

Year 6

Arithmetic

Questions

by **Richard Brown**

Contents Page

Place Value

How Many	1
Digit Value	2

Add

Compensate	3
Multiples of 1,000s - 1,000,000s	4
Decimals	5
Column Addition	6
Column Addition with Decimals	7

Subtract

Compensate	8
Multiples of 1,000s - 1,000,000s	9
Decimals	10
Column Subtraction	11
Column Subtraction with Decimals	12

Multiply

Multiples of 10s	13
Decimals	14
x10, x100 and x1,000	15
Short Multiplication	16
Short Multiplication with Decimals	17
Long Multiplication	18

Divide

Multiples of 10s	19
Decimals	20
÷10, ÷100 and ÷1,000	21
Short Division	22
Short Division with Decimals	24
Long Division	25

Contents Page

Find The Missing Number

Find The Missing Number	26
Balance Equations	27

Indices

Add and Subtract Indices	28
--------------------------	----

BIDMAS

BIDMAS	29
--------	----

Percentages

Percentage of a Quantity	30
--------------------------	----

Fractions

Fraction of a Quantity	31
Add Proper Fractions	32
Subtract Proper Fractions	33
Add Mixed Fractions	34
Subtract Mixed Fractions	35
Multiply Proper Fractions	36
Multiply Mixed Fractions	38
Divide Proper Fractions	39
Converted to Percentages and Decimals	40

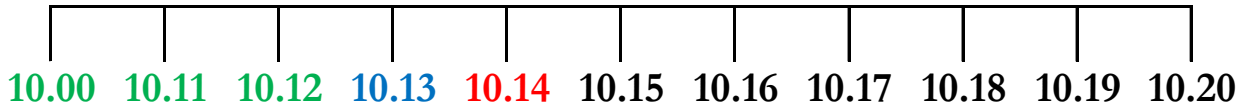
Answers and Glossary

41

Key Language and Representations

Reasoning Scenarios are the arithmetic test questions applied to a real-life reasoning and problem solving scenario.

Number Lines are used to count forwards and backwards in whole, decimal numbers and fractional numbers.



Concrete Objects are manipulated or handled to calculate and represent a number sentence and enable understanding. E.g. a metric ruler.

Formal Written Methods set out working in columnar form.

Ladder Method

$$\begin{array}{r}
 1 \ 2 \ 9 \\
 \times \quad \quad 7 \\
 \hline
 \quad \quad 6 \ 3 \\
 1 \ 4 \ 0 \\
 + \ 7 \ 0 \ 0 \\
 \hline
 1 \\
 \hline
 \underline{\underline{9 \ 0 \ 3}}
 \end{array}$$

Grid Method

x	200	60	7
4	800	240	28

Short Multiplication

$$\begin{array}{r}
 1 \ 7 \ 3 \\
 \times \quad \quad 5 \\
 \hline
 \quad \quad 3 \ 1 \\
 \hline
 \underline{\underline{8 \ 6 \ 5}}
 \end{array}$$

$$\begin{array}{r}
 1 \ 3 \ 0 \\
 \times \quad \quad 9 \\
 \hline
 \quad \quad 2 \\
 \hline
 \underline{\underline{1 \ 1 \ 7 \ 0}}
 \end{array}$$

Long Division

$$\begin{array}{r}
 \quad \quad 0 \ 6 \ 7 \ r \ 1 \\
 2 \overline{) 1 \ 13 \ 15} \\
 \underline{- 0} \\
 \quad 1 \ 3 \\
 \underline{- 1 \ 2} \\
 \quad \quad 1 \ 5 \\
 \quad \quad \underline{- 1 \ 4} \\
 \quad \quad \quad 1
 \end{array}$$

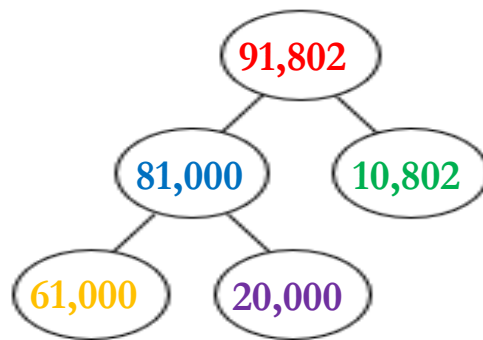
Short Division

$$\begin{array}{r}
 \quad \quad 0 \ 6 \ 7 \ r \ 1 \\
 2 \overline{) 1 \ 13 \ 15}
 \end{array}$$

$$\begin{array}{r}
 \quad \quad 0 \ 4 \ 3 \ r \ 1 \\
 4 \overline{) 1 \ 17 \ 13}
 \end{array}$$

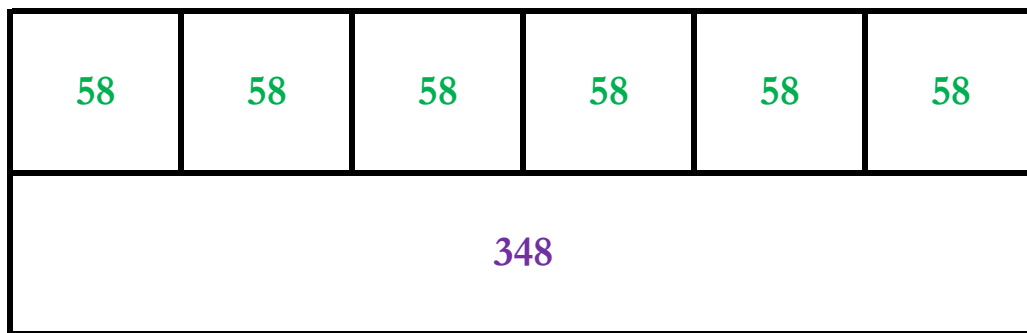
Strategy Applied is when formal written method is used to calculate an arithmetic question or a reasoning and problem solving scenario. Explained using appropriate mathematical language, proven using concrete objects that can be manipulated, shown with pictorial representations to visualise the calculations, enabling deeper understanding.

Part Whole Models are pictorial mathematical images to represent an arithmetic question or reasoning and problem solving scenario.



