BROAD HORIZON
TUITION CENTRE

11+ Tuition – Year 5

Week 1 - Online

ANSWERS

Contents

Maths

Practice – Multiplying by 10, 100 and 1000

Practice – Dividing by 10, 100 and 1000

1. 70
2. 5600
3. 730000
4. 89600
5. 70000
6. 340
7. 620
8. 35
9. 730
10. 9.6
11. 1900
12. 450

1. 720
2. 83500
3. 8300
4. 68
5. 564000
6. 7100
7. 2260
8. 84790
9. 340
10. 5165000
11. 9670
12. 0.45
13. 72.4
14. 592

1. 60
2. 34
3. 96
4. 73
5. 9
6. 64
7. 0.13
8. 5.6
9. 8.2
10. 0.5
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12. 0.00062
13. 7.2
14. 0.0036
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16. 0.952
17. 5
18. 1.455
19. 98.54
20. 950
21. 34
22. 92.5
23. 9562
24. 0.0056
25. 9500
26. 695.1

Further Practice – Multiplying and Dividing by 10, 100 and 1000

Answers

5 x 10 = **50**

6 x 100 = **600**

7 ÷ 10 = **0.7**

4 x 10 = **40**

70 ÷ 100 = **0.7**

6 x 10 = **60**

2 x 100 = **200**

28 ÷ 10 = **2.8**

5 ÷ 10 = **0.5**

8 ÷ 10 = **0.8**

7 x 100 = **700**

8 x 10 = **80**

3 x 100 = **300**

2 ÷ 10 = **0.2**

80 ÷ 100 = **0.8**

9 x 10 = **90**

Answers

34 x 10 = **340**

65 x 100 = **6500**

53 ÷ 10 = **5.3**

87 x 10 = **870**

785 ÷ 100 = **7.85**

64 x 10 = **640**

39 x 100 = **3900**

283 ÷ 10 = **28.3**

65 ÷ 10 = **6.5**

42 ÷ 10 = **4.2**

17 x 100 = **1700**

453 x 10 = **4530**

34 x 100 = **3400**

24 ÷ 10 = **2.4**

124 ÷ 100 = **1.24**

736 x 10 = **7360**

Challenge – Multiplying and Dividing by 10, 100 and 1000

Fill in the missing numbers:

7 x **100** = 700

64 ÷ **10** = 6.4

30 ÷ **100** = 0.3

3 x **10** = 30

Fill in the space with either x or ÷ so that the calculation is correct:

62 ÷ 10 = 6.2

4 **x** 10 = 40

5 **x** 100 = 500

40 ÷ 100 = 0.4

True (**T**) or False (**F**):

7 x 100 = 70 [F]

79 ÷ 10 = 790 [F]

30 ÷ 100 = 0.3 [T]

1 x 10 = 10 [T]

ill in the missing numbers:

7 x **10** = 670

68 ÷ **10** = 6.8

40 ÷ **100** = 6.4

73 x **100** = 7300

ill in the space with either x or ÷ so that the calculation is correct:

42 ÷ 10 = 54.2

46 **x** 10 = 460

73 ÷ 100 = 4.73

37 **x** 10 = 370

rue (**T**) or False (**F**):

7 x 100 = 670 [F]

809 ÷ 10 = 80.9 [T]

68 ÷ 100 = 0.568 [F]

64 x 10 = 640 [T]

Practice - Column Multiplication

Long Multiplication Practice - 3 Digits x 2 Digits **Answers**

1.				
		1	6	1
x			2	3
		4	**8**	**3**
	3	**2**	**2**	**0**
	3	**7**	**0**	**3**

2.				
		2	3	2
x			2	6
	1	**3**	**9**	**2**
	4	**6**	**4**	**0**
	6	**0**	**3**	**2**

3.				
		6	1	4
x			1	8
	4	**9**	**1**	**2**
	6	**1**	**4**	**0**
1	**1**	**0**	**5**	**2**

4.				
		9	6	9
x			9	5
	4	**8**	**4**	**5**
8	**7**	**2**	**1**	**0**
9	**2**	**0**	**5**	**5**

