



BROAD HORIZON
— T U I T I O N —

11+ Tuition

Year 5

Week 05 - Online

ANSWERS

Fraction	Decimal	Percentage
1	1	100%
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$	0.333	33%
$\frac{1}{4}$	0.25	25%
$\frac{1}{5}$	0.2	20%
$\frac{1}{6}$	0.166	16.6%
$\frac{1}{7}$	0.142	14.2%
$\frac{1}{8}$	0.125	12.5%
$\frac{1}{9}$	0.111	11.1%
$\frac{1}{10}$	0.1	10%
$\frac{1}{20}$	0.05	5%

- 1) How do you work out the mean? Add up all the numbers and divide by how many numbers there are
- 2) What is the 'range'? Difference between largest and smallest number
- 3) What is the 'mode'? the most common number
- 4) How do you work out the median? Put the numbers in order and find the number in the middle

(4 marks)

Now work out the Mean, Mode, Median and Range of the numbers in bold on the left-hand side. You will get 1 mark for each individual calculation.

		Mode	Range	Mean	Median
5)	7, 8, 12, 6	None	6	8.25	7.5
6)	3, 9, 17, 11	None	14	10	10

Maths

Roman Numerals

1	I	11	XI	50	L
2	II	12	XII	100	C
3	III	13	XIII	500	D
4	IV	14	XIV	1000	M
5	V	15	XV		
6	VI	16	XVI		
7	VII	17	XVII		
8	VIII	18	XVIII		
9	IX	19	XIX		
10	X	20	XX		

Try writing the following in roman numerals:

- 1) 247 CCXLVII
- 2) 398 CCCXCVIII
- 3) 1350 MCCCL
- 4) 1987 MCMLXXXVII
- 5) 3478 MMMCDLXXVIII

Name: _____

Score : _____

Teacher: _____

Date: _____

Mean, Mode, Median, and Range

1) 8,4,4,8,9, 7,2
2, 4, 4, 7, 8, 8, 9

Mean 6 Median 7 Mode 4 8 -- Range 7

6) 3,4,2
2, 3, 4

Mean 3 Median 3 Mode N=one -- Range 2

2) 7, 5,6
5, 6, 7

Mean 6 Median 6 Mode N=one -- Range 2

7) 6, 7,8
6,7,8

Mean 7 Median 7 Mode N=one -- Range 2

3) 6,8,9,8,4
4, 6, 8, 8, 9

Mean 7 Median 8 Mode 8 _____ Range 5

8) 2,6,5,4,3
2, 3, 4, 5, 6

Mean 4 Median 4 Mode N=one -- Range 4

4) 5,6,4,6,4,2, 1
1,2,4,4,5,6,6

Mean 4 Median 4 Mode 4 6 -- Range 5

9) 8, 8,5,9,5
5,5,8,8,9

Mean 7 Median 8 Mode 5 8 -- Range 4

5) 7, 9,2
2, 7,9

Mean 6 Median 7 Mode N=one -- Range 7

10) 2,8,4,4,8,8,8
2,4,4,8,8,8,8

Mean 6 Median 8 Mode 8 _____ Range 6

Mean, Median, Mode, Range

Lucy's Wear ANSWERS

1a. $387/9 = 43$

1b. 41

1c. 40

1d. 11

2a. $248/9 = 27.55$

2b. 27

2c. 27

2d. 6

3a. $52/9 = 5.77$

3b. 6

3c. 6 and 7

3d. 3

Name: _____

Score: _____

Answer key**Elapsed Time: Nearest Half-Hour**

ES2

Q.No	Start Time	End Time	Elapsed Time
1)	3:00 A.M.	11:30 A.M.	8 hours and 30 minutes
2)	4:00 P.M.	8:30 P.M.	4 hours and 30 minutes
3	10:30 A.M.	11:30 A.M.	1 hour
4	5:00 P.M.	8:00 P.M.	3 hours
5)	7:30 A.M.	10:30 A.M.	3 hours
6	3:30 P.M.	5:30 P.M.	2 hours
7	4:30 A.M.	NOON	7 hours and 30 minutes
8	6:30 P.M.	7:30 P.M.	1 hour
9	1:30 A.M.	6:30 A.M.	5 hours
10)	1:00 P.M.	9:00 P.M.	8 hours
11)	11:00 A.M.	11:30 A.M.	30 minutes
12)	2:30 A.M.	7:30 A.M.	5 hours
13)	2:00 P.M.	11:30 P.M.	9 hours and 30 minutes
14)	6:00 P.M.	8:30 P.M.	2 hours and 30 minutes
15)	NOON	8:30 P.M.	8 hours and 30 minutes