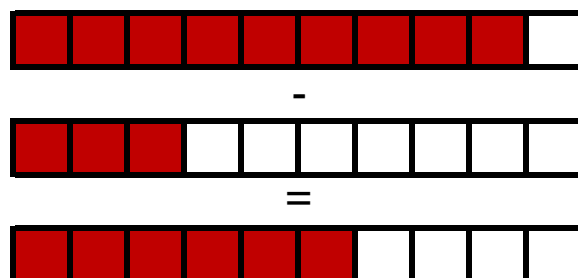
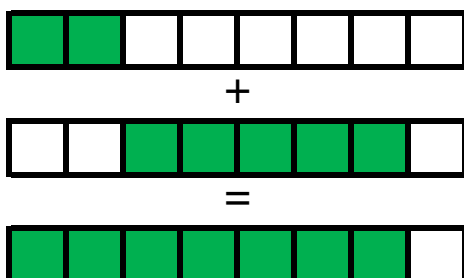
Bar Models are an image, that pictorially represents a calculation.

$$58 \times 6 = 348$$



$$\frac{2}{8} + \frac{5}{8} = \frac{7}{8}$$

$$\frac{9}{10} - \frac{3}{10} = \frac{6}{10}$$



Number Grid

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109
110	111	112	113	114	115	116	117	118	119
120	121	122	123	124	125	126	127	128	129
130	131	132	133	134	135	136	137	138	139
140	141	142	143	144	145	146	147	148	149
150	151	152	153	154	155	156	157	158	159

Multiplication Square

x	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0
1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100
11	22	33	44	55	66	77	88	99	110
12	24	36	48	60	72	84	96	108	120

Decimal Number Grid

0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9
5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9
7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9
8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9
10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9
11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9
12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9
13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9
14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9
15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9

How Many

How many **1,000,000s** (millions), **100,000s** (hundred thousands), **10,000s** (ten thousands) and **0.001s** (thousandths) in each number

1) 98,765,432.109 = ___

2) 25,124,619.102 = ___

3) 36,217,983.213 = ___

4) 49,353,774.908 = ___

5) 58,406,861.987 = ___

6) 63,537,902.765 = ___

7) 71,601,393.432 = ___

8) 82,721,548.098 = ___

9) 95,834,657.876 = ___

10) 96,095,372.065 = ___

Digit Value

What is the digit value of the **1,000,000s** (millions), **100,000s** (hundred-thousands), **10,000s** (ten thousands) and **0.001s** (thousandths) in each number?

1) 98,765,432.109 = _____

2) 25,124,619.102 = _____

3) 36,217,983.213 = _____

4) 49,353,774.908 = _____

5) 58,406,861.987 = _____

6) 63,537,902.765 = _____

7) 71,601,393.432 = _____

8) 82,721,548.098 = _____

9) 95,834,657.876 = _____

10) 96,095,372.065 = _____

Compensate

1) $567,621 + 7,099 = \underline{\quad}$

2) $355,102 + 54,097 = \underline{\quad}$

3) $400,102 + 87,005 = \underline{\quad}$

4) $675,555 + 987 = \underline{\quad}$

5) $888,777 + 55,005 = \underline{\quad}$

6) $801,821 + 1,002 = \underline{\quad}$

7) $812,392 + 98,505 = \underline{\quad}$

8) $333,333 + 2,222 = \underline{\quad}$

9) $40,915 + 8,998 = \underline{\quad}$

10) $8,391 + 999 = \underline{\quad}$

11) $\underline{\quad} = 99,999 + 200$

12) $\underline{\quad} = 99,999 + 50$

13) $\underline{\quad} = 9,999 + 20$

14) $\underline{\quad} = 8,999 + 60$

Multiples of 1,000s - 1,000,000s

1) $368,701 + 21,000 = \underline{\quad}$

2) $494,009 + 32,000 = \underline{\quad}$

3) $80,400 + 73,000 = \underline{\quad}$

4) $840,000 + 48,000 = \underline{\quad}$

5) $383,000 + 92,000 = \underline{\quad}$

6) $372,000 + 43,000 = \underline{\quad}$

7) $468,888 + 110,000 = \underline{\quad}$

8) $301,900 + 85,000 = \underline{\quad}$

9) $560,000 + 450,000 = \underline{\quad}$

10) $900,900 + 290,000 = \underline{\quad}$

11) $\underline{\quad} = 210,100 + 72,000$

12) $\underline{\quad} = 444,444 + 55,000$

13) $\underline{\quad} = 230,000 + 90,000$

14) $\underline{\quad} = 260,000 + 75,000$

Decimals

1) $56.97 + 8.102 = \underline{\quad}$

2) $94.37 + 8.122 = \underline{\quad}$

3) $32.97 + 1.001 = \underline{\quad}$

4) $21.06 + 1.934 = \underline{\quad}$

5) $22.87 + 5.100 = \underline{\quad}$

6) $340.0 + 3.905 = \underline{\quad}$

7) $23.56 + 5.036 = \underline{\quad}$

8) $25.04 + 9.138 = \underline{\quad}$

9) $57.40 + 1.308 = \underline{\quad}$

10) $12.60 + 4.194 = \underline{\quad}$

11) $\underline{\quad} = 33.75 + 5.130$

12) $\underline{\quad} = 48.18 + 8.713$

13) $\underline{\quad} = 65.41 + 8.160$

14) $\underline{\quad} = 38.10 + 8.112$

Column Addition

$$\begin{array}{r} 1) \ 6 \ 8 \ 2 \ 0 \ 8 \ 8 \\ + \ 3 \ 7 \ 5 \ 2 \ 5 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \ 6 \ 3 \ 6 \ 2 \ 4 \ 2 \\ + \ 2 \ 1 \ 7 \ 8 \ 3 \ 8 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \ 8 \ 9 \ 9 \ 7 \ 3 \\ \quad 3 \ 8 \ 2 \ 0 \ 8 \\ + \ 2 \ 1 \ 7 \ 8 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 4) \ 8 \ 0 \ 0 \ 6 \ 7 \ 9 \\ + \ 5 \ 9 \ 9 \ 7 \ 3 \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \ 7 \ 5 \ 2 \ 4 \ 7 \ 6 \\ + \ 5 \ 2 \ 8 \ 0 \ 1 \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6) \ 6 \ 7 \ 5 \ 2 \ 5 \\ \quad 6 \ 3 \ 6 \ 2 \ 4 \\ + \ 5 \ 2 \ 8 \ 0 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} 7) \ 7 \ 8 \ 0 \ 4 \ 0 \ 0 \\ + \ 3 \ 3 \ 0 \ 5 \ 0 \ 0 \\ \hline \end{array}$$

$$\begin{array}{r} 8) \ 8 \ 7 \ 0 \ 9 \ 9 \ 9 \\ + \ 4 \ 8 \ 0 \ 9 \ 9 \ 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9) \ 8 \ 7 \ 0 \ 9 \ 9 \\ \quad 7 \ 8 \ 0 \ 4 \ 0 \\ + \ 2 \ 7 \ 8 \ 5 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 10) \ 7 \ 5 \ 5 \ 1 \ 0 \ 2 \\ + \ 3 \ 8 \ 9 \ 0 \ 7 \ 0 \\ \hline \end{array}$$

$$\begin{array}{r} 11) \ 5 \ 5 \ 5 \ 8 \ 0 \ 5 \\ + \ 2 \ 7 \ 8 \ 5 \ 3 \ 7 \\ \hline \end{array}$$

$$\begin{array}{r} 12) \ 4 \ 8 \ 0 \ 9 \ 9 \\ \quad 3 \ 8 \ 9 \ 0 \ 7 \\ + \ 2 \ 5 \ 6 \ 9 \ 2 \\ \hline \end{array}$$