5.				
		7	4	0
x			9	6
	4	**4**	**4**	**0**
6	**6**	**6**	**0**	**0**
7	**1**	**0**	**4**	**0**

6.				
		3	6	2
x			5	8
	2	**8**	**9**	**6**
1	**8**	**1**	**0**	**0**
2	**0**	**9**	**9**	**6**

7.				
		3	0	5
x			7	1
		3	**0**	**5**
2	**1**	**3**	**5**	**0**
2	**1**	**6**	**5**	**5**

8.				
		3	7	0
x			6	4
	1	**4**	**8**	**0**
2	**2**	**2**	**0**	**0**
2	**3**	**6**	**8**	**0**

9.				
		5	8	4
x			1	5
	2	**9**	**2**	**0**
	5	**8**	**4**	**0**
	8	**7**	**6**	**0**

10.				
		8	5	1
x			8	9
	7	**6**	**5**	**9**
6	**8**	**0**	**8**	**0**
7	**5**	**7**	**3**	**9**

11.				
		7	4	9
x			9	8
	5	**9**	**9**	**2**
6	**7**	**4**	**1**	**0**
7	**3**	**4**	**0**	**2**

12.				
		4	8	2
x			2	3
	1	**4**	**4**	**6**
	9	**6**	**4**	**0**
1	**1**	**0**	**8**	**6**

13.				
		6	4	6
x			1	0
				0
	6	**4**	**6**	**0**
	6	**4**	**6**	**0**

14.				
		7	0	9
x			1	7
	4	**9**	**6**	**3**
	7	**0**	**9**	**0**
1	**2**	**0**	**5**	**3**

15.				
		9	1	4
x			5	7
	6	**3**	**9**	**8**
4	**5**	**7**	**0**	**0**
5	**2**	**0**	**9**	**8**

16.				
		7	1	8
x			4	5
	3	**5**	**9**	**0**
2	**8**	**7**	**2**	**0**
3	**2**	**3**	**1**	**0**

Application – Column Multiplication

Use a formal method to calculate the answers to these questions.

1. There are 15 biscuits in a packet. A shop orders 156 packets. How many biscuits will be in the 156 packets? **2340**
2. A school buys 172 boxes of pencils. Each box has 12 pencils. How many pencils has the school bought? **2064**
3. A wholesaler sells apples for 17p each. A grocer buys 197 apples. How much will they cost? **3349 £33.49**
4. It takes 18 minutes to make a toy car. How many minutes will it take to make 205 cars? **3690**
5. A machine makes 16 dice in a minute. A working day is 264 minutes. How many dice are made in 264 minutes? **4224**
6. A cinema has 21 screens. Each screen has 297 seats. How many seats are there in the cinema? **6237**
7. Eggs are sold in trays of 24. In a week, a farmer sells 372 trays. How many eggs does he sell in one week? **8928**
8. A bag of nails contains 613 nails. A hardware store has 23 bags. How many nails are in the 23 bags? **14 099**
9. There are 27 children in a class. Each child pays £7.49 for a school trip. How much do they pay altogether? **20 223 £202.23**
10. A football club has an average attendance of 859 people to each match. What is the total attendance for the 29 matches played in a season? **24 911**

