frac{7 \times 5}{12 \times 5}$$
$$4 + \frac{36}{60} + \frac{35}{60} = 4 + \frac{61}{60} = 4 + 1\frac{1}{60} = \boxed{5\frac{1}{60}}$$

6) $\frac{4}{13} + \frac{1}{2}$ LCD: 26

$$\frac{4 \times 2}{13 \times 2} + \frac{1 \times 13}{2 \times 13}$$
$$\frac{8}{26} + \frac{13}{26} = \boxed{\frac{21}{26}}$$

13) $5\frac{1}{3} + \frac{1}{2}$ LCD: 6

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

7) $\frac{1}{4} + \frac{4}{7}$ LCD: 28

$$\frac{1 \times 7}{4 \times 7} + \frac{4 \times 4}{7 \times 4}$$
$$\frac{7}{28} + \frac{16}{28} = \boxed{\frac{23}{28}}$$

14) $\frac{1}{7} + 3\frac{4}{5}$ LCD: 35

$$\frac{1 \times 5}{7 \times 5} + 3 + \frac{4 \times 7}{5 \times 7}$$
$$\frac{5}{35} + 3 + \frac{28}{35} = \boxed{3\frac{33}{35}}$$

Answers

Subtracting Fractions

(LCD = least common Denominator)

1) $\frac{2}{3} - \frac{2}{5}$ LCD: 15

$$\frac{2 \times 5}{3 \times 5} - \frac{2 \times 3}{5 \times 3}$$
$$\frac{10}{15} - \frac{6}{15} = \boxed{\frac{4}{15}}$$

2) $\frac{1}{3} - \frac{5}{24}$ LCD: 24

$$\frac{1 \times 8}{3 \times 8} - \frac{5}{24}$$
$$\frac{8}{24} - \frac{5}{24} = \boxed{\frac{3}{24} \text{ Reduce to } \frac{1}{8}}$$

3) $\frac{4}{9} - \frac{5}{18}$ LCD: 18

$$\frac{4 \times 2}{9 \times 2} - \frac{5}{18}$$
$$\frac{8}{18} - \frac{5}{18} = \boxed{\frac{3}{18} \text{ Reduce to } \frac{1}{6}}$$

4) $\frac{5}{7} - \frac{1}{3}$ LCD: 21

$$\frac{5 \times 3}{7 \times 3} - \frac{1 \times 7}{3 \times 7}$$
$$\frac{15}{21} - \frac{7}{21} = \boxed{\frac{8}{21}}$$

5) $\frac{5}{9} - \frac{1}{3}$ LCD: 9

$$\frac{5}{9} - \frac{1 \times 3}{3 \times 3}$$
$$\frac{5}{9} - \frac{3}{9} = \boxed{\frac{2}{9}}$$

6) $\frac{2}{3} - \frac{1}{8}$ LCD: 24

$$\frac{2 \times 8}{3 \times 8} - \frac{1 \times 3}{8 \times 3}$$
$$\frac{16}{24} - \frac{3}{24} = \boxed{\frac{13}{24}}$$

7) $\frac{4}{7} - \frac{4}{8}$ LCD: 56

$$\frac{4 \times 8}{7 \times 8} - \frac{4 \times 7}{8 \times 7}$$
$$\frac{32}{56} - \frac{28}{56} = \boxed{\frac{4}{56} \text{ Reduce to } \frac{1}{14}}$$

8) $2\frac{2}{3} - 1\frac{2}{5}$ LCD: 15

$$2\frac{2 \times 5}{3 \times 5} - 1\frac{2 \times 3}{5 \times 3}$$
$$2\frac{10}{15} - 1\frac{6}{15} = \boxed{1\frac{4}{15}}$$

9) $3\frac{7}{15} - 1\frac{3}{10}$ LCD: 30

$$3\frac{7 \times 2}{15 \times 2} - 1\frac{3 \times 3}{10 \times 3}$$
$$3\frac{14}{30} - 1\frac{9}{30} = \boxed{2\frac{5}{30} \text{ Reduce to } 2\frac{1}{6}}$$

10) $5\frac{5}{8} - 1\frac{1}{4}$ LCD: 8

$$5\frac{5}{8} - 1\frac{1 \times 2}{4 \times 2}$$
$$5\frac{5}{8} - 1\frac{2}{8} = \boxed{4\frac{3}{8}}$$

11) $7\frac{5}{6} - 6\frac{1}{7}$ LCD: 42

$$7\frac{5 \times 7}{6 \times 7} - 6\frac{1 \times 6}{7 \times 6}$$
$$7\frac{35}{42} - 6\frac{6}{42} = \boxed{1\frac{29}{42}}$$

12) $4\frac{3}{5} - \frac{7}{12}$ LCD: 60

$$4\frac{3 \times 12}{5 \times 12} - \frac{7 \times 5}{12 \times 5}$$
$$4\frac{36}{60} - \frac{35}{60} = \boxed{4\frac{1}{60}}$$

13) $5\frac{1}{3} - \frac{1}{2}$ LCD: 6

$$5\frac{1 \times 2}{3 \times 2} - \frac{1 \times 3}{2 \times 3}$$
$$5\frac{2}{6} - \frac{3}{6} = 4\frac{8}{6} - \frac{3}{6} = \boxed{4\frac{5}{6}}$$

* Had to borrow from whole # to subtract fractions

14) $9\frac{1}{7} - 4\frac{4}{5}$ LCD: 35

$$9\frac{1 \times 5}{7 \times 5} - 4\frac{4 \times 7}{5 \times 7}$$
$$9\frac{5}{35} - 4\frac{28}{35} = 8\frac{40}{35} - 4\frac{28}{35} = \boxed{4\frac{12}{35}}$$