Column Addition with Decimals

$$\begin{array}{r} 1) \quad 8 \ 6 \ . \ 9 \ 7 \ 5 \\ + \quad 5 \ 1 \ . \ 5 \ 2 \ 1 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 3 \ 4 \ . \ 0 \ 2 \ 7 \\ + \quad 3 \ 9 \ . \ 0 \ 5 \ 0 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 8 \ . \ 5 \ 2 \ 1 \\ \ 5 \ . \ 3 \ 5 \ 6 \\ + \quad 3 \ . \ 9 \ 7 \ 3 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 9 \ 4 \ . \ 3 \ 7 \ 2 \\ + \quad 8 \ 1 \ . \ 8 \ 4 \ 5 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 5 \ 2 \ . \ 3 \ 5 \ 6 \\ + \quad 4 \ 5 \ . \ 0 \ 5 \ 6 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 9 \ . \ 3 \ 7 \ 2 \\ \ 5 \ . \ 9 \ 7 \ 5 \\ + \quad 4 \ . \ 0 \ 9 \ 9 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 4 \ 2 \ . \ 9 \ 7 \ 3 \\ + \quad 3 \ 0 \ . \ 0 \ 9 \ 9 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 9 \ 5 \ . \ 7 \ 0 \ 4 \\ + \quad 2 \ 1 \ . \ 3 \ 8 \ 3 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 9 \ . \ 9 \ 4 \ 0 \\ \ 3 \ . \ 9 \ 7 \ 3 \\ \ 2 \ . \ 0 \ 6 \ 7 \\ + \quad 1 \ . \ 1 \ 2 \ 9 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 2 \ 1 \ . \ 0 \ 6 \ 7 \\ + \quad 1 \ 9 \ . \ 4 \ 4 \ 5 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 3 \ 5 \ . \ 6 \ 9 \ 2 \\ + \quad 2 \ 9 \ . \ 0 \ 4 \ 3 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 4 \ . \ 1 \ 8 \ 6 \\ \ 2 \ . \ 7 \ 0 \ 4 \\ \ 1 \ . \ 4 \ 4 \ 5 \\ + \quad 1 \ . \ 8 \ 6 \ 1 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 9 \ 8 \ . \ 1 \ 8 \ 6 \\ + \quad 4 \ 3 \ . \ 9 \ 4 \ 0 \\ \hline \cdot \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 1 \ 7 \ . \ 8 \ 6 \ 1 \\ + \quad 1 \ 5 \ . \ 1 \ 2 \ 9 \\ \hline \cdot \\ \hline \end{array}$$

Compensate

$$1) \quad 40,915 \quad - \quad 8,998 \quad = \quad \underline{\quad}$$

$$2) \quad 9,900 \quad - \quad 2 \quad = \quad \underline{\quad}$$

$$3) \quad 100,101 \quad - \quad 9 \quad = \quad \underline{\quad}$$

$$4) \quad 777,999 \quad - \quad 12 \quad = \quad \underline{\quad}$$

$$5) \quad 333,333 \quad - \quad 8,998 \quad = \quad \underline{\quad}$$

$$6) \quad 8,999 \quad - \quad 60 \quad = \quad \underline{\quad}$$

$$7) \quad 100,000 \quad - \quad 9 \quad = \quad \underline{\quad}$$

$$8) \quad 9,999 \quad - \quad 2 \quad = \quad \underline{\quad}$$

$$9) \quad 812,392 \quad - \quad 91,997 \quad = \quad \underline{\quad}$$

$$10) \quad 99,999 \quad - \quad 50 \quad = \quad \underline{\quad}$$

$$11) \quad 20,001 \quad - \quad 4 \quad = \quad \underline{\quad}$$

$$12) \quad 99,999 \quad - \quad 200 \quad = \quad \underline{\quad}$$

$$13) \quad 801,821 \quad - \quad 21,003 \quad = \quad \underline{\quad}$$

$$14) \quad 675,555 \quad - \quad 987 \quad = \quad \underline{\quad}$$

Multiples of 1,000s - 1,000,000s

1) $630,000 - 325,000 = \underline{\quad}$

2) $840,000 - 48,000 = \underline{\quad}$

3) $900,000 - 546,000 = \underline{\quad}$

4) $750,000 - 80,000 = \underline{\quad}$

5) $820,000 - 405,000 = \underline{\quad}$

6) $301,900 - 20,000 = \underline{\quad}$

7) $601,600 - 20,000 = \underline{\quad}$

8) $900,900 - 150,000 = \underline{\quad}$

9) $210,100 - 25,000 = \underline{\quad}$

10) $444,444 - 33,000 = \underline{\quad}$

11) $330,000 - 230,000 = \underline{\quad}$

12) $888,800 - 303,000 = \underline{\quad}$

13) $812,000 - 98,000 = \underline{\quad}$

14) $801,000 - 16,000 = \underline{\quad}$

Decimals

1) $154.600 - 8.500 = \underline{\quad}$

2) $817.020 - 59.010 = \underline{\quad}$

3) $65.710 - 1.510 = \underline{\quad}$

4) $524.100 - 8.100 = \underline{\quad}$

5) $36.880 - 4.680 = \underline{\quad}$

6) $782.400 - 3.400 = \underline{\quad}$

7) $291.600 - 81.600 = \underline{\quad}$

8) $460.405 - 9.205 = \underline{\quad}$

9) $178.60 - 1.500 = \underline{\quad}$

10) $385.100 - 8.100 = \underline{\quad}$

11) $\underline{\quad} = 6.000 - 5.738$

12) $\underline{\quad} = 9.000 - 3.45$

13) $\underline{\quad} = 4.000 - 1.15$

14) $\underline{\quad} = 7.000 - 2.25$

Column Subtraction

$$\begin{array}{r} 1) \ 5 \ 0 \ 0 \ 1 \ 0 \ 2 \\ - \ 2 \ 1 \ 7 \ 8 \ 3 \ 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \ 4 \ 0 \ 0 \ 6 \ 7 \ 9 \\ - \ 2 \ 9 \ 9 \ 7 \ 3 \ 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \ 7 \ 2 \ 5 \ 3 \ 0 \\ - \ 3 \ 5 \ 9 \ 6 \ 1 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \ 7 \ 8 \ 0 \ 0 \ 0 \ 3 \\ - \ 2 \ 7 \ 9 \ 1 \ 5 \ 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \ 3 \ 5 \ 5 \ 1 \ 0 \ 2 \\ - \ \ \ 7 \ 8 \ 9 \ 0 \ 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \ 6 \ 3 \ 6 \ 3 \ 4 \\ - \ \ \ 8 \ 7 \ 8 \ 8 \\ \hline \\ \hline \end{array}$$

Column Subtraction with Decimals

$$\begin{array}{r} 1) \quad 3 \ 5 \ 0 \ . \ 2 \ 7 \ 0 \\ - \quad \quad 5 \ 3 \ . \ 9 \ 0 \ 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 5 \ 2 \ 3 \ . \ 5 \ 6 \ 0 \\ - \quad \quad 4 \ 5 \ . \ 0 \ 5 \ 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 2 \ 5 \ 7 \ . \ 0 \ 4 \ 0 \\ - \quad \quad \quad 9 \ . \ 1 \ 3 \ 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 3 \ 8 \ 5 \ . \ 1 \ 0 \ 0 \\ - \quad \quad \quad 8 \ . \ 1 \ 1 \ 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 2 \ 5 \ 6 \ . \ 9 \ 2 \ 0 \\ - \quad \quad 3 \ 9 \ . \ 0 \ 4 \ 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 4 \ 6 \ 0 \ . \ 4 \ 0 \ 0 \\ - \quad \quad 2 \ 9 \ . \ 5 \ 0 \ 0 \\ \hline \\ \hline \end{array}$$

