

A $5 + 6 = 11$ $10 \times 10 = 100$ $(6 \times 6) + 5 = 41$ $27 \times 8 = 216$
 $8 + 8 = 16$ $4 \times 7 = 28$ $(9 \times 1) + 7 = 16$ $49 \times 6 = 294$
 $0 + 7 = 7$ $9 \times 3 = 27$ $(5 \times 8) + 4 = 44$ $107 \times 7 = 749$
 $7 + 8 = 15$ $8 \times 6 = 48$ $(8 \times 0) + 6 = 6$ $93 \times 10 = 930$
 $4 + 7 = 11$ $1 \times 8 = 8$ $(10 \times 5) + 8 = 58$ $180 \times 10 = 1800$
 $18 + 9 = 27$ $5 \times 9 = 45$ $(8 \times 8) + 6 = 70$ $95 \times 20 = 1900$
 $15 + 8 = 23$ $7 \times 7 = 49$ $(3 \times 3) + 2 = 11$ $86 \times 40 = 3440$
 $3 + 29 = 32$ $0 \times 0 = 0$ $(9 \times 8) + 7 = 79$ $100 \times 80 = 8000$
 $7 + 36 = 43$ $4 \times 8 = 32$ $(4 \times 9) + 5 = 41$ $98 \times 100 = 9800$
 $14 + 19 = 33$ $9 \times 7 = 63$ $(7 \times 6) + 3 = 45$ $204 \times 100 = 20400$

$12 - 5 = 7$ $24 \div 3 = 8$ $29 \div 3 = 9 \text{ r } 2$ $102 \div 3 = 34$
 $9 - 0 = 9$ $40 \div 8 = 5$ $67 \div 8 = 8 \text{ r } 3$ $336 \div 4 = 84$
 $11 - 3 = 8$ $0 \div 6 = 0$ $21 \div 4 = 5 \text{ r } 1$ $648 \div 6 = 108$
 $14 - 5 = 9$ $54 \div 9 = 6$ $6 \div 7 = 0 \text{ r } 6$ $590 \div 10 = 59$
 $15 - 9 = 6$ $7 \div 7 = 1$ $39 \div 5 = 7 \text{ r } 4$ $800 \div 10 = 80$
 $24 - 6 = 18$ $42 \div 7 = 6$ $70 \div 9 = 7 \text{ r } 7$ $540 \div 20 = 27$
 $26 - 9 = 17$ $81 \div 9 = 9$ $51 \div 6 = 8 \text{ r } 3$ $420 \div 60 = 7$
 $32 - 8 = 24$ $36 \div 4 = 9$ $13 \div 7 = 1 \text{ r } 6$ $1050 \div 50 = 21$
 $58 - 9 = 49$ $63 \div 9 = 7$ $52 \div 5 = 10 \text{ r } 2$ $4000 \div 100 = 40$
 $47 - 20 = 27$ $56 \div 8 = 7$ $4 \div 9 = 0 \text{ r } 4$ $2900 \div 100 = 29$

B Write these numbers.

Fifty thousand and seven 50007
 Sixty-two thousand four hundred and two 62402
 One hundred and forty thousand and eleven 140011
 Two hundred and six thousand and nine 206009
 $30000 + 400 + 6 =$ 30406
 $100000 + 7000 + 50 + 8 =$ 107058
 $(4 \times 1000) + (6 \times 100) + (3 \times 10) + 8 =$ 4638
 $(9 \times 1000) + (7 \times 10) + 5 =$ 9075
 $(3 \times 1000) + (4 \times 10) =$ 3040
 1 million 1000000
 $1\frac{1}{2}$ million 1500000
 $\frac{1}{4}$ million 250000
 2.7 million 2700000

C Write as decimals.

47 tenths 4.7 How many tenths equal 68
 201 tenths 20.1 14.9 149
 4 hundredths 0.04 30.4? 304

How many hundredths equal

309 hundredths 3.09 93
 580 hundredths 5.8 705
 603 thousandths 0.603 320
 75 thousandths 0.075 705
 3009 thousandths 3.009 320

How many thousandths equal

$9 + \frac{3}{10} + \frac{8}{100} =$ 9.38 3
 $10 + \frac{7}{100} + \frac{2}{1000} =$ 10.072 78
 5 tenths + 0.003 1520
 2 hundredths = 0.52 2800
 17 hundredths and 1.52 4090
 6 thousandths = 0.176 4090

D $5.03 + 0.7 = 5.73$ $6.45 \times 10 = 64.5$ $79 \div 10 = 7.9$
 $2.5 + 1.54 = 4.04$ $0.873 \times 10 = 8.73$ $40.2 \div 10 = 4.02$
 $0.06 + 1.04 = 1.1$ $2.03 \times 100 = 203$ $34 \div 100 = 0.34$
 $3.7 + 0.35 = 4.05$ $0.092 \times 100 = 9.2$ $10.7 \div 100 = 0.107$
 $0.28 + 1.625 = 1.905$ $1.64 \times 1000 = 1640$ $608 \div 1000 = 0.608$
 $2 - 1.4 = 0.6$ $0.053 \times 1000 = 53$ $1035 \div 1000 = 1.035$
 $1.4 - 0.9 = 0.5$ $1.8 \times 5 = 9$ $5.6 \div 8 = 0.7$
 $10 - 8.75 = 1.25$ $4 \times 1.63 = 6.52$ $10.25 \div 5 = 2.05$
 $4.8 - 3.76 = 1.04$ $0.09 \times 8 = 0.72$ $0.636 \div 6 = 0.106$
 $0.7 - 0.58 = 0.12$ $7 \times 2.08 = 14.56$ $4.77 \div 9 = 0.53$
 $1.063 \times 6 = 6.378$ $8.032 \div 8 = 1.004$

E Find the value of x.

