

Cancelling Down Fractions

1 $\frac{2}{18} \times \frac{6}{10} \times \frac{5}{28} \times \frac{7}{15} =$

2 $\frac{12}{40} \times \frac{30}{48} \times \frac{25}{36} \times \frac{24}{45} =$

3 $\frac{18}{60} \times \frac{30}{42} \times \frac{25}{92} \times \frac{24}{45} =$

4 $\frac{33}{100} \times \frac{30}{36} \times \frac{20}{25} \times \frac{16}{40} =$

5 $\frac{34}{35} \times \frac{30}{51} \times \frac{18}{40} \times \frac{15}{36} =$

6 $\frac{12}{40} \times \frac{18}{24} \times \frac{48}{60} \times \frac{8}{9} =$

7 $\frac{13}{21} \times \frac{30}{48} \times \frac{14}{26} \times \frac{24}{50} =$

8 $\frac{44}{100} \times \frac{30}{48} \times \frac{25}{55} \times \frac{110}{120} =$

9 $\frac{15}{42} \times \frac{30}{42} \times \frac{21}{35} \times \frac{28}{60} =$

10 $\frac{9}{16} \times \frac{88}{90} \times \frac{55}{105} \times \frac{21}{121} =$

11 $\frac{38}{45} \times \frac{30}{57} \times \frac{27}{96} \times \frac{24}{45} =$

12 $\frac{10}{12} \times \frac{30}{88} \times \frac{77}{100} \times \frac{24}{33} =$

13 $\frac{16}{80} \times \frac{10}{48} \times \frac{25}{36} \times \frac{24}{65} =$

14 $\frac{9}{60} \times \frac{30}{36} \times \frac{35}{72} \times \frac{24}{45} =$

15 $\frac{14}{40} \times \frac{30}{63} \times \frac{25}{42} \times \frac{28}{45} =$

16 $\frac{35}{60} \times \frac{30}{45} \times \frac{3}{10} \times \frac{7}{21} =$

17 $\frac{26}{40} \times \frac{30}{50} \times \frac{25}{39} \times \frac{18}{60} =$

18 $\frac{23}{62} \times \frac{30}{34} \times \frac{17}{46} \times \frac{31}{45} =$

19 $\frac{144}{200} \times \frac{21}{36} \times \frac{5}{18} \times \frac{24}{36} =$

20 $\frac{34}{39} \times 26 \times \frac{25}{85} \times \frac{2}{12} =$

21 $\frac{16}{25} \times \frac{30}{48} \times \frac{49}{36} \times \frac{24}{63} =$

22 $\frac{25}{27} \times 9 \times \frac{25}{32} \times \frac{24}{125} =$

23 $\frac{39}{42} \times \frac{14}{18} \times \frac{75}{140} \times \frac{2}{25} =$

24 $\frac{44}{60} \times \frac{30}{42} \times \frac{27}{55} \times \frac{24}{36} =$

25 $\frac{24}{50} \times \frac{15}{72} \times \frac{9}{14} \times \frac{70}{99} =$

26 $\frac{36}{52} \times \frac{54}{65} \times \frac{39}{48} \times \frac{26}{45} =$

27 $\frac{35}{40} \times 20 \times \frac{17}{100} \times \frac{20}{34} =$

28 $\frac{45}{80} \times \frac{36}{80} \times \frac{100}{108} \times \frac{12}{16} =$

29 $\frac{12}{38} \times \frac{23}{55} \times \frac{19}{46} \times \frac{24}{144} =$

30 $\frac{52}{70} \times \frac{42}{45} \times \frac{105}{120} \times \frac{12}{130} =$

31 $\frac{36}{48} \times \frac{18}{24} \times \frac{7}{12} \times \frac{48}{72} =$

32 $\frac{19}{58} \times \frac{16}{76} \times \frac{16}{92} \times \frac{120}{144} =$

Adding Fractions

Leave your answers as simplified fractions or mixed numbers where appropriate.

