



**BROAD HORIZON**  
— T U I T I O N —

# **11+ Tuition**

**Year 4**

**Mock Exam 01**

**Week 47**

**ANSWERS**

## Set A — Paper 1

### Section 1: Verbal Reasoning — Comprehension

1) **B**

Lines 2-3 state that there are "children dressed up as monsters" on Halloween, which is one of the reasons the writer gives for it being the spookiest night of the year.

2) **A**

Lines 13 states that the Otherworld was said to be "the realm of spirits". A 'realm' means a kingdom, so the Celts believed that this is where the spirits lived.

3) **D**

Lines 15-16 state that the Celts "may have sacrificed cattle and crops" to "please the spirits".

4) **B**

Lines 17-20 state that one of the activities "on this night" (31st October) was "choosing a nut to roast on the fire".

5) **D**

Line 11 states that Samhain was celebrated on "31st October", and line 25 states that "All Hallows' Day" is "celebrated on 1st November", which is the day after.

6) **B**

Lines 23-24 state that "Celtic traditions like Samhain began to fall out of favour", which means that Celtic traditions weren't as popular.

7) **B**

Line 34 states that the people who answered their doors "asked the soulers to pray for the souls of their relatives", not that the soulers themselves asked people to pray for them.

8) **C**

Lines 35-36 state that the "tradition of souling" moved away from its roots and "evolved into the trick-or-treating that is often practised on Halloween today."

9) **A**

Lines 38-40 state that "Halloween's popularity in the British Isles dwindled" as celebrations like "Guy Fawkes Night" were introduced.

10) **D**

Line 42 states that at first "Halloween was only celebrated in some Southern United States".

11) **D**

Lines 43-45 state that "Halloween's popularity increased in the United States" when "a large number of Irish and Scottish immigrants moved there."

12) **B**

Line 36 states that "trick-or-treating" is "often practised on Halloween today", and lines 50-51 state that having "houses covered with gruesome decorations" is also currently a "popular part" of Halloween.

13) **C**

Lines 55-56 state that "In 2017, it was estimated that £25 million would be spent in Britain on pumpkin carving alone."

14) **C**

Lines 45-47 describe popular Halloween activities in the United States in the 1900s, line 50 states that "horror films" are popular during Halloween, and lines 51-53 state that "Halloween in the UK" has become "increasingly similar to the celebrations in the United States." However, the amount spent on Halloween costumes is not mentioned.

15) **B**

In lines 56-57, the writer states that Halloween has become "larger and more spectacular", and that it is "hard to imagine" the "simpler beginnings" of Halloween. This suggests that they think it has changed a lot since it was first celebrated.

16) **A**

"numerous" means 'several' or 'various'.

17) **B**

"brought about" means 'caused' or 'led to', so the phrase means that new traditions started.

18) **A**

"evolved" means 'developed or changed over time'.

19) **C**

"dwindled" means 'became smaller' or 'declined'.

20) **D**

"gruesome" means 'frightening' or 'horrible'.

### Section 2: Verbal Reasoning — Synonyms

1) **sip**

Both words mean 'to take in liquid'.

2) **healthy**

Both words mean 'in good physical condition'.

3) **complain**

Both words mean 'to moan'.

4) **finish**

Both words mean 'to conclude'.

5) **celebrated**

Both words mean 'well known'.

6) **tasty**

Both words mean 'having a pleasant flavour'.

7) **chat**

Both words mean 'a talk'.

8) **loot**

Both words mean 'to take without permission'.

9) **shatter**

Both words mean 'to separate into pieces'.

10) **peaceful**

Both words mean 'tranquil'.

11) **sickness**

Both words mean 'ill health'.

12) **clutch**

Both words mean 'to take and hold something firmly'.

13) **shut**

Both words mean 'to cover or seal'.

14) **student**

Both words mean 'someone who learns through studying'.

15) **complicated**

Both words mean 'difficult'.

16) **fix**

Both words mean 'to mend'.