$x + 7 = 24$ 17
 $5 + x = 32$ 27
 $x + 1.5 = 5$ 3.5
 $31 - x = 16$ 15
 $x - 6.3 = 10$ 16.3
 $10 \times x = 25$ 2.5
 $x \times 4 = 18$ 4.5
 $7 = \frac{x}{5}$ 35
 $\frac{x}{10} = 0.6$ 6
 $9 + x = 7 \times 7$ 40

A Fill in the missing numerator or denominator.

$\frac{3}{4} = \frac{12}{16}$ $\frac{2}{3} = \frac{8}{12}$ $\frac{7}{8} = \frac{21}{24}$ $\frac{5}{6} = \frac{15}{18}$ $\frac{4}{5} = \frac{40}{50}$ $\frac{3}{10} = \frac{30}{100}$

Write each fraction in its simplest form.

$\frac{9}{12} = \frac{3}{4}$ $\frac{12}{18} = \frac{2}{3}$ $\frac{20}{25} = \frac{4}{5}$ $\frac{24}{30} = \frac{4}{5}$ $\frac{70}{100} = \frac{7}{10}$ $\frac{45}{100} = \frac{9}{20}$

Change each improper fraction to a mixed number.

$\frac{19}{4} = 4\frac{3}{4}$ $\frac{31}{5} = 6\frac{1}{5}$ $\frac{43}{8} = 5\frac{3}{8}$ $\frac{29}{6} = 4\frac{5}{6}$ $\frac{77}{10} = 7\frac{7}{10}$ $\frac{40}{3} = 13\frac{1}{3}$

Change each mixed number to an improper fraction.

$7\frac{3}{4} = \frac{31}{4}$ $8\frac{2}{3} = \frac{26}{3}$ $5\frac{4}{5} = \frac{29}{5}$ $9\frac{7}{10} = \frac{97}{10}$ $4\frac{7}{8} = \frac{39}{8}$ $10\frac{5}{6} = \frac{65}{6}$

B Write as a fraction in its simplest form.

50 of 75 $\frac{2}{3}$
 30p of £1.00 $\frac{3}{10}$
 25cm of 1m $\frac{1}{4}$
 12kg of 30kg $\frac{2}{5}$
 70 of 100 $\frac{7}{10}$
 800g of 1kg $\frac{4}{5}$
 400ml of 2l $\frac{1}{5}$
 45 of 100 $\frac{9}{20}$

C Find

$\frac{3}{5}$ of 70 42
 $\frac{5}{8}$ of 64 40
 $\frac{7}{10}$ of £1.20 84p
 $\frac{5}{6}$ of 42l 35l
 $\frac{4}{7}$ of 350g 200g
 $\frac{13}{100}$ of £1.00 13p
 $\frac{2}{3}$ of 1200 800
 $\frac{35}{100}$ of 1kg. 350g

Find the whole when

$\frac{1}{6}$ is 35 210
 $\frac{3}{4}$ is 27p 36p
 $\frac{4}{5}$ is 36cm 45cm
 $\frac{7}{10}$ is £1.40 £2.00
 $\frac{2}{3}$ is 800g 1200g
 $\frac{5}{9}$ is 5000 9000
 $\frac{3}{8}$ is 24l 64l
 $\frac{9}{20}$ is £1.80 £4.00

D Write as percentages.

a 33 out of 100 33% b 87 out of 100 87% c 9 out of 100 9% d 45 out of 100 45%
 a 0.65 65% b 0.38 38% c 0.75 75% d 0.3 30%
 a $\frac{29}{100}$ 29% b $\frac{56}{100}$ 56% c $\frac{1}{100}$ 1% d $\frac{13}{100}$ 13%

Change each fraction first to hundredths, then write it as a percentage.

a $\frac{19}{50} = \frac{38}{100} = 38\%$ b $\frac{3}{25} = \frac{12}{100} = 12\%$ c $\frac{13}{20} = \frac{65}{100} = 65\%$
 a $\frac{3}{4} = \frac{75}{100} = 75\%$ b $\frac{4}{5} = \frac{80}{100} = 80\%$ c $\frac{7}{10} = \frac{70}{100} = 70\%$

Fill the blank spaces in each of the columns. The first is done for you.

	a	b	c	d	e	f	g	h	i	j	k	l	m
Fraction in its simplest form	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{1}{10}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{1}{20}$	$\frac{1}{100}$
Decimal fraction	0.5	0.25	0.75	0.2	0.4	0.6	0.8	0.1	0.3	0.7	0.9	0.05	0.01
Percentage	50%	25%	75%	20%	40%	60%	80%	10%	30%	70%	90%	5%	1%

E Find the value of

25% of 120 30 Find the value of 7p
 50% of 35 17.5 50% of 14p £1.30
 75% of 400 300 20% of £6.50 93p
 10% of 1000 100 100% of 93p 250g
 30% of 90 27 10% of 2.5kg 200ml
 70% of 200 140 5% of 4l 60cm
 90% of 160 144 30% of 2m 1p
 20% of 95p 19p 1% of £1.00 7p
 40% of £20 £8.00 7% of £1.00 9p
 60% of £15 £9.00 3% of £3.00 £1.08
 12% of £9.00 12p

F Find as a percentage

6 of 24 25%
 $7\frac{1}{2}$ of 15 50%
 40p of 50p 80%
 93p of 93p 100%
 200g of $\frac{1}{2}$ kg 40%
 700ml of 1l 70%
 25p of £2.50 10%
 £1.50 of £2.00 75%
 7p of £1.00 7%
 30cm of 1.5m. 20%