Practice - Short Division

Answers

1. Can you use the written method for division to calculate the answers to these questions?

   a) 56 ÷ 4 = **14**

   b) 48 ÷ 3 = **16**

   c) 96 ÷ 6 = **16**

   d) 110 ÷ 5 = **22**

   e) 136 ÷ 8 = **17**

2. Now try these. They have remainders. (use the correct symbol to represent 'r' for remainder)

   a) 27 ÷ 5 = **5r2**

   b) 49 ÷ 4 = **12r1**

   c) 74 ÷ 6 = **12r2**

   d) 34 ÷ 3 = **11r1**

   e) 67 ÷ 9 = **7r4**

Challenge - Short Division

Name : _____

Answer key

Division

No remainder: S1

1) $7 \overline{)2,562}$ = **366**

2) $5 \overline{)9,305}$ = **1,861**

3) $4 \overline{)4,616}$ = **1,154**

4) $9 \overline{)3,807}$ = **423**

5) $3 \overline{)6,291}$ = **2,097**

6) $6 \overline{)1,128}$ = **188**

7) $2 \overline{)8,254}$ = **4,127**

8) $8 \overline{)5,920}$ = **740**

9) $7 \overline{)7,483}$ = **1,069**

Application – Short division

Answers

1. 498 ÷ 3 = **166**
2. 498 ÷ 4 = **124 r 2**
3. 498 ÷ 6 = **83**
4. 498 ÷ 8 = **62 r 2**
5. 498 ÷ 12 = **41 r 6**
6. 100 packs
7. 46 packs
8. Yes
9. Multiple answers possible.

Verbal Reasoning

GL Techniques – Odd Word Out

1. **hamster** — *The other four are types of bird.*
2. **morning** — *The other four are types of weather.*
3. **sofa** — *The other four are things that would be found in the garden.*
4. **princess** — *The other four are titles given to men.*
5. **ship** — *The other four are vehicles that travel by road.*
6. **banana** — *The other four are types of vegetable.*
7. **line** — *The other four mean a collection of things which are on top of each other.*
8. **bed** — *The other four are kitchen appliances.*
9. **needle** — *The other four are strands of fibre.*
10. **jumper** — *The other four are items of clothing worn below the waist.*
11. **gold** — *The other four are types of precious stone.*
12. **driver** — *The other four are parts of a car.*
13. **clock** — *The other four are units of time.*
14. **office** — *The other four are buildings where people live.*
15. **coral** — *The other four are natural hair colours.*

GL Techniques – Type One

TYPE ONE

the(2nd),ball
to,his
across,into
the,quickly
up,down
hot,cold
in,out
it,into
is,milk
slippers,table
be,quiet
no,deck
church,in
shoes,cloakroom
nine,seven
friday,sunday
in,out
at,herself
come,in
fir,bend

GL Techniques – Type Two

TYPE TWO:

road, canal
head, hand
ring, bracelet
mood, moor
heat, light
yellow, red
live, time
root, foundations
trick, prick
book, music
10, 25 (+5!)
metre, litre
cart, part
hot, cold
apple, potato
lead, ink
pentagon, rectangle
look, listen
steam, gas
write, paint

Shuffled Sentences

Test 1

1. she floated in the pool like a starfish
2. the giraffe stretched its neck to reach the top branches
3. the hippo wallowed in the cool mud
4. police sirens could be heard racing to the crash
5. the fire-engine raced to the scene of the fire
6. the sheep escaped through a hole in the .ge
7. the cows looked up in astonishment
8. the little red tractor bumped across the field
9. I dreamed of owning my own tractor
10. she watched the Olympics with mounting excitement

Non-Verbal Reasoning

Shapes

Warm Up

1. a) 5 b) 7 c) 7 d) 6 e) 8 f) 5

2. Number of same-sided grey shapes: 2
(the second and fourth figures both have a grey shape with seven sides).

Find the Figure Like the First Two

3. D
In all figures, the large white shape must have four sides.

4. C
All figures must have two identical shapes that overlap.

5. C
In all figures, there must be two separate shapes — a large shape and a small shape. The small shape must be the same size as a third of the large shape.

Complete the Grid

6. D
Working from left to right, the small shape becomes larger, and the old large shape gets smaller and moves inside the new large shape.

7. A
Working from left to right, the number of lines of symmetry of the shape increases by two.

8. D
Working from left to right, one shape disappears in each grid square. First the smallest shape disappears, and then the largest shape disappears.

Counting

Warm Up

1. a) 3 b) 3 c) 5 d) 4 e) 4 f) 7

2. Number of cakes with the same number of layers: 2
(the second and fourth cakes also have four layers).

Number of cakes with the same number of cherries: 1
(the first cake also has four cherries).

