Fractions Workout

Show your workings and leave in simplest form where appropriate

Equivalent Fractions - Fill in the missing number to make the fractions the same

1. $\frac{2}{3}=\frac{\quad}{12}$
2. $\frac{4}{5}=\frac{\quad}{30}$
3. $\frac{1}{3}=\frac{\quad}{18}$
4. $\frac{2}{5}=\frac{\quad}{45}$
5. $\frac{3}{7}=\frac{\quad}{35}$
6. $\frac{4}{7}=\frac{\quad}{21}$
7. $\frac{3}{5}=\frac{\quad}{50}$
8. $\frac{5}{6}=\frac{\quad}{24}$
9. $\frac{5}{6}=\frac{\quad}{42}$
10. $\frac{7}{12}=\frac{\quad}{48}$

Simplifying Fractions - Simplify these:

1. $\frac{10}{30}$
2. $\frac{8}{24}$
3. $\frac{9}{24}$
4. $\frac{12}{36}$
5. $\frac{15}{25}$
6. $\frac{15}{40}$
7. $\frac{14}{35}$
8. $\frac{6}{33}$
9. $\frac{18}{27}$
10. $\frac{66}{121}$

Multiplying Fractions - Multiply these:

1. $\frac{1}{4}\times\frac{2}{5}$
2. $\frac{1}{7}\times\frac{5}{6}$
3. $\frac{1}{12}\times\frac{9}{11}$
4. $\frac{2}{3}\times\frac{4}{5}$
5. $\frac{2}{3}\times\frac{6}{7}$
6. $\frac{3}{4}\times\frac{8}{11}$
7. $\frac{15}{17}\times\frac{4}{5}$
8. $\frac{10}{21}\times\frac{3}{4}$
9. $\frac{7}{12}\times\frac{5}{11}$
10. $\frac{3}{8}\times\frac{4}{15}$

Top Heavy Fractions to Mixed numbers – Change these to mixed numbers

1. $\frac{21}{9}$
2. $\frac{11}{3}$
3. $\frac{7}{4}$
4. $\frac{33}{4}$
5. $\frac{22}{5}$
6. $\frac{30}{7}$
7. $\frac{23}{8}$
8. $\frac{59}{8}$
9. $\frac{65}{6}$
10. $\frac{95}{12}$

Dividing Fractions - Divide these:

1. $\frac{2}{3} \div \frac{5}{7}$
2. $\frac{4}{7} \div \frac{8}{11}$
3. $\frac{3}{4} \div \frac{2}{9}$
4. $\frac{3}{10} \div \frac{4}{25}$
5. $\frac{5}{6} \div \frac{2}{5}$
6. $\frac{8}{9} \div \frac{3}{8}$
7. $\frac{5}{10} \div \frac{10}{16}$
8. $\frac{8}{15} \div \frac{12}{25}$
9. $\frac{8}{9} \div \frac{2}{3}$
10. $\frac{9}{10} \div \frac{39}{40}$

Mixed Numbers to Top Heavy Fractions – Change these to top heavy fractions

1. $1\frac{3}{4}$
2. $2\frac{1}{3}$
3. $2\frac{2}{3}$
4. $6\frac{2}{7}$
5. $4\frac{3}{5}$
6. $2\frac{9}{10}$
7. $8\frac{5}{6}$
8. $7\frac{1}{4}$
9. $51\frac{1}{2}$
10. $9\frac{5}{8}$

Fractions of – Find the fractions of these amounts

1. $\frac{1}{4}$ of 20
2. $\frac{1}{8}$ of 32
3. $\frac{1}{7}$ of 56
4. $\frac{3}{4}$ of 20
5. $\frac{2}{3}$ of 12
6. $\frac{4}{5}$ of 30
7. $\frac{4}{7}$ of 21
8. $\frac{5}{8}$ of 56
9. $\frac{3}{8}$ of 96
10. $\frac{7}{9}$ of 108

Fractions to Percentages – Change these fractions into the equivalent percentages