Name: _____

Score: _____

Answer key

Start, End and Elapsed Time

Nearest Half-hour: ESI

Q.No	Start Time	End Time	Elapsed Time
1)	4:30 A.M.	7:30 A.M.	3 hours
2)	5:00 P.M.	6:30 P.M.	1 hour and 30 minutes
3)	2:00 A.M.	8:30 A.M.	6 hours and 30 minutes
4	1:30 A.M.	4:30 A.M.	3 hours
5	6:30 P.M.	11:30 P.M.	5 hours
6)	1:30 P.M.	10:30 P.M.	9 hours
7	3:00 A.M.	5:30 A.M.	2 hours and 30 minutes
8	6:00 P.M.	11:00 P.M.	5 hours
9)	7:30 A.M.	8:30 A.M.	1 hour
10)	10:00 A.M.	NOON	2 hours
11)	4:30 P.M.	9:30 P.M.	5 hours
12)	8:00 A.M.	9:30 A.M.	1 hour and 30 minutes
13)	5:30 P.M.	11:30 P.M.	6 hours
14)	1:30 A.M.	6:30 A.M.	5 hours
15)	5:00 A.M.	8:30 A.M.	3 hours and 30 minutes

Name: _____ **Answer key**

Score: _____

Start, End and Elapsed Time

Nearest Quarter: ESI

Q.No	Start Time	End Time	Elapsed Time
1)	1:30 A.M.	8:45 A.M.	7 hours and 15 minutes
2)	6:30 P.M.	9:30 P.M.	3 hours
3)	9:15 A.M.	10:15 A.M.	1 hour
4)	3:15 P.M.	7:00 P.M.	3 hours and 45 minutes
5	6:30 P.M.	10:45 P.M.	4 hours and 15 minutes
6	2:30 A.M.	4:30 A.M.	2 hours
7)	5:30 A.M.	8:45 A.M.	3 hours and 15 minutes
8)	7:00 P.M.	9:30 P.M.	2 hours and 30 minutes
9)	4:15 A.M.	7:15 A.M.	3 hours
10)	2:30 A.M.	5:45 A.M.	3 hours and 15 minutes
11)	6:15 P.M.	9:00 P.M.	2 hours and 45 minutes
12)	5:00 A.M.	6:30 A.M.	1 hour and 30 minutes
13)	1:15 P.M.	11:00 P.M.	9 hours and 45 minutes
14)	5:15 A.M.	8:00 A.M.	2 hours and 45 minutes
15)	7:30 P.M.	8:45 P.M.	1 hour and 15 minutes



1. **No**
2. **9:25am, 10:05am,
12:55pm and 1:25pm**
3. **5 minutes**
4. **8:30am**
5. **6**
6. **Sunny Avenue**
7. **Star Street**
8. **501**
9. **Star Street**
10. **7**



-
1. **Yes**
 2. **9:30am, 10:10am,
1:00pm and 1:30pm**
 3. **25 minutes**
 4. **8:40am**
 5. **2 - Star Street and
Twinkl City**
 6. **Twinkl Street**
 7. **Twinkl City**
 8. **501**
 9. **20 minutes**
 10. **9:10am**

TYPE SIX:

**BORE
FARM
PLAY
TOIL
FAIL
FREE
COOK
HEAP
TALK
HAVE
LAST
WELD
HOOF
BALL
BARE
SLEW
PALM
SLIP
FISH
DARK**

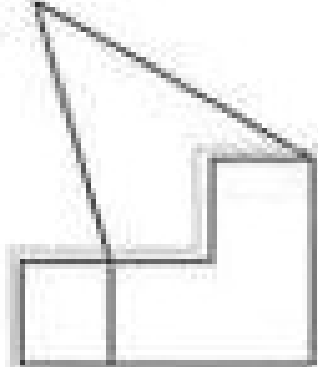
TYPE SEVEN:

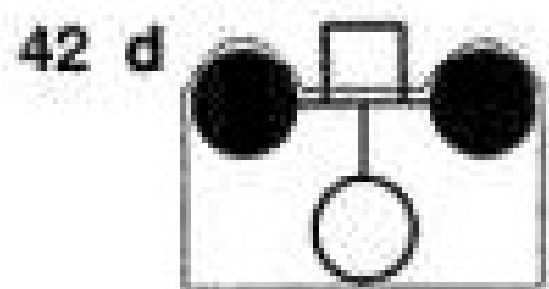
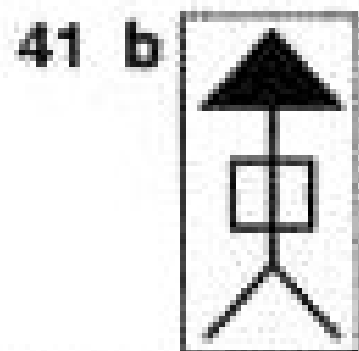
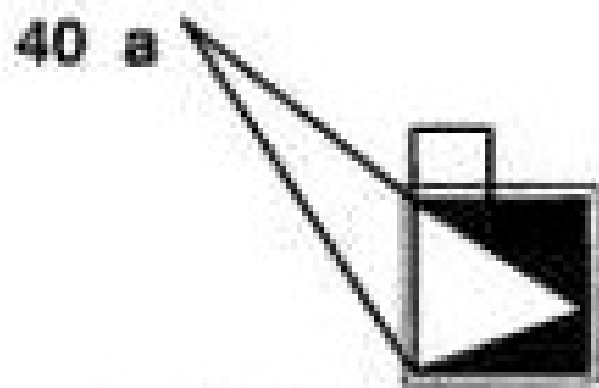
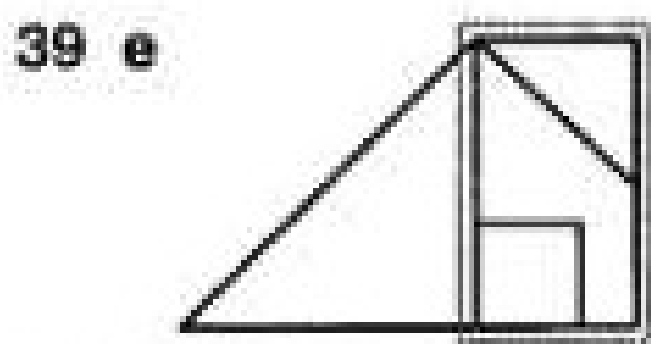
cure solution
buy acquire
smell fragrance
agile spry
strong vigorous
imperative essential
revolve gyrate
obstinate flexible
clear opaque
peaceful noisy
occupied empty
quit stay
hide reveal
friend foe
outside interior
allow forbid
odd usual
assist obstruct
indolent industrious
begin conclude