Multiples of 10

1) $600 \times 40 = \underline{\quad}$

2) $80 \times 120 = \underline{\quad}$

3) $30 \times 110 = \underline{\quad}$

4) $500 \times 80 = \underline{\quad}$

5) $3 \times 1,200 = \underline{\quad}$

6) $4 \times 1,100 = \underline{\quad}$

7) $50 \times 700 = \underline{\quad}$

8) $40 \times 120 = \underline{\quad}$

9) $500 \times 60 = \underline{\quad}$

10) $40 \times 800 = \underline{\quad}$

11) $\underline{\quad} = 20 \times 50 \times 30$

12) $\underline{\quad} = 40 \times 60 \times 10$

13) $\underline{\quad} = 80 \times 70 \times 20$

14) $\underline{\quad} = 15 \times 50 \times 20$

Decimals

1) $0.08 \times 9 = \underline{\quad}$

2) $0.07 \times 8 = \underline{\quad}$

3) $0.06 \times 7 = \underline{\quad}$

4) $0.04 \times 12 = \underline{\quad}$

5) $0.03 \times 7 = \underline{\quad}$

6) $0.8 \times 8 = \underline{\quad}$

7) $0.7 \times 9 = \underline{\quad}$

8) $0.6 \times 11 = \underline{\quad}$

9) $0.3 \times 5 = \underline{\quad}$

10) $0.4 \times 11 = \underline{\quad}$

11) $\underline{\quad} = 0.12 \times 2$

12) $\underline{\quad} = 0.11 \times 3$

13) $\underline{\quad} = 0.18 \times 4$

14) $\underline{\quad} = 0.09 \times 5$

x10, x100 and x1,000

Multiply each value below first by **x10**, then by **x100**, next by **x1,000** and write down the **answers consecutively**.

1) 2.381

2) 4.11

3) 300.01

4) 999.9

5) 567

6) 5869

7) 4560.05

8) 28.6

9) 8851.0

10) 101.0

11) 238.100

12) 58.69

13) 99.99

14) 5.67

Short Multiplication

$$\begin{array}{r} 1) \quad 3 \quad 2 \quad 9 \quad 5 \quad 4 \\ \times 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 7 \quad 0 \quad 8 \quad 2 \quad 5 \\ \times 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 2 \quad 8 \quad 3 \quad 9 \quad 5 \\ \times 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 6 \quad 5 \quad 7 \quad 4 \\ \times 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 4 \quad 7 \quad 8 \quad 1 \\ \times 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 5 \quad 4 \quad 1 \quad 8 \\ \times 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 8 \quad 7 \quad 9 \\ \times 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 1 \quad 6 \quad 7 \\ \times 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 5 \quad 7 \quad 4 \\ \times 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 4 \quad 7 \quad 6 \\ \times 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 7 \quad 1 \\ \times 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 3 \quad 3 \\ \times 8 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 6 \quad 1 \\ \times 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 6 \quad 5 \\ \times 3 \\ \hline \\ \hline \end{array}$$

Short Multiplication with Decimals

$$\begin{array}{r} 1) \quad 7 \ 5 \ . \ 8 \ 3 \ 6 \\ \times \qquad \qquad \qquad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 9 \ 1 \ . \ 3 \ 7 \ 2 \\ \times \qquad \qquad \qquad 9 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 3 \ 5 \ . \ 4 \ 9 \ 8 \\ \times \qquad \qquad \qquad 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 2 \ 5 \ . \ 0 \ 9 \ 9 \\ \times \qquad \qquad \qquad 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 8 \ 2 \ . \ 9 \ 9 \ 8 \\ \times \qquad \qquad \qquad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 9 \ 3 \ . \ 7 \ 8 \ 9 \\ \times \qquad \qquad \qquad 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 9 \ 8 \ . \ 0 \ 7 \ 9 \\ \times \qquad \qquad \qquad 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 2 \ 9 \ . \ 7 \ 8 \ 4 \\ \times \qquad \qquad \qquad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 8 \ 2 \ . \ 3 \ 0 \ 9 \\ \times \qquad \qquad \qquad 8 \\ \hline \\ \hline \end{array}$$

Long Multiplication

1) 4 5 9 8 x 6 2 = ___

2) 3 4 8 7 x 5 3 = ___

3) 7 8 6 x 9 4 = ___

4) 6 7 5 x 8 3 = ___

5) 8 3 x 9 4 = ___

6) 2 4 5 8 x 3 6 = ___

7) 1 3 9 7 x 2 5 = ___

8) 9 7 8 x 6 8 = ___

9) 8 6 7 x 5 7 = ___

10) 7 4 x 6 9 = ___

Multiples of 10

1) $3,300 \div 30 = \underline{\quad}$

2) $42,000 \div 70 = \underline{\quad}$

3) $48,000 \div 80 = \underline{\quad}$

4) $3,600 \div 50 = \underline{\quad}$

5) $3,500 \div 70 = \underline{\quad}$

6) $5,500 \div 500 = \underline{\quad}$

7) $4,500 \div 300 = \underline{\quad}$

8) $32,000 \div 80 = \underline{\quad}$

9) $48,000 \div 40 = \underline{\quad}$

10) $15,000 \div 500 = \underline{\quad}$

11) $36,000 \div 90 = \underline{\quad}$

12) $36,000 \div 60 = \underline{\quad}$

13) $48,000 \div 40 = \underline{\quad}$

14) $60,000 \div 50 = \underline{\quad}$

Decimals

1) $5.4 \div 9 = \underline{\quad}$

2) $2.7 \div 3 = \underline{\quad}$

3) $6.0 \div 15 = \underline{\quad}$

4) $5.05 \div 1 = \underline{\quad}$

5) $7.2 \div 8 = \underline{\quad}$

6) $32.6 \div 1 = \underline{\quad}$

7) $9.5 \div 5 = \underline{\quad}$

8) $9.6 \div 4 = \underline{\quad}$

9) $4.86 \div 3 = \underline{\quad}$

10) $1.32 \div 12 = \underline{\quad}$

11) $1.8 \div 3 = \underline{\quad}$

12) $1.2 \div 12 = \underline{\quad}$

13) $9.1 \div 7 = \underline{\quad}$

14) $1.21 \div 11 = \underline{\quad}$

$\div 10$, $\div 100$ and $\div 1,000$

Divide the values below first by $\div 10$, then by $\div 100$, next by $\div 1,000$ and write down all **three answers consecutively**.