1. $\frac{3}{4}$
2. $\frac{7}{10}$
3. $\frac{21}{50}$
4. $\frac{13}{20}$
5. $\frac{7}{25}$
6. $\frac{3}{5}$
7. $\frac{17}{25}$
8. $\frac{22}{40}$
9. $\frac{42}{60}$
10. $\frac{69}{75}$

Adding & Subtracting Fractions – Add, or subtract, these fractions

1. $\frac{2}{7} + \frac{3}{7}$
2. $\frac{7}{20} + \frac{9}{20}$
3. $\frac{5}{8} - \frac{3}{8}$
4. $\frac{11}{15} - \frac{4}{15}$
5. $\frac{5}{7} + \frac{3}{7}$
6. $\frac{13}{20} + \frac{7}{10}$
7. $\frac{11}{12} - \frac{5}{12}$
8. $\frac{3}{8} + \frac{1}{4}$
9. $\frac{11}{12} - \frac{1}{4}$
10. $\frac{5}{8} + \frac{1}{6}$
11. $\frac{9}{20} + \frac{11}{25}$
12. $\frac{8}{9} - \frac{7}{12}$

Fractions Workout - Answers

Show your workings and leave in simplest form where appropriate

Equivalent Fractions - Fill in the missing number to make the fractions the same

1. $\frac{2}{3}=\frac{\_\_}{12}$ 8
2. $\frac{4}{5}=\frac{\_\_}{30}$ 24
3. $\frac{1}{3}=\frac{\_\_}{18}$ 6
4. $\frac{2}{5}=\frac{\_\_}{45}$ 18
5. $\frac{3}{7}=\frac{\_\_}{35}$ 15
6. $\frac{4}{7}=\frac{\_\_}{21}$ 12
7. $\frac{3}{5}=\frac{\_\_}{50}$ 30
8. $\frac{5}{6}=\frac{\_\_}{24}$ 20
9. $\frac{5}{6}=\frac{\_\_}{42}$ 35
10. $\frac{7}{12}=\frac{\_\_}{48}$ 28

Simplifying Fractions - Simplify these:

1. $\frac{10}{30}=\frac{1}{3}$
2. $\frac{8}{24}=\frac{1}{3}$
3. $\frac{9}{24}=\frac{3}{8}$
4. $\frac{12}{36}=\frac{1}{3}$
5. $\frac{15}{25}=\frac{3}{5}$
6. $\frac{15}{40}=\frac{3}{8}$
7. $\frac{14}{35}=\frac{2}{5}$
8. $\frac{6}{33}=\frac{2}{11}$
9. $\frac{18}{27}=\frac{2}{3}$
10. $\frac{66}{121}=\frac{6}{11}$

Multiplying Fractions - Multiply these:

1. $\frac{1}{4}\times\frac{2}{5}=\frac{1}{10}$
2. $\frac{1}{7}\times\frac{5}{6}=\frac{5}{42}$
3. $\frac{1}{12}\times\frac{9}{11}=\frac{3}{44}$
4. $\frac{2}{3}\times\frac{4}{5}=\frac{8}{15}$
5. $\frac{2}{3}\times\frac{6}{7}=\frac{4}{7}$
6. $\frac{3}{4}\times\frac{8}{11}=\frac{6}{11}$
7. $\frac{15}{17}\times\frac{4}{5}=\frac{12}{17}$
8. $\frac{10}{21}\times\frac{3}{4}=\frac{5}{14}$
9. $\frac{7}{12}\times\frac{5}{11}=\frac{35}{132}$
10. $\frac{3}{8}\times\frac{4}{15}=\frac{1}{10}$

Top Heavy Fractions to Mixed numbers – Change these to mixed numbers

1. $\frac{21}{9}=2\frac{1}{3}$
2. $\frac{11}{3}=3\frac{2}{3}$
3. $\frac{7}{4}=1\frac{3}{4}$
4. $\frac{33}{4}=8\frac{1}{4}$
5. $\frac{22}{5}=4\frac{2}{5}$
6. $\frac{30}{7}=4\frac{2}{7}$
7. $\frac{23}{8}=2\frac{7}{8}$
8. $\frac{59}{8}=7\frac{3}{8}$
9. $\frac{65}{6}=10\frac{5}{6}$
10. $\frac{95}{12}=7\frac{11}{12}$