Complete the Series

3. B
The zebra gains an extra stripe in each series square.

4. C
The series alternates between two and three stars. The stars gain an extra point in each series square.

5. D
The white shape gains an extra side in each series square. An extra dot is added inside the white shape.

Find the Figure Like the First Three

6. A
All stars must have exactly two black points.

7. A
All figures must have two black dots and four small inner lines.

8. D
All figures must be four-sided white shapes, with three inner lines.

Pointing

Warm Up

1. a) square b) triangle c) star
d) circle e) square f) triangle

2. Number of arrows that point in the same direction: 2
(the second and fourth figures both point diagonally down to the right).

Odd One Out

3. E
In all other figures, the arrow points away from the cannon.

4. D
In all other figures, the arrow points in a clockwise direction.

5. A
In all other figures, the arrow points towards the shape with the X inside.

Find the Figure Like the First Two

6. B
In all figures, the arrow must point in the same direction as the roof of the house.

7. C
All figures must have three grey triangles inside the white square. Two of the triangles must point up, and one triangle must point down.

8. A
In all figures, the arrow must point towards the middle of one of the triangle's sides.

Shading and Line Types

Warm Up

1. a) grey b) black c) white
d) black e) grey f) white

2. Number of paintings with the same direction of hatching: 1
(the third figure is the only figure which is hatched going diagonally down to the left).

Number of paintings with the same type of line: 3
(the first, second and fourth figures are the only figures with dotted hatched lines).

Odd One Out

3. B
In all other figures, the line between the circle and the black shape at the top is thick. (In B the line is thin.)

4. D
All other figures have three wavy lines.
(D has three jagged lines.)

5. B
In all other figures, the top and bottom parts of the sock are the same colour.

Complete the Grid

6. D
Working from left to right, the shading of the bottom shape changes from grey to white. The top of the mushroom and its spots swap shadings.

7. D
Working from left to right, each shape changes from being grey with a solid outline in the left-hand column, to being hatched with a dotted outline in the middle column, to being white with a dashed outline in the right-hand column.

8. A
Working from left to right, the three shapes with dashed outlines become white shapes with solid outlines. The white shape with the solid outline becomes grey.

Order and Position

Warm Up

1. a) star b) triangle c) pentagon
d) star e) heart

2. Number of figures with the same order of shapes: 3
(the second, third and fifth figures all go from top to bottom in the order: square, trapezium, triangle).

Find the Figure Like the First Three

3. D
In all figures, the semicircle must overlap one of the star's points.

4. A
In all figures, there must be a four-sided shape on the left-hand side of the figure and a circle on the right-hand side of the figure.

5. B
In all figures, the circles must go from left to right in the order: white, black, black, grey. (The order of the circles is always the same if you start from wherever the white circle is and move right. When the order reaches the right-hand circle, it starts again from the left-hand circle.)

Complete the Pair

6. D
The black segment moves round three places.

7. B
The line and the black dot swap places. The short grey triangle swaps places with the tall grey triangle.

8. C
All of the shapes move one place to the left. (When a shape reaches the far left, it starts again from the far right.)

Rotation

Warm Up

1. a) C b) A c) A d) C e) C f) A

2. Number of identical figures: 2
(the first and second figures).

Rotate the Figure

3. D
The figure has been rotated 90 degrees clockwise. Options A and B are the wrong shape. Option C is a rotated reflection.

4. A
The figure has been rotated 180 degrees. Options B and C have the wrong shading. In option D, the black and white boxes have swapped positions.

5. C
The figure has been rotated 270 degrees clockwise (or 90 degrees anticlockwise.) Option A has four arrows, instead of three. In options B and D, the arrows are in the wrong positions.

Complete the Series

6. B
The arrows rotate 45 degrees clockwise in each series square. The number of arrows alternates between three and one.

7. D
The whole figure apart from the black triangle rotates 90 degrees anticlockwise in each series square. The black triangle rotates 180 degrees in each series square.

8. A
The circle rotates 180 degrees in each series square. The arrow rotates 45 degrees anticlockwise.

Quick Lesson Recap Answers

1. 0.00025
2. 1200
3. 367.8
4. 0.23
5. 587000
6. An abstract noun names something that does not physically exist and so cannot be touched. The names of qualities and characteristics, emotions and feelings, concepts and ideas are abstract nouns.

7. We can look at:
   - The shape
   - Counting
   - Pointing