1) 156

2) 831

3) 958

4) 7467

5) 1624

6) 456

7) 193

8) 331

9) 222

10) 255

11) 304

12) 2534

13) 326

14) 3915

Short Division

1) $8,253 \div 4 = \underline{\quad}$

2) $7,643 \div 9 = \underline{\quad}$

3) $5,844 \div 8 = \underline{\quad}$

4) $3,686 \div 8 = \underline{\quad}$

5) $1,571 \div 7 = \underline{\quad}$

6) $6,789 \div 7 = \underline{\quad}$

7) $8,954 \div 6 = \underline{\quad}$

8) $4,555 \div 6 = \underline{\quad}$

Short Division

$$1) \quad 12 \overline{) 7521}$$

$$2) \quad 13 \overline{) 9875}$$

$$3) \quad 17 \overline{) 5715}$$

$$4) \quad 25 \overline{) 8615}$$

$$5) \quad 29 \overline{) 7252}$$

$$6) \quad 43 \overline{) 1119}$$

$$7) \quad 59 \overline{) 2245}$$

$$8) \quad 97 \overline{) 8829}$$

Short Division with Decimals

1) $32.6 \div 5 = \underline{\quad}$

2) $76.2 \div 5 = \underline{\quad}$

3) $51.4 \div 4 = \underline{\quad}$

4) $37.8 \div 4 = \underline{\quad}$

5) $60.4 \div 8 = \underline{\quad}$

6) $96.8 \div 8 = \underline{\quad}$

7) $37.2 \div 6 = \underline{\quad}$

8) $87.6 \div 6 = \underline{\quad}$

9) $78.6 \div 4 = \underline{\quad}$

10) $98.52 \div 4 = \underline{\quad}$

Long Division

1) $37 \overline{) 888}$

2) $83 \overline{) 8051}$

3) $17 \overline{) 714}$

4) $59 \overline{) 2242}$

5) $43 \overline{) 645}$

6) $97 \overline{) 8827}$

7) $29 \overline{) 725}$

8) $43 \overline{) 1118}$

9) $29 \overline{) 6844}$

10) $25 \overline{) 8625}$

11) $19 \overline{) 2261}$

12) $44 \overline{) 5720}$

Find The Missing Number

1) $\underline{\quad} + 20,002 = 33,333$

2) $\underline{\quad} + 25,100 = 40,050$

3) $\underline{\quad} + 58,100 = 63,000$

4) $\underline{\quad} + 3,006 = 19,005$

5) $\underline{\quad} + 30,500 = 80,400$

6) $33,333 - \underline{\quad} = 20,002$

7) $300,001 - \underline{\quad} = 200,002$

8) $121,010 - \underline{\quad} = 111,005$

9) $870,999 - \underline{\quad} = 480,999$

10) $444,005 - \underline{\quad} = 22,006$

Balance Equations

$$1) \quad 18 \times 3 = 2 \times \underline{\quad}$$

$$2) \quad 72,000 = 24 \times \underline{\quad} \times 1,000$$

$$3) \quad 423 \times 7 = 9 \times \underline{\quad}$$

$$4) \quad 48,000 = 16 \times \underline{\quad} \times 1,000$$

$$5) \quad 400 = 20 \times \underline{\quad} \times 10$$

$$6) \quad 3,050,020 = 3,000,000 + \underline{\quad} + 20$$

$$7) \quad 826 = 800 + \underline{\quad} 6$$

$$8) \quad \underline{\quad} + 58,100 = 63,000 - 2,468$$

$$9) \quad \underline{\quad} + 25,100 = 40,050 - 1,357$$

$$10) \quad \underline{\quad} + 20,002 = 33,333 - 9,083$$

$$11) \quad 16 - 20 = - 8 + \underline{\quad}$$

$$12) \quad - 16 + 20 = - 9 + \underline{\quad}$$

$$13) \quad - 12 - 5 = - 17 + \underline{\quad}$$

$$14) \quad 13 - 17 = - 15 + \underline{\quad}$$

Indices

1) $11^2 + 6^2 - 4^3 = \underline{\quad}$

2) $12^2 + 7^2 - 5^3 = \underline{\quad}$

3) $3^2 + 7^3 + 4^2 = \underline{\quad}$

4) $9^2 + 8^3 - 3 = \underline{\quad}$

5) $1^2 + 9^3 - 3^2 = \underline{\quad}$

6) $2^3 + 3 + 11^2 = \underline{\quad}$

7) $4^2 + 7^3 - 5 = \underline{\quad}$

8) $5^2 + 3^3 - 4^2 = \underline{\quad}$

9) $3^2 + 2 + 5^2 = \underline{\quad}$

10) $1^3 + 2^3 + 4^2 = \underline{\quad}$

11) $2^2 + 7^3 - 1^2 = \underline{\quad}$

12) $4^2 + 8^3 - 2^2 = \underline{\quad}$

13) $5^2 + 5^3 - 5^2 = \underline{\quad}$

14) $6^2 + 6^3 - 6^2 = \underline{\quad}$

BIDMAS

1) $10^2 - 60 \div 4 + 9 \times 2 = \underline{\quad}$

2) $(3 + 7) \times (9 + 17) = \underline{\quad}$

3) $60 - 48 \div 4 + 6 = \underline{\quad}$

4) $2 + 7 \times 7 - 10 = \underline{\quad}$

5) $236 - (30 \times 6) = \underline{\quad}$

6) $50 \times 80 - 40 = \underline{\quad}$

7) $8 + 7 \times 3 = \underline{\quad}$

8) $36 + 22 \times 4 = \underline{\quad}$

9) $60 \times 90 - 80 = \underline{\quad}$

10) $100 - 26 \div 2 = \underline{\quad}$

11) $220 - 3 \times 60 = \underline{\quad}$

12) $60 \div (30 - 24) = \underline{\quad}$

13) $50 + (36 \div 6) = \underline{\quad}$

14) $9^2 - 36 \div 9 = \underline{\quad}$

Percentage of a Quantity

1) 36% of 450 = ___

2) 36% of 4,500 = ___

3) 20% of 300 = ___

4) 20% of 3,000 = ___

5) 35% of 320 = ___

6) 35% of 3,200 = ___

7) 51% of 900 = ___

8) 51% of 9,000 = ___

9) 20% of 180 = ___

10) 20% of 1,800 = ___

11) 15% of 440 = ___

12) 15% of 4,440 = ___

13) 45% of 460 = ___

14) 45% of 4,600 = ___

Fraction of a Quantity

1) $\frac{7}{8}$ of 64ml =

2) $\frac{1}{7}$ of 602 =

3) $\frac{5}{6}$ x 24 =

4) $\frac{2}{5}$ x 140 =

5) $\frac{5}{6}$ of £72 =

6) $\frac{1}{8}$ of 996 =

7) $\frac{4}{5}$ of 450 =

8) $\frac{5}{8}$ x 40 =

9) $\frac{1}{8}$ of £3.20 =

10) $\frac{3}{4}$ of 1,000 =

Add Proper Fractions

$$1) \frac{2}{3} + \frac{3}{4} = \underline{\quad}$$

$$2) \frac{2}{3} + \frac{4}{5} = \underline{\quad}$$

$$3) \frac{2}{5} + \frac{11}{12} = \underline{\quad}$$

$$4) \frac{2}{5} + \frac{5}{9} = \underline{\quad}$$

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

$$6) \frac{3}{5} + \frac{7}{12} = \underline{\quad}$$

$$7) \frac{5}{6} + \frac{11}{15} = \underline{\quad}$$

$$8) \frac{2}{3} + \frac{11}{12} = \underline{\quad}$$

$$9) \frac{5}{6} + \frac{5}{15} = \underline{\quad}$$

$$10) \frac{1}{5} + \frac{3}{4} = \underline{\quad}$$

Subtract Proper Fractions