### Section 3: Verbal Reasoning — Antonyms

- 1) **fake**  
'real' means 'genuine', whereas 'fake' means 'false'.
- 2) **hilly**  
'flat' means 'level and smooth', whereas 'hilly' means 'bumpy and uneven'.
- 3) **guilty**  
'innocent' means 'not having committed a wrongdoing', whereas 'guilty' means 'having committed a wrongdoing'.
- 4) **bought**  
'sold' means 'gave away in exchange for money', whereas 'bought' means 'received in exchange for money'.
- 5) **leave**  
'arrive' means 'to come to a place', whereas 'leave' means 'to go away from a place'.
- 6) **question**  
'answer' means 'a solution or response', whereas 'question' means 'a problem or query'.
- 7) **truth**  
'lie' means 'something that is false', whereas 'truth' means 'something that is correct'.
- 8) **fresh**  
'rotten' means 'decayed', whereas 'fresh' means 'newly produced'.
- 9) **messy**  
'tidy' means 'orderly', whereas 'messy' means 'disorderly'.
- 10) **straight**  
'bent' means 'curved or twisted', whereas 'straight' means 'not having curves or twists'.
- 11) **danger**  
'safety' means 'protection from harm', whereas 'danger' means 'the possibility of harm'.
- 12) **entrance**  
'exit' means 'the way out', whereas 'entrance' means 'the way in'.
- 13) **whole**  
'piece' means 'a part', whereas 'whole' means 'the entirety'.
- 14) **reject**  
'accept' means 'to allow', whereas 'reject' means 'to deny'.

### Section 4: Verbal Reasoning — Related Words

- 1) **medal**  
All the words are examples of prizes.
- 2) **Italian**  
All the words are examples of languages.
- 3) **Oxford**  
All the words are names of English cities.
- 4) **freezing**  
All the words mean 'cold'.
- 5) **choir**  
All the words are examples of musical groups.
- 6) **superb**  
All the words mean 'really good'.

- 7) **pie**  
All the words are examples of main meals.
- 8) **haddock**  
All the words are types of fish.
- 9) **thumb**  
All the words are parts of a hand.
- 10) **coop**  
All the words are examples of animal enclosures.
- 11) **mustard**  
All the words are examples of savoury condiments.
- 12) **Africa**  
All the words are continents on Earth.
- 13) **clown**  
All the words are types of people who make others laugh.
- 14) **journey**  
All the words refer to a period of travel.
- 15) **decade**  
All the words are measurements of time.

### Section 5: Numerical Reasoning

- 1) **6**  
 $4 \times 6 = 24$ , so  $24 \div 4 = 6$ .
- 2) **4**  
Saleem flipped the coin  $8 + 3 = 11$  times.  
Clive flipped the coin  $6 + 9 = 15$  times.  
So Saleem flipped the coin  $15 - 11 = 4$  fewer times than Clive.
- 3) **1476**  
In figures, one thousand is 1000, four hundred is 400 and seventy-six is 76. Adding them gives 1476.
- 4) **10 cm<sup>2</sup>**  
There are 9 whole squares shaded and 2 half squares shaded, so the area of the shape is  $9 + \frac{1}{2} + \frac{1}{2} = 10 \text{ cm}^2$ .
- 5) **scalene**  
Go through each option to decide which is the right answer. All equilateral and isosceles triangles have at least two equal sides (equilateral triangles have three). Right-angled triangles have one  $90^\circ$  angle, but the other two angles could be the same ( $45^\circ$ ), which would give an isosceles triangle (see above). A scalene triangle has three different side lengths, so Emlyn's triangle cannot be scalene.
- 6) **5**  
Each full symbol on the pictogram = 2 pins.  
Each half symbol =  $2 \div 2 = 1$  pin.  
For Evan, five whole symbols =  $5 \times 2 = 10$  pins.  
For Nilesh, two whole symbols =  $2 \times 2 = 4$  pins and one half symbol = 1 pin, so Nilesh knocked down  $4 + 1 = 5$  pins.  
So Evan knocked down  $10 - 5 = 5$  more pins than Nilesh.
- 7) **0.27**  
In figures, two tenths is 0.2 and seven hundredths is 0.07.  
Adding them gives 0.27.
- 8) **8632**  
To make the largest number possible, put the digits in order with the largest first, giving 8632.