Test 6

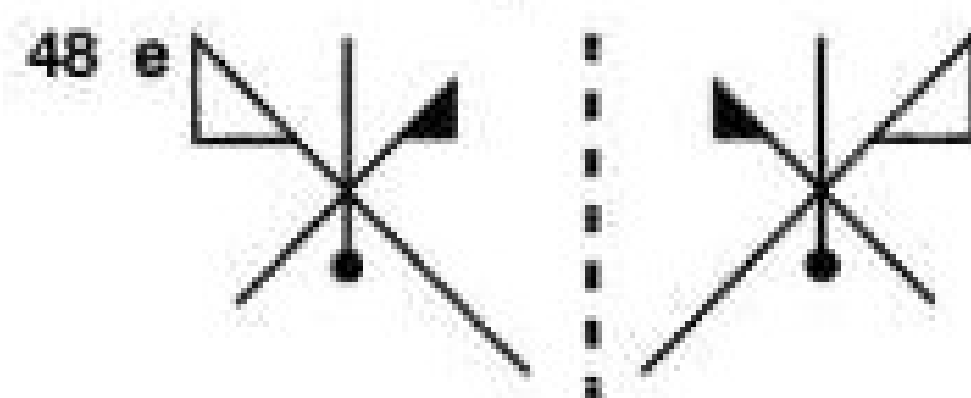
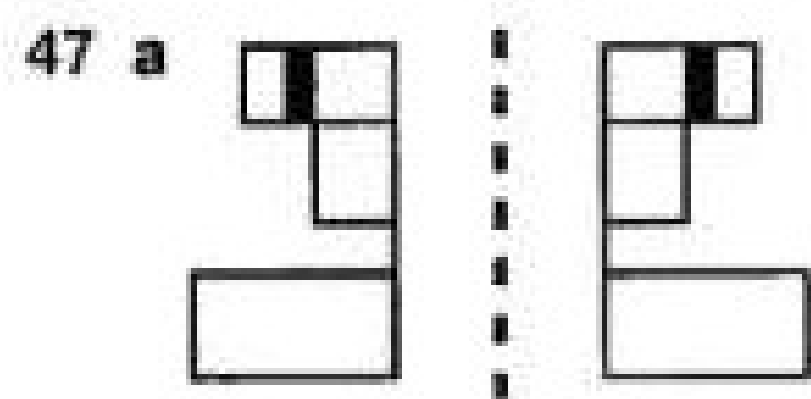
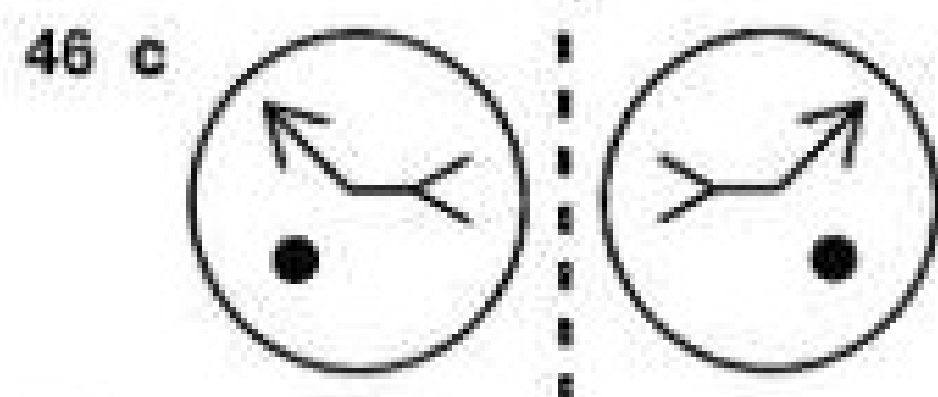
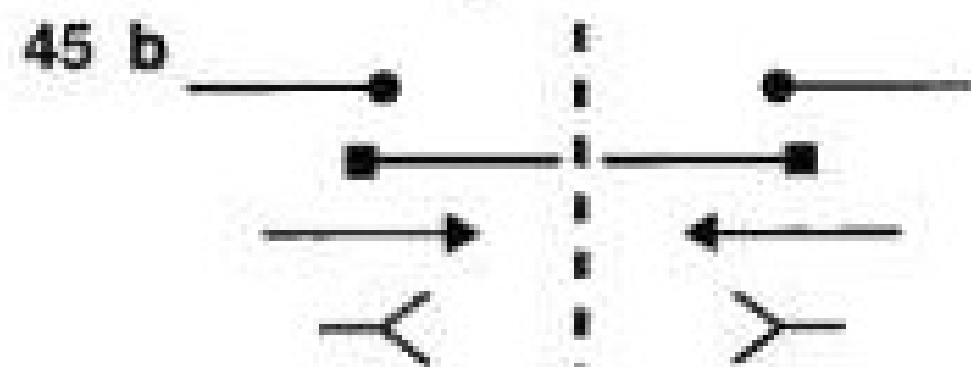
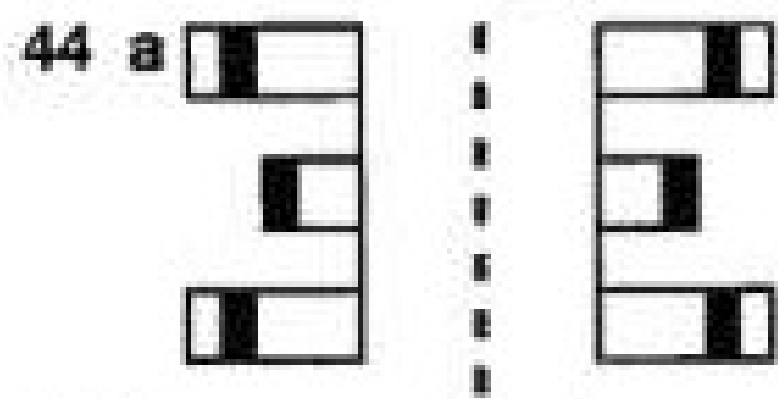
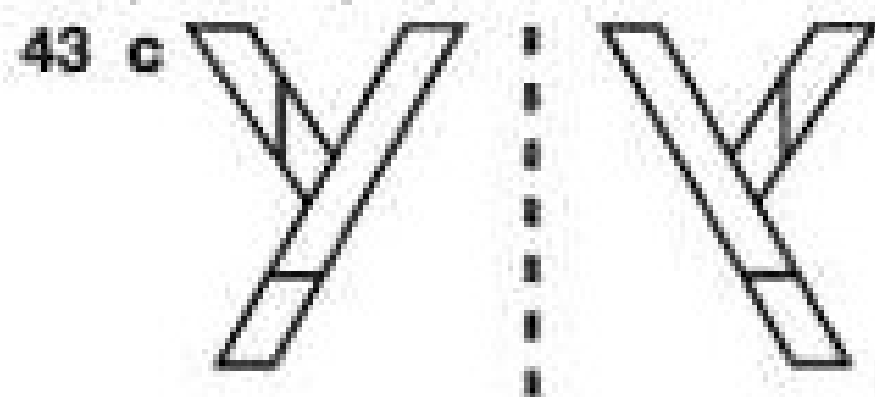
1. coral reefs are home to many kinds of fish
2. they squinted into the distance
3. the treasure was not marked on any map
4. they wondered why the traffic had stopped
5. it took hours for the spider to spin her web
6. she screamed for help as she sank slowly in the mud
7. his shout echoed across the mountain valley
8. we snoozed in the sun's warmth
9. the bell rang at the end of the school day
10. the magician appeared to produce a rabbit out of an empty hat