$$1) \frac{3}{4} - \frac{5}{10} = \underline{\quad}$$

$$2) \frac{3}{4} - \frac{3}{10} = \underline{\quad}$$

$$3) \frac{7}{5} - \frac{3}{7} = \underline{\quad}$$

$$4) \frac{7}{6} - \frac{7}{10} = \underline{\quad}$$

$$5) \frac{7}{3} - \frac{4}{5} = \underline{\quad}$$

$$6) \frac{3}{4} - \frac{3}{8} = \underline{\quad}$$

$$7) \frac{2}{3} - \frac{5}{21} = \underline{\quad}$$

$$8) \frac{19}{20} - \frac{4}{5} = \underline{\quad}$$

$$9) \frac{8}{9} - \frac{1}{4} = \underline{\quad}$$

$$10) \frac{5}{4} - \frac{5}{6} = \underline{\quad}$$

Add Mixed Fractions

$$1) \quad 2 \frac{2}{3} + 1 \frac{4}{5} = \underline{\quad}$$

$$2) \quad 3 \frac{2}{7} + 2 \frac{4}{5} = \underline{\quad}$$

$$3) \quad 1 \frac{2}{5} + 2 \frac{11}{12} = \underline{\quad}$$

$$4) \quad 3 \frac{3}{4} + 1 \frac{7}{12} = \underline{\quad}$$

$$5) \quad 4 \frac{5}{6} + 2 \frac{11}{15} = \underline{\quad}$$

$$6) \quad 3 \frac{2}{3} + 1 \frac{11}{12} = \underline{\quad}$$

Subtract Mixed Fractions

$$1) \quad 3 \frac{1}{4} - 1 \frac{7}{8} = \underline{\quad}$$

$$2) \quad 4 \frac{2}{5} - 1 \frac{7}{8} = \underline{\quad}$$

$$3) \quad 6 \frac{1}{6} - 2 \frac{1}{7} = \underline{\quad}$$

$$4) \quad 2 \frac{2}{3} - \frac{2}{9} = \underline{\quad}$$

$$5) \quad 3 \frac{3}{4} - 2 \frac{7}{10} = \underline{\quad}$$

$$6) \quad 4 \frac{2}{5} - 3 \frac{2}{6} = \underline{\quad}$$

Multiply Proper Fractions

$$1) \frac{7}{8} \times 3 = \underline{\quad}$$

$$2) \frac{5}{8} \times 12 = \underline{\quad}$$

$$3) \frac{5}{7} \times 8 = \underline{\quad}$$

$$4) \frac{3}{7} \times 6 = \underline{\quad}$$

$$5) \frac{5}{6} \times 7 = \underline{\quad}$$

$$6) \frac{3}{8} \times 7 = \underline{\quad}$$

$$7) \frac{4}{5} \times 8 = \underline{\quad}$$

$$8) \frac{3}{8} \times 12 = \underline{\quad}$$

Multiply Proper Fractions

$$1) \frac{1}{7} \times \frac{1}{3} = \underline{\quad}$$

$$2) \frac{3}{5} \times \frac{4}{5} = \underline{\quad}$$

$$3) \frac{3}{4} \times \frac{3}{7} = \underline{\quad}$$

$$4) \frac{1}{2} \times \frac{1}{4} = \underline{\quad}$$

$$5) \frac{1}{3} \times \frac{1}{8} = \underline{\quad}$$

$$6) \frac{1}{8} \times \frac{1}{6} = \underline{\quad}$$

$$7) \frac{3}{4} \times \frac{6}{7} = \underline{\quad}$$

$$8) \frac{3}{7} \times \frac{4}{5} = \underline{\quad}$$

Multiply Mixed Fractions

$$1) 2 \frac{3}{5} \times 4 = \underline{\quad}$$

$$2) 2 \frac{1}{3} \times 3 = \underline{\quad}$$

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

$$4) 2 \frac{3}{5} \times 4 = \underline{\quad}$$

$$5) 4 \frac{1}{3} \times 4 = \underline{\quad}$$

$$6) 3 \frac{5}{6} \times 4 = \underline{\quad}$$

$$7) 1 \frac{6}{7} \times 5 = \underline{\quad}$$

$$8) 2 \frac{4}{7} \times 3 = \underline{\quad}$$

Divide Proper Fractions

$$1) \frac{6}{7} \div 2 = \underline{\quad}$$

$$2) \frac{6}{4} \div 2 = \underline{\quad}$$

$$3) \frac{1}{3} \div 5 = \underline{\quad}$$

$$4) \frac{2}{3} \div 4 = \underline{\quad}$$

$$5) \frac{1}{3} \div 3 = \underline{\quad}$$

$$6) \frac{1}{5} \div 2 = \underline{\quad}$$

$$7) \frac{2}{5} \div 6 = \underline{\quad}$$

$$8) \frac{1}{3} \div 4 = \underline{\quad}$$

Converted to Percentages and Decimals

$$1) \frac{5}{20} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$2) \frac{4}{5} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$3) \frac{3}{10} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$4) \frac{1}{4} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$5) \frac{7}{10} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$6) \frac{3}{4} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$7) \frac{2}{5} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

$$8) \frac{15}{20} = \underline{\hspace{2cm}} \% = \underline{\hspace{2cm}}$$

Answers

P. 1

- 1) 9 ten million, 8 million, 7 hundred thousands, 6 ten thousands, 5 thousands
4 hundreds, 3 tens, 2 ones, 1 tenths, 0 hundredths, 9 thousandths
- 2) 2 ten million, 5 million, 1 hundred thousands, 2 ten thousands, 4 thousands
6 hundreds, 1 tens, 9 ones, 1 tenths, 0 hundredths, 2 thousandths
- 3) 3 ten million, 6 million, 2 hundred thousands, 1 ten thousands, 7 thousands
9 hundreds, 8 tens, 3 ones, 2 tenths, 1 hundredths, 3 thousandths
- 4) 4 ten million, 9 million, 3 hundred thousands, 5 ten thousands, 3 thousands
7 hundreds, 7 tens, 4 ones, 9 tenths, 0 hundredths, 8 thousandths
- 5) 5 ten million, 8 million, 4 hundred thousands, 0 ten thousands, 6 thousands
8 hundreds, 6 tens, 1 ones, 9 tenths, 8 hundredths, 7 thousandths
- 6) 6 ten million, 3 million, 5 hundred thousands, 3 ten thousands, 7 thousands
9 hundreds, 0 tens, 2 ones, 7 tenths, 6 hundredths, 5 thousandths
- 7) 7 ten million, 1 million, 6 hundred thousands, 0 ten thousands, 1 thousands
3 hundreds, 9 tens, 3 ones, 4 tenths, 3 hundredths, 2 thousandths
- 8) 8 ten million, 2 million, 7 hundred thousands, 2 ten thousands, 1 thousands
5 hundreds, 4 tens, 8 ones, 0 tenths, 9 hundredths, 8 thousandths
- 9) 9 ten million, 5 million, 8 hundred thousands, 3 ten thousands, 4 thousands
6 hundreds, 5 tens, 7 ones, 8 tenths, 7 hundredths, 6 thousandths
- 10) 9 ten million, 6 million, 0 hundred thousands, 9 ten thousands, 5 thousands
3 hundreds, 7 tens, 2 ones, 0 tenths, 6 hundredths, 5 thousandths