9) -1

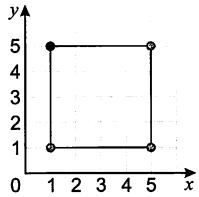
Each term is decreasing by 3 ( $11 - 8 = 3$ ,  $8 - 5 = 3$  and  $5 - 2 = 3$ ). So the number that goes in the box must be  $2 - 3 = -1$ .

10) 15:47

The time shown on the clock is forty-seven minutes past three, so is 3:47. Latisha is having afternoon tea, so the time must be 3:47 pm. Add 12 to 3 to get the time on the 24-hour clock, which is 15:47.

11) (1, 5)

Draw the final corner of the square as shown below. Reading off the coordinates of this corner gives (1, 5).



12) 2250 g

The pointer is one quarter of the way between 2 kg and 3 kg, so the weight in kg is 2.25 kg.  $1 \text{ kg} = 1000 \text{ g}$ , so the weight in grams is  $2.25 \times 1000 = 2250 \text{ g}$ .

13) 0.75

$\frac{3}{4}$  is the same as 0.75.

14) £9.75

To find out how much Katya has after buying the book, partition £4.25 into £4 and 25p, and subtract each from £12:

$$£12 - £4 = £8 \text{ and } £8 - 25p = £7.75.$$

Then add on the £2 her grandad gave her:  $£7.75 + £2 = £9.75$ .

15) 216

Reuel has  $72 \times 3$  stamps. To do this multiplication, partition 72 into 70 and 2, and multiply each part separately by 3.

For  $70 \times 3$ , you know  $7 \times 3 = 21$ . 70 is 10 times bigger than 7, so  $70 \times 3 = 21 \times 10 = 210$ .

$$2 \times 3 = 6, \text{ so } 72 \times 3 = 210 + 6 = 216.$$

16) 6

9 ( $3 \times 3$ ), 18 ( $6 \times 3$ ) and 6 ( $2 \times 3$ ) are multiples of 3.

4 and 6 are factors of 24, since  $4 \times 6 = 24$ .

The '?' is in the part of the diagram where the circles overlap, so it must represent a number that's both a multiple of 3 and a factor of 24. So 6 is the only option that can replace the '?'.

## Section 6: Non-Verbal Reasoning

1) D

Option A is the wrong shape. Option B has the wrong shading. Option C is a 180 degree rotation.

2) C

Option A has the wrong shading. Option B is a 180 degree rotation. In option D, one of the small black squares is in the wrong place.

3) B

Option A is a 135 degree clockwise rotation. In option C, the shape at the front has not been reflected. In option D, the shape at the front is the wrong shape.

4) D

In option A, the line with the circle has not been reflected. In option B, the bars have not been reflected and they have the wrong shading. Option C has the wrong shading.

5) C

In each series square, the triangle rotates 180 degrees. The shading of the triangle alternates between white and black.

6) A

In each series square, the triangle at the front moves to the back. The shading of the triangles stays the same.

7) A

In each series square, one candle disappears and the remaining candles rotate 90 degrees clockwise.

8) C

In each series square, the shaded rectangles alternate between grey and black. One more small white rectangle is added onto each of the large rectangles on either side of the figure.

9) D

In each series square, the black star moves one place along the line, working from the bottom end of the line to the top end. The white star moves one place along the line, working from the top end of the line to the bottom end.

10) A

All figures must contain two identical shapes on the same side of a line. Both shapes must have the same shading.

11) D

In all figures, the shape on the left must have a solid outline. The shape on the right must have a dashed outline and be a squashed version of the shape on the left.

12) D

In all figures, all of the frog's feet must be the same shape as the shape on its chest. The shading of the frog's two middle feet must match the shading of the frog's eyes.

13) B

In all figures, the shape on the right of the grid must have one more side than the shape on the left.

14) C

All figures must have three shapes that are identical apart from shading. The shape at the front must be pointing left, the shape in the middle must be pointing up, and the shape at the back must be pointing right.