Answers

Multiplying Fractions

$$1) \frac{2}{3} * \frac{2}{5} = \boxed{\frac{4}{15}}$$

$$8) \frac{12}{13} * \frac{26}{33} = \frac{\cancel{3} \times 4 \times 2 \times \cancel{13}}{\cancel{13} \times 3 \times 11} = \boxed{\frac{8}{11}}$$

$$2) \frac{1}{3} * \frac{5}{24} = \boxed{\frac{5}{72}}$$

$$9) \frac{7}{15} * \frac{3}{14} = \frac{\cancel{7} \times 3}{5 \times \cancel{3} \times 2 \times \cancel{7}} = \boxed{\frac{1}{10}}$$

$$3) \frac{4}{9} * \frac{5}{18} = \frac{2 \times \cancel{2} \times 5}{9 \times \cancel{2} \times 9} = \boxed{\frac{10}{81}}$$

$$10) \frac{5}{8} * \frac{4}{15} = \frac{\cancel{5} \times 4}{4 \times 2 \times 3 \times \cancel{5}} = \boxed{\frac{1}{6}}$$

$$4) \frac{5}{7} * \frac{1}{3} = \boxed{\frac{5}{21}}$$

$$11) \frac{5}{6} * \frac{2}{7} = \frac{5 \times \cancel{2}}{\cancel{2} \times 3 \times 7} = \boxed{\frac{5}{21}}$$

$$5) \frac{5}{9} * \frac{3}{10} = \frac{5 \times \cancel{3}}{\cancel{3} \times 3 \times 2 \times \cancel{5}} = \boxed{\frac{1}{6}}$$

$$12) \frac{3}{5} * \frac{7}{12} = \frac{\cancel{3} \times 7}{5 \times \cancel{3} \times 4} = \boxed{\frac{7}{20}}$$

$$6) \frac{2}{3} * \frac{3}{8} = \frac{\cancel{2} \times \cancel{3}}{\cancel{3} \times 2 \times 4} = \boxed{\frac{1}{4}}$$

$$13) \frac{1}{3} * \frac{1}{2} = \boxed{\frac{1}{6}}$$

$$7) \frac{4}{7} * \frac{21}{24} = \frac{\cancel{4} \times \cancel{3} \times \cancel{7}}{\cancel{7} \times \cancel{4} \times 2 \times \cancel{3}} = \boxed{\frac{1}{2}}$$

$$14) \frac{1}{7} * \frac{4}{5} = \boxed{\frac{4}{35}}$$

Answers

Dividing Fractions

1) $\frac{2}{3} \div \frac{2}{5}$

$$\frac{\cancel{2}}{3} \cdot \frac{5}{\cancel{2}} = \boxed{\frac{5}{3}} \text{ or } \boxed{1\frac{2}{3}}$$

2) $\frac{1}{3} \div \frac{5}{24}$

$$\frac{1}{3} \cdot \frac{24}{5} = \boxed{\frac{8}{5} \text{ or } 1\frac{3}{5}}$$

3) $\frac{4}{9} \div \frac{5}{18}$

$$\frac{4}{9} \cdot \frac{18}{5} = \boxed{\frac{8}{5} \text{ or } 1\frac{3}{5}}$$

4) $\frac{5}{7} \div \frac{1}{3}$

$$\frac{5}{7} \cdot \frac{3}{1} = \boxed{\frac{15}{7} \text{ or } 2\frac{1}{7}}$$

5) $\frac{5}{9} \div \frac{5}{12}$

$$\frac{\cancel{5}}{9} \cdot \frac{12}{\cancel{5}} = \boxed{\frac{4}{3} \text{ or } 1\frac{1}{3}}$$

6) $\frac{2}{3} \div \frac{8}{9}$

$$\frac{\cancel{2}}{3} \cdot \frac{9}{\cancel{8}_4} = \boxed{\frac{3}{4}}$$

7) $\frac{4}{7} \div \frac{8}{21}$

$$\frac{\cancel{4}}{7} \cdot \frac{21}{\cancel{8}_2} = \boxed{\frac{3}{2} \text{ or } 1\frac{1}{2}}$$

8) $\frac{12}{13} \div \frac{9}{26}$

$$\frac{\cancel{12}_4}{13} \cdot \frac{26}{\cancel{9}_3} = \boxed{\frac{8}{3} \text{ or } 2\frac{2}{3}}$$

9) $\frac{7}{15} \div \frac{3}{14}$

$$\frac{7}{15} \cdot \frac{14}{3} = \boxed{\frac{98}{45} \text{ or } 2\frac{8}{45}}$$

10) $\frac{5}{8} \div \frac{3}{4}$

$$\frac{5}{\cancel{8}_2} \cdot \frac{4}{3} = \boxed{\frac{5}{6}}$$

11) $\frac{5}{6} \div \frac{15}{18}$

$$\frac{\cancel{5}}{6} \cdot \frac{18}{\cancel{15}_3} = \frac{3}{3} = \boxed{1}$$

12) $\frac{3}{5} \div \frac{1}{15}$

$$\frac{3}{5} \cdot \frac{15}{1} = \boxed{9}$$

13) $\frac{1}{3} \div \frac{1}{2}$

$$\frac{1}{3} \cdot \frac{2}{1} = \boxed{\frac{2}{3}}$$

14) $\frac{1}{7} \div \frac{4}{5}$

$$\frac{1}{7} \cdot \frac{5}{4} = \boxed{\frac{5}{28}}$$