P. 2

- 1) 8,000,000, 700,000, 60,000, 0.009
- 2) 5,000,000, 100,000, 20,000, 0.002
- 3) 6,000,000, 200,000, 10,000, 0.003
- 4) 9,000,000, 300,000, 50,000, 0.008
- 5) 8,000,000, 400,000, 00,000, 0.007
- 6) 3,000,000, 500,000, 30,000, 0.005
- 7) 1,000,000, 600,000, 00,000, 0.002
- 8) 2,000,000, 700,000, 20,000, 0.008
- 9) 5,000,000, 800,000, 30,000, 0.006
- 10) 6,000,000, 000,000, 90,000, 0.005

Answers

P. 3

- 1) 575,620
- 2) 410,099
- 3) 487,107
- 4) 676,542
- 5) 943,782
- 6) 802,823
- 7) 910,897
- 8) 335,555
- 9) 49,913
- 10) 9,390
- 11) 100,199
- 12) 100,049
- 13) 10,019
- 14) 9,059

P. 4

- 1) 389,701
- 2) 526,009
- 3) 153,400
- 4) 888,000
- 5) 475,000
- 6) 415,000
- 7) 578,000
- 8) 386,000
- 9) 1,010,000
- 10) 1,190,000
- 11) 282,000
- 12) 499,444
- 13) 320,000
- 14) 335,000

P. 5

- 1) 65.072
- 2) 102.492
- 3) 33.971
- 4) 22.994
- 5) 27.97
- 6) 343.905
- 7) 28.92
- 8) 34.178
- 9) 58.708
- 10) 16.794
- 11) 38.88
- 12) 56.893
- 13) 73.57
- 14) 46.212

P. 6

- 1) 1,057,341
- 2) 854,080
- 3) 149,964
- 4) 1,400,414
- 5) 1,280,491
- 6) 183,950
- 7) 1,110,900
- 8) 1,351,998
- 9) 192,992
- 10) 1,144,172
- 11) 834,342
- 12) 114,698

P. 7

- 1) 138.496
- 2) 73.077
- 3) 17.850
- 4) 176.217
- 5) 97.412
- 6) 19.446
- 7) 73.072
- 8) 116.087
- 9) 17.109
- 10) 30.512
- 11) 64.735
- 12) 142.126
- 13) 32.990
- 14) 10.196

P. 8

- 1) 31,917
- 2) 8,898
- 3) 100,998
- 4) 777,987
- 5) 324,335
- 6) 8,939
- 7) 99,991
- 8) 9,997
- 9) 720,395
- 10) 99,949
- 11) 19,997
- 12) 99,799
- 13) 780,818
- 14) 674,568

P. 9

- 1) 305,000
- 2) 792,000
- 3) 354,000
- 4) 670,000
- 5) 415,000
- 6) 281,000
- 7) 581,000
- 8) 750,900
- 9) 185,100
- 10) 411,444
- 11) 100,000
- 12) 585,800
- 13) 714,000
- 14) 785,000

P. 10

- 1) 146.1
- 2) 758.01
- 3) 64.2
- 4) 516
- 5) 32.2
- 6) 779
- 7) 210
- 8) 451.2
- 9) 177.1
- 10) 377
- 11) 0.262
- 12) 5.55
- 13) 2.85
- 14) 4.75

Answers

P. 11

- 1) 282,264
- 2) 100,944
- 3) 36,569
- 4) 500,849
- 5) 276,195
- 6) 54,846

P. 12

- 1) 296.365
- 2) 478.504
- 3) 247.902
- 4) 376.988
- 5) 217.877
- 6) 430.9

P. 13

- 1) 24,000
- 2) 9,600
- 3) 3,300
- 4) 40,000
- 5) 3,600
- 6) 4,400
- 7) 35,000
- 8) 480
- 9) 30,000
- 10) 32,000
- 11) 30,000
- 12) 24,000
- 13) 112,000
- 14) 150,000

P. 14

- 1) 0.72
- 2) 0.56
- 3) 0.42
- 4) 0.48
- 5) 0.21
- 6) 6.40
- 7) 0.63
- 8) 0.66
- 9) 1.50
- 10) 4.40
- 11) 0.24
- 12) 0.33
- 13) 0.72
- 14) 0.45

P. 15

- | | | |
|-------------|---------|-----------|
| 1) 23.81 | 238.1 | 2,381 |
| 41.1 | 411 | 4,110 |
| 3) 3,000.1 | 30,001 | 300,010 |
| 4) 9,999 | 99,990 | 999,900 |
| 5) 5,670 | 56,700 | 567,000 |
| 6) 58,690 | 586,900 | 5,869,000 |
| 7) 45,600.5 | 456,005 | 4,560,050 |
| 8) 286 | 2,860 | 28,600 |
| 9) 88,510 | 885,100 | 8,851,000 |
| 10) 1,010 | 10,100 | 101,000 |
| 11) 2,381 | 23,810 | 238,100 |
| 12) 586.9 | 5,869 | 58,690 |
| 13) 999.9 | 9,999 | 99,990 |
| 14) 56.7 | 567 | 5,670 |

P. 16

- 1) 230,678
- 2) 566,600
- 3) 255,555
- 4) 46,018
- 5) 43,029
- 6) 32,508
- 7) 2,637
- 8) 668
- 9) 2,870
- 10) 752
- 11) 568
- 12) 264
- 13) 244
- 14) 195

P. 17

- 1) 379.180
- 2) 822.348
- 3) 248.486
- 4) 150.594
- 5) 414.990
- 6) 656.543
- 7) 588.474
- 8) 89.352
- 9) 660.472

Answers

P. 18

- 1) 285,076
- 2) 184,811
- 3) 73,884
- 4) 56,025
- 5) 7,802
- 6) 88,488
- 7) 34,925
- 8) 66,504
- 9) 40,419
- 10) 5,106

P. 19

- 1) 110
- 2) 600
- 3) 600
- 4) 72
- 5) 50
- 6) 11
- 7) 15
- 8) 400
- 9) 1,200
- 10) 30
- 11) 400
- 12) 600
- 13) 1,200
- 14) 1,200

P. 20

- 1) 0.6
- 2) 0.9
- 3) 0.4
- 4) 5.05
- 5) 0.9
- 6) 32.6
- 7) 1.9
- 8) 2.4
- 9) 1.62
- 10) 0.11
- 11) 0.6
- 12) 0.1
- 13) 1.3
- 14) 0.11