## Set A — Paper 2

### Section 1: Numerical Reasoning

1 a) Angles Q and S are acute

An acute angle is less than  $90^\circ$  and an obtuse angle is bigger than  $90^\circ$  but less than  $180^\circ$ . Q and S are acute, P is a right angle and R is obtuse, so only the fourth option is correct.

1 b) P

A right angle is  $90^\circ$ .

2 a) 4

Using the times tables you know that  $12 \times 4 = 48$ , so Sundeep plants  $48 \div 12 = 4$  seeds in each pot.

2 b) 4

$$48 = 50 - 2, \text{ so } 3 \times 48 = 50 \times 3 - 2 \times 3 = 150 - 6 = 144.$$

There aren't quite enough seeds in 3 packs, so Carla will need to buy 4 packs.

**3 a) 25**

There are 12 marks for right-handed boys and 13 marks for right-handed girls.  $12 + 13 = 25$ .

**3 b)  $\frac{4}{16}$** 

There are 4 marks for left-handed boys and 12 marks for right-handed boys, so there are  $4 + 12 = 16$  boys in total. As a fraction, the number of boys that are left-handed is  $\frac{4}{16}$ .

**4 a) 69**

The first two odd numbers in the list are 3 and 23. To multiply these numbers, partition 23 into 20 and 3, and multiply each part separately:  $20 \times 3 = 60$ ,  $3 \times 3 = 9$ , so  $23 \times 3 = 60 + 9 = 69$ .

**4 b) 105**

45 ( $5 \times 9$ ) and 60 ( $5 \times 12$ ) are the only multiples of 5 in the list.  $45 + 60 = 105$ .

**4 c)  $60 - 32 > 45 - 23$** 

'>' means more than.  $60 - 32 = 28$  and  $45 - 23 = 22$ .  $28 > 22$ , so  $60 - 32 > 45 - 23$  is true.

**5 a) 456**

Partition 912 into 900 and 12, and divide each part by 2:  $900 \div 2 = 450$ ,  $12 \div 2 = 6$ , so  $912 \div 2 = 450 + 6 = 456$ .

**5 b) 1432**

First add the extra 640 books to 912. Partition 640 into 600 and 40 and add them separately:  $912 + 600 = 1512$  and  $1512 + 40 = 1552$ .

You then need to subtract the books donated.

Partition 120 into 100 and 20 and subtract each part separately:  $1552 - 100 = 1452$  and  $1452 - 20 = 1432$ .

**6 a) white**

'White' is the third highest bar on the chart.

**6 b) 34**

Add up the number of cars that are not blue:  $11 + 10 + 4 + 9 = 34$  cars.

**6 c) £35.00**

There are  $4 + 10 = 14$  red and black cars, so you need to multiply £2.50 by 14:  $\text{£}2.50 \times 10 = \text{£}25$  and  $\text{£}2.50 \times 4 = \text{£}10$ , so  $\text{£}2.50 \times 14 = \text{£}25 + \text{£}10 = \text{£}35$ .

**7 a) 3**

A regular polygon has equal side lengths. The first shape (square), second shape (regular pentagon) and the fifth shape (regular hexagon) have equal side lengths. The third shape (irregular hexagon) and fourth shape (isosceles triangle) do not.

**7 b)  $\frac{2}{5}$** 

A hexagon has 6 sides, so there are 2 hexagons (third and fifth shapes). So 2 out of 5 or  $\frac{2}{5}$  of the shapes are hexagons.

**8 a) 8:55 am**

The time shown on the clock is 5 minutes past 7 and you know the time is in the morning, so it's 7:05 am. Counting on 1 hour and 50 minutes from this time gives you the time Rachel finished her run. 1 hour later than 7:05 am is 8:05 am and 50 minutes later than 8:05 am is 8:55 am.

**8 b) 11 minutes**

1 hour 50 minutes =  $60 + 50 = 110$  minutes.

Divide this by 10 to find  $\frac{1}{10}$ :  $110 \div 10 = 11$  minutes.

**9 a) 100**

Oti has £10 and magazines cost 10p. 10p goes into £1 ten times, so with £10 Oti could buy  $10 \times 10 = 100$  magazines.