Paper 2 (pages 11 – 20)

- 1 **a** All of the shapes, apart from a, consist of two curved lines.
- 2 **e** All of the shapes, apart from e, have shading with short lines.
- 3 **b** All of the patterns, apart from b, consist of a triangle, a circle and two rectangles.
- 4 **b** All of the arrows, apart from b, have a large arrowhead.
- 5 **a** All of the options, apart from a, have the same pattern in both shapes.
- 6 **e** All of the arrows, apart from e, have three lines through the shaft.
- 7 **d** All of the shapes, apart from d, have a white triangle at the end.
- 8 **c** All of the squares, apart from c, have three lines inside them.
- 9 **b** All of the shapes, apart from b, are the same size.
- 10 **d** All of the patterns, apart from d, have a black circle.
- 11 **d** All of the patterns, apart from d, have small squares.
- 12 **a** All of the patterns, apart from a, have small squares.
- 13 **b** The two lines within the square continue to rotate by 45° anti-clockwise inside the square.
- 14 **b** The outer squares continue to be removed one at a time. The inner square alternates between black and white.
- 15 **e** The number of points on the star continues to decrease. All of the shapes are white and do not have anything inside them.
- 16 **a** The shapes alternate between circles and squares. There is a repeating pattern in the colour: all white, black inner shape with a white outer shape, white inner shape with a black outer shape.
- 17 **b** The black squares on the left continue to move downwards at the same distance each time.
- 18 **b** Alternate patterns have an outer square. The symbols follows a repeating pattern: +, x, ÷.
- 19 **a** The number of circles in each 'arm' of the arrow shape continues to increase by two each time.
- 20 **e** The shape at the bottom alternates between a circle and a square, with the first two black, the next two white, the next two black and so on. At the top is a repeating pattern with three shapes.
- 21 **e** The square with the black triangle alternates between top-right and bottom-left. The other square follows a repeating pattern: white circle, black circle, no circle.
- 22 **d** The square continues to get darker.
- 23 **b** The trapezium at the top alternates between all white and white with a black triangle. The number of lines in the rectangle at the bottom follows a repeating pattern: one line, two lines, three lines.
- 24 **e** The circle continues to increase in size, with the same pattern.
- 25 **d** The second shape is vertical reflection of the first.
- 26 **d** The second shape is the first shape stretched vertically, with the white and black parts staying in the same position. The size of the second shape will increase by the same amount.
- 27 **e** The second shape is the same as the first shape with the colours reversed.
- 28 **c** The first pattern is the same as the first pattern with the bottom shape removed.
- 29 **e** The second pattern is the same as the first shape with the inner shape moved outside of the larger shape.
- 30 **b** The second pattern is the same as the first shape with both shapes made smaller.
- 31 **c** A diagonal reflection of the outer shape in the first pattern has been added. The shape inside the first triangle changes from white to black, so in the second pair this will change from black to white. The small shape inside the reflection will be the opposite colour.
- 32 **a** The first pattern is the second pattern with the arrow rotated 180° and moved to above the larger shape.
- 33 **b** The second pattern is the first pattern rotated 90° clockwise, with an extra copy of the shape at each end.
- 34 **c** The second shape is the first shape vertically reflected and halved in size.
- 35 **c** The second shape is the first shape rotated 90° anti-clockwise and doubled in size.
- 36 **a** The second shape is the first shape with each line widened into a hollow shape. The arrow-head changes from black to white.
- 37 **c** 
- 38 **a** 



43–48 When each shape is paired with the correct reflection, they form a single shape that is perfectly symmetrical.



49 e The missing shape will be the same as the bottom right square.

50 c The missing square will be a 180° rotation of the bottom left square.

51 b In each row, from left to right, the shape moves down slightly. The first row has an arrow; the second row has a cross; and the third row has a capital 'I' shape on its side. This means the missing square will have a capital 'I' shape on its side at the bottom of the square.

52 d The top row has 1 shape in each square; the second row has 2 shapes in each square; the third row has 3 shapes in each square. The first column has white triangles; the second column has black squares; the third column has black circles. The shapes in each column are in the same position. This means the missing square will have 3 white triangles to the right of the square.

53 c Each row shows a shape that is repeated in the next square. The missing square will be the same as the other shapes in the top row.

54 b Each row has the same shape increasing in size, in a repeating pattern: small, medium, large, very large, small, medium, large, and so on. This means the shape in the missing square will be very large black circle.

Quick Lesson Recap

Work out the Mean, Mode, Median and Range of the numbers in bold on the left-hand side. You will get 1 mark for each individual calculation.

		Mode	Range	Mean	Median
1)	3, 4, 2, 3	3	2	3	3
2)	10, 7, 2, 9	None	8	7	8
3)	4, 3, 9, 9, 3	9	6	5.6	4

(12 marks)

4) $0.07 \div 100 = \mathbf{0.0007}$

5) $9.8 \times 1000 = \mathbf{9800}$

6) Round 45,879 to the nearest thousand = $\mathbf{46,000}$

7) $235 \times 4 = \mathbf{940}$

8) $6 + 2 \times 3 \div 3 = \mathbf{8}$

(5 marks)

- 1) Work out the difference in time between 7:35pm and 9:55pm.
2 Hours 20 Minutes
- 2) Work out the difference in time between 6:25am and 1:35pm.
7 Hours 10 Minutes
- 3) Work out the difference in time between 11:12pm and 9:05am.
10 Hours 53 Minutes

(3 marks)

Now work out the Mean, Mode, Median and Range of the numbers in bold on the left-hand side. You will get 1 mark for each individual calculation.

		Mode	Range	Mean	Median
4)	1, 8, 5, 4	None	7	4.5	4.5

(4 marks)

5) $(6^2 - 2 \times 3) + 7 - 8 \div 2 = 33$