(1) $\frac{1}{3} + \frac{1}{3} =$

(2) $\frac{2}{5} + \frac{1}{5} =$

(3) $\frac{4}{7} + \frac{2}{7} =$

(4) $\frac{3}{4} + \frac{1}{8} =$

(5) $\frac{1}{3} + \frac{2}{9} =$

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

(7) $\frac{3}{4} + \frac{5}{6} =$

(8) $\frac{2}{3} + \frac{1}{4} =$

(9) $\frac{3}{5} + \frac{3}{4} =$

(10) $\frac{2}{3} + \frac{5}{7} =$

(11) $\frac{1}{2} + \frac{2}{3} + \frac{1}{6} =$

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

(13) $5\frac{1}{8} + 3\frac{2}{5} =$

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

(15) $\frac{1}{x} + \frac{2}{y} =$

(16) At a school one third of the pupils are in year 7 and one half of the pupils are in year 8. How many pupils are **not** in year 7 or year 8 at the school?

Subtracting Fractions

Leave your answers as simplified fractions or mixed numbers where appropriate.

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

(2) $\frac{3}{4} - \frac{1}{4} =$

(3) $\frac{7}{12} - \frac{1}{3} =$

(4) $\frac{7}{12} - \frac{5}{6} =$

(5) $\frac{1}{3} - \frac{1}{4} =$

(6) $\frac{4}{5} - \frac{3}{4} =$

(7) $\frac{7}{4} - \frac{1}{6} =$

(8) $\frac{2}{9} - \frac{1}{2} =$

(9) $\frac{2}{3} - \frac{7}{8} =$

(10) $\frac{2}{5} - \frac{9}{4} =$

(11) $4\frac{3}{4} - 1\frac{1}{2} =$

(12) $5\frac{1}{3} - 3\frac{1}{4} =$

(13) $7\frac{2}{5} - 2\frac{2}{3} =$

(14) $\frac{1}{a} - \frac{1}{b} =$

(15) $3 + \frac{4}{p} =$

(16) Fred has seven eighths of a bag of sweets at home. He eats one fifth of the remaining sweets. What fraction of the bag of sweets has he now got left?

Multiplying Fractions

Leave your answers as simplified fractions or mixed numbers where appropriate.

(1) $\frac{1}{2} \times \frac{1}{3} =$

(2) $\frac{2}{3} \times \frac{1}{7} =$

(3) $\frac{2}{3} \times \frac{1}{2} =$

(4) $\frac{3}{4} \times \frac{3}{5} =$

(5) $\frac{3}{5} \times \frac{1}{6} =$

(6) $\frac{2}{3} \times \frac{7}{8} =$

(7) $\frac{8}{7} \times \frac{7}{8} =$

(8) $4 \times \frac{7}{3} =$

(9) $\frac{3}{5} \times 6 =$

(10) $\frac{1}{2} \times \frac{4}{7} \times \frac{2}{3} =$

(11) $\frac{1}{5} \times \frac{2}{3} \times \frac{2}{5} =$

(12) $1\frac{2}{5} \times 3\frac{2}{3} =$

(13) $4\frac{1}{6} \times 2\frac{2}{5} =$

(14) $\frac{4}{a} \times \frac{3}{b} =$

(15) $\frac{5}{a} \times \frac{2}{b} \times \frac{d}{c} =$

(16) Jane ate one third of 2 fifths of a cake. What fraction of the cake did she eat?

Dividing Fractions

Leave your answers as simplified fractions or mixed numbers where appropriate.