**9 b) £3.75**

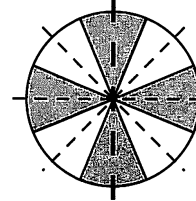
A hardback cost £2.50 and three paperbacks cost  $\text{£}1.25 \times 3 = \text{£}3.75$ . So Oti spent:  $\text{£}2.50 + \text{£}3.75 = \text{£}6.25$  and got  $\text{£}10 - \text{£}6.25 = \text{£}3.75$  change.

**10 a) E**

Amelia's shape is divided into 8 equal parts. 4 out of 8 parts are shaded, which is equivalent to half of the shape. Half of shape E is also shaded.

**10 b) 3**

There are 4 lines of symmetry as shown here:



Amelia has already drawn the line shown in bold, so there are  $4 - 1 = 3$  more lines to be drawn.

**11 a) 400 m**

Change one of the units so both distances are in m or km — m are easier to use here. To convert km to m you multiply by 1000, so 1.8 km is 1800 m.  $1800 \text{ m} - 1400 \text{ m} = 400 \text{ m}$ .

**11 b) 1439 m**

To become 1400 m when rounded to the nearest hundred, the distance must be bigger than or equal to 1350 m and less than 1450 m. This is only true for 1439 m.

**12 a) £4.50**

$5 \times 9 = 45$ . 90 is 10 times bigger than 9, so  $5p \times 90 = 45 \times 10 = 450p$  which is the same as £4.50.

**12 b) 30**

$\frac{2}{3}$  of the stickers are purple, so  $1 - \frac{2}{3} = \frac{1}{3}$  of the stickers are not purple.  $\frac{1}{3}$  of 90 is  $90 \div 3 = 30$ .

**12 c) 42 cm**

The perimeter of the shape is made up of six 3 cm lengths and six 4 cm lengths.  $3 \times 6 = 18$  and  $4 \times 6 = 24$ , so the perimeter is  $18 + 24 = 42 \text{ cm}$ .

**13 a) 0.46 m**

Luke is the tallest with a height of 1.65 m.

Bill is the shortest with a height of 1.19 m.

Subtract Bill's height from Luke's height:

$$\begin{array}{r} 1.58\overset{5}{5} \\ - 1.19 \\ \hline 0.4\overset{6}{6} \end{array}$$

**13 b) 183 cm**

Change Manon's height to centimetres:

1 m = 100 cm, so  $1.47 \text{ m} = 1.47 \times 100 = 147 \text{ cm}$ .

Add on 36 cm using the column method:

$$\begin{array}{r} 147 \\ + 36 \\ \hline 183 \\ \hline \end{array}$$

**13 c) 8**

Aziz's height is 1.2 m. Try multiplying 1.2 m by different numbers to see how many times it goes into 10 m. Using the times tables, you know  $12 \times 8 = 96$ . 1.2 is 10 times smaller than 12, so  $1.2 \text{ m} \times 8 = 9.6 \text{ m}$ . You also know  $12 \times 9 = 108$ , so  $1.2 \text{ m} \times 9 = 10.8 \text{ m}$ . This is too big, so Aziz's height can fit into the height of his house 8 whole times.

## Section 2: Verbal Reasoning — Cloze

- 1) **occur**  
'The modern Paralympics **occur** every four years'
- 2) **television**  
'The London 2012 Paralympics were watched on **television**'
- 3) **major**  
'the Paralympics haven't always been such a **major** sporting event.'
- 4) **history**  
'the Olympics have a long **history**'
- 5) **recent**  
'the Paralympics are a more **recent** development.'
- 6) **soldiers**  
'Guttmann began working with **soldiers** with spinal injuries'
- 7) **recover**  
'which involved helping them to **recover**'
- 8) **popular**  
'This proved so **popular** that in 1948, Guttmann organised'
- 9) **involved**  
'This event, which **involved** an archery competition'
- 10) **wheelchairs**  
'an archery competition for athletes in **wheelchairs**'
- 11) **became**  
'These later **became** known as the Paralympics'
- 12) **expanded**  
'The event has **expanded** over time'
- 13) **range**  
'so that athletes with a wider **range** of disabilities can compete.'
- 14) **grown**  
'The number of sports included has also **grown**'
- 15) **important**  
'The Paralympic Games play an **important** role'
- 16) **continue**  
'the Paralympics **continue** to grow in popularity'