P. 21

- | | | |
|-----------|-------|-------|
| 1) 15.6 | 1.56 | 0.156 |
| 2) 83.18 | 8.31 | 0.831 |
| 3) 95.8 | 9.58 | 0.958 |
| 4) 746.7 | 74.67 | 7.467 |
| 5) 162.4 | 16.24 | 1.624 |
| 6) 45.6 | 4.56 | 0.456 |
| 7) 19.3 | 1.93 | 0.193 |
| 8) 33.1 | 3.31 | 0.331 |
| 9) 22.2 | 2.22 | 0.222 |
| 10) 25.5 | 2.55 | 0.255 |
| 11) 30.4 | 3.04 | 0.304 |
| 12) 253.4 | 25.34 | 2.534 |
| 13) 32.6 | 3.26 | 0.326 |
| 14) 391.5 | 39.15 | 3.915 |

P. 22

- 1) 2063 r1 or $\frac{1}{4}$
- 2) 849 r2 or $\frac{2}{9}$
- 3) 730 r4 or $\frac{1}{2}$
- 4) 460 r6 or $\frac{3}{4}$
- 5) 224 r3 or $\frac{3}{7}$
- 6) 969 r6 or $\frac{6}{7}$
- 7) 1,492 r2 or $\frac{1}{3}$
- 8) 759 r1 or $\frac{5}{6}$

P. 23

- 1) 626 r9 or $\frac{3}{4}$
- 2) 759 r8 or $\frac{8}{13}$
- 3) 336 r3 or $\frac{3}{17}$
- 4) 344 r15 or $\frac{3}{5}$
- 5) 250 r2 or $\frac{2}{29}$
- 6) 26 r1 or $\frac{1}{43}$
- 7) 38 r3 or $\frac{3}{59}$
- 8) 91 r2 or $\frac{2}{97}$

P. 24

- 1) 6.52
- 2) 15.24
- 3) 1.285
- 4) 9.45
- 5) 7.55
- 6) 12.1
- 7) 6.2
- 8) 14.6
- 9) 19.65
- 10) 24.63

P. 25

- 1) 51
- 2) 97
- 3) 42
- 4) 38
- 5) 15
- 6) 91
- 7) 25
- 8) 26
- 9) 236
- 10) 345
- 11) 6,119
- 12) 130

Answers

P. 26

- 1) 13,331
- 2) 14,950
- 3) 4,900
- 4) 15,999
- 5) 49,900
- 6) 13,331
- 7) 100,001
- 8) 100,005
- 9) 390,000
- 10) 421,999

P. 27

- 1) 27
- 2) 3
- 3) 329
- 4) 3
- 5) 2
- 6) 50,000
- 7) 20
- 8) 2,432
- 9) 13,593
- 10) 4,248
- 11) 4
- 12) 13
- 13) 0
- 14) 11

P. 28

- 1) 93
- 2) 68
- 3) 368
- 4) 590
- 5) 721
- 6) 135
- 7) 354
- 8) 36
- 9) 36
- 10) 25
- 11) 346
- 12) 524
- 13) 125

P. 29

- 1) 67
- 2) 1,530
- 3) 40
- 4) 41
- 5) 56
- 6) 3,960
- 7) 29
- 8) 124
- 9) 5,320
- 10) 87
- 11) 40
- 12) 10
- 13) 56
- 14) 77

P. 30

- 1) 162
- 2) 1,620
- 3) 60
- 4) 600
- 5) 112
- 6) 1,120
- 7) 459
- 8) 4,590
- 9) 36
- 10) 360
- 11) 66
- 12) 660
- 13) 207
- 14) 2,070

P. 31

- 1) 56ml
- 2) 86
- 3) 20
- 4) 56
- 5) £60
- 6) 124.5
- 7) 360
- 8) 25
- 9) £0.40
- 10) 750

P. 32

- 1) $\frac{17}{12}$ or $1\frac{5}{12}$
- 2) $\frac{22}{15}$ or $1\frac{7}{15}$
- 3) $\frac{79}{60}$ or $1\frac{19}{60}$
- 4) $\frac{43}{45}$
- 5) $\frac{16}{12}$ or $1\frac{1}{3}$

- 6) $\frac{71}{60}$ or $1\frac{11}{60}$
- 7) $\frac{47}{30}$ or $1\frac{17}{30}$
- 8) $\frac{19}{12}$ or $1\frac{7}{12}$
- 9) $\frac{35}{30}$ or $1\frac{1}{6}$
- 10) $\frac{19}{20}$

Answers

P. 33

1) $\frac{5}{20}$ or $\frac{1}{4}$

2) $\frac{9}{20}$

3) $\frac{34}{35}$

4) $\frac{28}{60}$ or $\frac{7}{15}$

5) $\frac{23}{35}$

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

7) $\frac{9}{21}$

8) $\frac{3}{20}$

9) $\frac{23}{36}$

10) $\frac{5}{12}$

P. 34

1) $4\frac{7}{15}$

2) $6\frac{3}{35}$

3) $4\frac{19}{60}$

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

5) $7\frac{17}{30}$

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

P. 35

1) $\frac{11}{8}$

2) $2\frac{21}{40}$

3) $4\frac{1}{42}$

4) $2\frac{4}{9}$

5) $1\frac{1}{20}$

6) $1\frac{1}{15}$

P. 36

1) $\frac{21}{8}$ or $2\frac{5}{8}$

2) $\frac{60}{8}$ or $7\frac{1}{2}$

3) $\frac{40}{7}$ or $5\frac{5}{7}$

4) $\frac{18}{7}$ or $2\frac{4}{7}$

5) $\frac{35}{6}$ or $5\frac{5}{6}$

6) $\frac{21}{8}$ or $2\frac{5}{8}$

7) $\frac{32}{5}$ or $6\frac{2}{5}$

8) $\frac{36}{8}$ or $4\frac{1}{2}$

P. 37

1) $\frac{2}{21}$

2) $\frac{12}{25}$

3) $\frac{9}{28}$

4) $\frac{1}{8}$

5) $\frac{1}{24}$

6) $\frac{1}{48}$

7) $\frac{9}{14}$

8) $\frac{12}{35}$

Answers

P. 38

1) $\frac{52}{5}$ or $10\frac{2}{5}$

5) $\frac{52}{3}$ or $17\frac{1}{3}$

2) $\frac{21}{3}$ or 7

6) $\frac{92}{6}$ or $15\frac{1}{6}$

3) $\frac{33}{6}$ or $5\frac{1}{2}$

7) $\frac{65}{7}$ or $9\frac{2}{7}$

4) $\frac{52}{5}$ or $10\frac{2}{5}$

8) $\frac{54}{7}$ or $7\frac{5}{7}$

P. 39

1) $\frac{3}{7}$

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

2) $\frac{3}{4}$

6) $\frac{1}{10}$

3) $\frac{7}{15}$

7) $\frac{1}{15}$

4) $\frac{1}{6}$

8) $\frac{1}{12}$

P. 40

1) 25% 0.25

2) 80% 0.80

3) 30% 0.30

4) 25% 0.25

5) 70% 0.70

6) 75% 0.75

7) 40% 0.40

8) 75% 0.75