Dividing Fractions - Divide these:

1. $\frac{2}{3} \div \frac{5}{7} = \frac{14}{15}$
2. $\frac{4}{7} \div \frac{8}{11} = \frac{11}{14}$
3. $\frac{3}{4} \div \frac{2}{9} = 3\frac{3}{8}$
4. $\frac{3}{10} \div \frac{4}{25} = 1\frac{7}{8}$
5. $\frac{5}{6} \div \frac{2}{5} = 2\frac{1}{12}$
6. $\frac{8}{9} \div \frac{3}{8} = 2\frac{10}{27}$
7. $\frac{5}{10} \div \frac{10}{16} = \frac{4}{5}$
8. $\frac{8}{15} \div \frac{12}{25} = 1\frac{1}{9}$
9. $\frac{8}{9} \div \frac{2}{3} = 1\frac{1}{3}$
10. $\frac{9}{10} \div \frac{39}{40} = \frac{12}{13}$

Mixed Numbers to Top Heavy Fractions – Change these to top heavy fractions

1. $1\frac{3}{4} = \frac{7}{4}$
2. $2\frac{1}{3} = \frac{7}{3}$
3. $2\frac{2}{3} = \frac{8}{3}$
4. $6\frac{2}{7} = \frac{44}{7}$
5. $4\frac{3}{5} = \frac{23}{5}$
6. $2\frac{9}{10} = \frac{29}{10}$
7. $8\frac{5}{6} = \frac{53}{6}$
8. $7\frac{1}{4} = \frac{29}{4}$
9. $51\frac{1}{2} = \frac{103}{2}$
10. $9\frac{5}{8} = \frac{77}{8}$

Fractions of – Find the fractions of these amounts

1. $\frac{1}{4}$ of 20 5
2. $\frac{1}{8}$ of 32 4
3. $\frac{1}{7}$ of 56 8
4. $\frac{3}{4}$ of 20 15
5. $\frac{2}{3}$ of 12 8
6. $\frac{4}{5}$ of 30 24
7. $\frac{4}{7}$ of 21 12
8. $\frac{5}{8}$ of 56 35
9. $\frac{3}{8}$ of 96 36
10. $\frac{7}{9}$ of 108 84

Fractions to Percentages – Change these fractions into the equivalent percentages

1. $\frac{3}{4}$ =75%
2. $\frac{7}{10}$ =70%
3. $\frac{21}{50}$ =42%
4. $\frac{13}{20}$ =65%
5. $\frac{7}{25}$ =28%
6. $\frac{3}{5}$ =60%
7. $\frac{17}{25}$ =68%
8. $\frac{22}{40}$ =55%
9. $\frac{42}{60}$ =70%
10. $\frac{69}{75}$ =92%

Adding & Subtracting Fractions – Add, or subtract, these fractions

1. $\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$
2. $\frac{7}{20} + \frac{9}{20} = \frac{4}{5}$
3. $\frac{5}{8} - \frac{3}{8} = \frac{1}{4}$
4. $\frac{11}{15} - \frac{4}{15} = \frac{7}{15}$
5. $\frac{5}{7} + \frac{3}{7} = 1\frac{1}{7}$
6. $\frac{13}{20} + \frac{7}{10}$ $1\frac{7}{20}$
7. $\frac{11}{12} - \frac{5}{12} = \frac{1}{2}$
8. $\frac{3}{8} + \frac{1}{4} = \frac{5}{8}$
9. $\frac{11}{12} - \frac{1}{4} = \frac{2}{3}$
10. $\frac{5}{8} + \frac{1}{6} = \frac{19}{24}$
11. $\frac{9}{20} + \frac{11}{25}$ $\frac{89}{100}$
12. $\frac{8}{9} - \frac{7}{12}$ $\frac{11}{36}$