(1) $\frac{1}{3} \div \frac{1}{2} =$

(2) $\frac{1}{5} \div \frac{1}{4} =$

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

(4) $\frac{3}{4} \div \frac{1}{3} =$

(5) $\frac{9}{7} \div 3 =$

(6) $4 \div \frac{1}{5} =$

(7) $\frac{9}{7} \div \frac{9}{7} =$

(8) $\frac{2}{3} \div \frac{4}{9} =$

(9) $\frac{9}{8} \div \frac{4}{9} =$

(10) $\frac{4}{3} \div \frac{4}{5} =$

(11) $\frac{5}{3} \div \left(\frac{5}{6} \times \frac{3}{5} \right) =$

(12) $2\frac{1}{3} \div 1\frac{1}{5} =$

(13) $3\frac{2}{7} \div 2\frac{2}{3} =$

(14) $\frac{1}{a} \div \frac{2}{b} =$

(15) $\frac{a}{b} \div \frac{c}{d} =$

(16) Kevin is seeing how many eighths he can cut from one quarter of a cake. How many would you expect him to be able to cut?

Equivalent Fractions

1 Copy the fractions and fill in the missing number to make the fractions equivalent.

a $\frac{1}{5} = \frac{\quad}{10}$

b $\frac{2}{7} = \frac{4}{\quad}$

c $\frac{2}{3} = \frac{\quad}{15}$

d $\frac{3}{5} = \frac{12}{\quad}$

e $\frac{3}{8} = \frac{\quad}{32}$

f $\frac{4}{9} = \frac{\quad}{45}$

g $\frac{5}{6} = \frac{15}{\quad}$

h $\frac{7}{8} = \frac{28}{\quad}$

2 Copy the fractions and fill in the missing number to make the fractions equivalent.

a $\frac{4}{7} = \frac{\quad}{28}$

b $\frac{5}{8} = \frac{\quad}{48}$

c $\frac{2}{9} = \frac{\quad}{54}$

d $\frac{3}{5} = \frac{24}{\quad}$

e $\frac{5}{12} = \frac{\quad}{36}$

f $\frac{7}{20} = \frac{21}{\quad}$

g $\frac{3}{16} = \frac{15}{\quad}$

h $\frac{7}{25} = \frac{\quad}{100}$

3 Write each fraction in its simplest form.

a $\frac{3}{6}$

b $\frac{6}{8}$

c $\frac{7}{21}$

d $\frac{10}{40}$

e $\frac{20}{25}$

f $\frac{12}{16}$

g $\frac{42}{48}$

h $\frac{36}{40}$

4 Write each fraction in its simplest form.

a $\frac{25}{100}$

b $\frac{24}{50}$

c $\frac{100}{150}$

d $\frac{75}{200}$

e $\frac{48}{60}$

f $\frac{72}{90}$

g $\frac{85}{100}$

h $\frac{125}{1000}$

5 Write each set of fractions in order. Start with the smallest fraction.

a $\frac{3}{5}, \frac{7}{10}$

b $\frac{5}{6}, \frac{3}{4}$

c $\frac{2}{3}, \frac{5}{6}, \frac{7}{12}$

d $\frac{9}{20}, \frac{4}{5}, \frac{3}{4}$

e $\frac{4}{15}, \frac{1}{3}, \frac{3}{10}$

f $\frac{3}{4}, \frac{9}{16}, \frac{5}{8}$

g $\frac{23}{40}, \frac{7}{10}, \frac{3}{5}, \frac{13}{20}$

h $\frac{1}{2}, \frac{3}{5}, \frac{5}{12}, \frac{11}{30}, \frac{7}{15}$

Mixed Numbers - Multiplication and Division

6 Work out

a $1\frac{1}{4} \times \frac{1}{3}$

b $1\frac{3}{5} \times \frac{1}{2}$

c $2\frac{2}{3} \times \frac{1}{5}$

d $\frac{3}{7} \times 3\frac{1}{2}$

e $1\frac{1}{3} \times 2\frac{1}{4}$

f $3\frac{1}{2} \times 1\frac{1}{4}$