## Section 3: Non-Verbal Reasoning

- 1) **B**  
The figure moves up and a copy appears below it.
- 2) **A**  
The smaller shape is copied onto each corner of the large shape.
- 3) **D**  
The outline of the shape becomes solid. A small square with a dashed outline appears inside the shape.
- 4) **B**  
The figure rotates 90 degrees clockwise. Two arrows appear, which both point towards the right.
- 5) **B**  
The line becomes thicker, and half of the shapes move to the other side of the line.
- 6) **D**  
The figure is reflected across. The mug and the oval swap patterns.
- 7) **D**  
Another identical shape is added to the end of the bug's body. The bug's head moves behind its body.

- 8) **C**  
All figures must contain a hatched shape in front of a black shape.
- 9) **A**  
All figures must be identical apart from rotation.
- 10) **A**  
All figures must contain three different shapes which each have a different shading.
- 11) **B**  
In all figures, the shading on the mouse's nose must match the shading on the inside of the mouse's ears. The mouse must have a pointed face.
- 12) **C**  
All figures must contain two small shapes in front of a large shape which has a dashed outline. The number of sides of the large shape must be one more than the number of sides on each of the small shapes.
- 13) **B**  
In all figures, moving from top to bottom, the length of the rectangles must increase and the number of vertical black lines inside each rectangle must increase by one.
- 14) **C**  
Working from left to right, the black shape becomes grey.
- 15) **C**  
Working from left to right, the number of points on the star decreases by one. The number of dashed lines also decreases by one.
- 16) **D**  
Working from top to bottom, the number of identical socks increases by one. The new sock is added on top of the previous sock.
- 17) **D**  
Working from left to right, one more shape is shaded. The shapes are shaded in order of size, from the largest to the smallest.
- 18) **D**  
Working from left to right, the arrow moves to point at a different shape, going in the order: black, grey, white. The style of arrowhead is the same in each column.
- 19) **A**  
Working from left to right, the figure rotates 45 degrees clockwise. The black shape moves further along the white rectangle.
- 20) **B**  
Working from top to bottom, a smaller version of the large shape appears inside the large shape. The new shape has a dashed outline. The shading of the teardrop changes from white to grey to black.
- 21) **C**  
The figure is rotated 90 degrees clockwise. Options A and D are the wrong shape. Option B has the wrong shading.
- 22) **A**  
The figure is rotated 135 degrees clockwise. Option B has the wrong shading. Option C is the wrong shape. Option D is a rotated reflection.
- 23) **C**  
The figure is rotated 90 degrees clockwise. Options A and D are the wrong shape. Option B is a reflection.
- 24) **D**  
The figure is rotated 90 degrees anticlockwise. In option A, the grey stripe is in the wrong place. Option B has triangles instead of circles. In option C, the shading of the circles is wrong.

**25) C**

The figure is rotated 45 degrees clockwise. Option A is a rotated reflection. Option B has the wrong shading. In option D, the black rectangles and the three white squares next to them are in the wrong place.

**26) C**

The figure is rotated 90 degrees clockwise. Option A is a rotated reflection. In option B, the spiral is going in the wrong direction. In option D, the spiral is the wrong shape.

**27) B**

The figure is rotated 180 degrees. In option A, the shading is wrong. In options C and D, the layering is wrong.

**28) B**

All other figures contain only one type of shading.

**29) D**

In all other figures, the head of the snake is pointing to the right.

**30) D**

In all other figures, the circle and the triangle are on the same side of the dividing line.

**31) A**

In all other figures, the tallest tree is on the left-hand side.

**32) C**

All other figures contain five black diamonds.

**33) E**

All other figures are identical apart from shading and rotation.

**34) C**

In all other figures, the shading of the car's front wheel matches the shading of its windows.