g $3\frac{1}{3} \times 1\frac{4}{5}$

h $2\frac{1}{7} \times 2\frac{4}{5}$

7 Work out

a $1\frac{1}{3} \times 1\frac{1}{4}$

b $2\frac{1}{2} \times 1\frac{3}{5}$

c $3\frac{3}{4} \times 1\frac{1}{10}$

d $1\frac{2}{3} \times 4\frac{1}{5}$

e $2\frac{2}{7} \times 4\frac{3}{8}$

f $4\frac{1}{6} \times 4\frac{4}{5}$

g $6\frac{3}{7} \times 1\frac{5}{9}$

h $8\frac{1}{3} \times 2\frac{7}{10}$

8 Work out

a $\frac{3}{4} \times \frac{5}{6} + \frac{3}{16}$

b $\frac{17}{20} - \frac{4}{5} \times \frac{3}{8}$

c $(1\frac{2}{3} + \frac{5}{6}) \times \frac{8}{9}$

d $(2\frac{7}{9} - 1\frac{1}{3}) \times 4\frac{1}{2}$

9 Work out

a $\frac{2}{3} \div \frac{3}{5}$

b $\frac{3}{7} \div \frac{4}{5}$

c $\frac{4}{5} \div \frac{3}{10}$

d $\frac{9}{16} \div \frac{3}{8}$

e $\frac{5}{8} \div \frac{15}{32}$

f $\frac{7}{10} \div \frac{14}{25}$

g $\frac{20}{21} \div \frac{8}{15}$

h $\frac{25}{32} \div \frac{15}{16}$

10 Work out

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

b $2\frac{4}{5} \div \frac{1}{10}$

c $2\frac{1}{3} \div \frac{1}{9}$

d $3\frac{3}{4} \div 5$

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

f $2\frac{4}{9} \div \frac{2}{3}$

g $7\frac{1}{5} \div \frac{9}{10}$

h $5\frac{1}{3} \div \frac{4}{9}$

Fractions of Quantities

11 Find

a $\frac{3}{4}$ of £184

b $\frac{5}{8}$ of £496

c $\frac{5}{6}$ of £318

d $\frac{17}{20}$ of £460

e $\frac{15}{16}$ of 336 m

f $\frac{39}{50}$ of £1750

g $\frac{7}{40}$ of 660 kg

h $\frac{29}{100}$ of 40 km

12 Find

a $\frac{2}{5}$ of £4

b $\frac{3}{8}$ of 12 m

c $\frac{7}{16}$ of 6 km

d $\frac{5}{12}$ of 78 cm

e $\frac{17}{32}$ of 20 kg

f $\frac{9}{10}$ of 175 grams

g $\frac{3}{40}$ of £1420

h $\frac{3}{4}$ of £68.40

Convert the following to fractions

a	0.2	j	0.86	s	0.8395
b	0.7	k	0.38	t	0.378
c	0.5	l	0.98	u	0.765
d	0.65	m	0.76	v	0.9985
e	0.35	n	0.34	w	0.9392
f	0.9	o	0.88	x	0.837
g	0.625	p	0.676	y	0.767
h	0.375	q	0.735	z	0.315
l	0.25	r	0.7665		

Convert these decimals into mixed numbers

a	3.25	f	12.7	k	56.85	p	95.45
b	60.25	g	16.1	l	23.85	q	86.85
c	40.5	h	18.3	m	52.65	r	55.15
d	82.5	l	52.6	n	87.75	s	18.05
e	65.7	j	35.3	o	92.85	t	23.35

Convert these fractions into mixed numbers

1	$\frac{7}{4} =$					16	$\frac{17}{3} =$
2	$\frac{9}{4} =$	9	$\frac{24}{7} =$			17	$\frac{29}{8} =$
3	$\frac{11}{4} =$	10	$\frac{30}{4} =$			18	$\frac{49}{8} =$
4	$\frac{25}{4} =$	11	$\frac{29}{7} =$			19	$\frac{49}{4} =$
5	$\frac{17}{7} =$	12	$\frac{16}{5} =$			20	$\frac{82}{7} =$
6	$\frac{23}{5} =$	13	$\frac{24}{9} =$			21	$\frac{95}{11} =$
7	$\frac{18}{5} =$	14	$\frac{36}{5} =$			22	$\frac{88}{16} =$
8	$\frac{7}{2} =$	15	$\frac{43}{9} =$				