



**BROAD HORIZON**  
— TUITION CENTRE —

# 11+ Tuition

Year 4

## Assessment Test 5

# Answers

**Total:** \_\_\_\_\_ **/150** \_\_\_\_\_ **%**

**Pass mark is 70%      105/150**

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## Overview of Your Scores

	<b>Your Score</b>	<b>%</b>
Probability	/ 6 marks	
Money Problems	/ 5 marks	
Algebra	/ 5 marks	
Percentage Increase / Decrease	/ 5 marks	
Ratio	/ 3 marks	
Angles in Shapes	/ 5 marks	
Venn Diagrams	/ 5 marks	
Column Multiplication	/ 3 marks	
Short Division	/ 2 marks	
Mean Mode Median Range	/ 4 marks	
Time Differences	/ 3 marks	
Area, Perimeter & Volume	/ 3 marks	
× & ÷ numbers by 10/100/1000	/ 4 marks	
Adding / Subtracting Fractions	/ 2 marks	
Fractions of Numbers	/ 2 marks	
BIDMAS	/ 2 marks	
<b>Maths Total</b>	<b>/ 59 marks</b>	
<b>Reading Comprehension</b>	<b>/ 14 marks</b>	
<b>Verbal Reasoning</b>	<b>/ 15 marks</b>	
<b>Vocabulary</b>	<b>/ 50 marks</b>	
<b>Non-Verbal Reasoning</b>	<b>/ 12 marks</b>	
<b>TOTAL</b>	<b>/ 150 marks</b>	

# Maths

## Probability

- 1) A bag contains 16 green marbles, 4 red marbles, and 6 orange marbles. One marble is selected at random.
- a) What is the probability it is orange ?  **$\frac{3}{13}$  or  $\frac{6}{26}$**
  - b) What is the probability the marble is red ?  **$\frac{2}{13}$  or  $\frac{4}{26}$**
  - c) What is the probability the marble is green ?  **$\frac{8}{13}$  or  $\frac{16}{26}$**
- 2) A pack of playing cards has 52 cards.
- a) What is the probability of selecting hearts ?  **$\frac{13}{52}$  or  $\frac{1}{4}$**
  - b) What is the probability of selecting a Queen ?  **$\frac{4}{52}$  or  $\frac{1}{13}$**
  - c) What is the probability of selecting the six of spades ?  **$\frac{1}{52}$**

**(6 marks)**

## Money Problems & Currency Exchange

- 1) What is the total of £33.50, £78.70 and £1.58? **£113.78**
- 2) What is the total cost of a T.V costing £457.50, two speakers costing £34.20 each and a CD costing £2.90? **£528.80**
- 3) If ten dictionaries cost £75.60, how much does one cost? **£7.56**
- 4) If £1 = \$1.34, how many dollars is £20 ? **\$26.80**
- 5) A crate of lemonade bottles is six bottles wide and seven bottles long. If each bottle costs £1.47, what is the total cost of the whole crate? **£61.74**

**(5 marks)**

## Algebra

1. The value of “n” has been provided for each question below. Solve the following:

n	$7n - 12$
5	<b>23</b>
10	<b>58</b>
15	<b>93</b>

2. If  $A = 3$ ,  $B = 4$  and  $C = 1$ , Find the value of the following:

a.  $4A - 3C =$  **9**

b.  $2(3B + C) =$  **26**

**(5 marks)**

**Percentage increase and decrease**

- 1) Increase 400 by 10% = **440**
- 2) Increase 220 by 35% = **297**
- 3) Decrease 1080 by 85% = **1998**
- 4) A bag of sweets cost £2.50. A shop discounts bags of sweets by 60%. What is the new cost ? **£1.00**
- 5) The 137 mile journey between Walsall and London is 3 hours long. Tom manages to reduce the journey time by 20%. What is the new journey time ? **144 minutes or 2 hours 24 mins**

**(5 marks)****Ratio**

- 1) In a fruit bowl there are 2 oranges for every 3 apples. If there are 15 apples, how many oranges are there? **10**
- 2) In a field there are 55 cows and sheep, in the ratio of 4:1 – How many cows are there ? and how many sheep ? **44 cows & 11 sheep**
- 3) At a party there are three sorts of drinks: orange, lemonade and cherry. The ratio of the drinks is 3:2:1 (orange:lemonade:cherry). If there are 12 glasses of orange, how many glasses of drink are there altogether? **24 glasses**

**(3 marks)**

## Angles

Calculate the missing angles

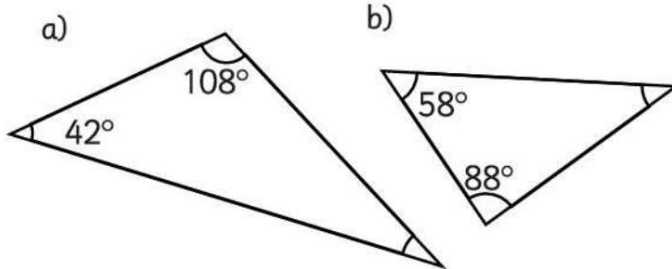
1)



The missing angle is:

**163**

2) Calculate the missing angle in these scale



Write the answers below

a) **30 degrees**

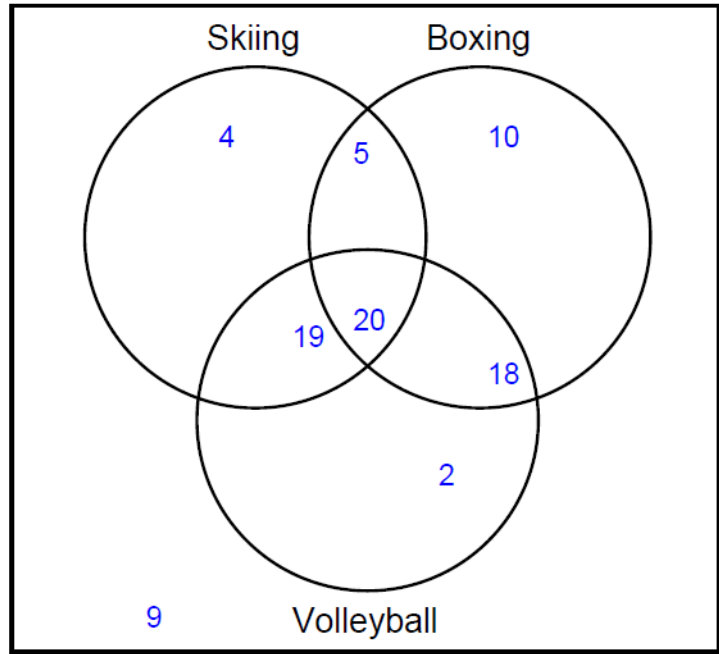
b) **34 degrees**

3) What are the **total** angles in a 6 sided shape ? **720**

4) What is **one angle** in a 6 sided shape ? **120**

**(5 marks)**

### Venn Diagrams



- 1) How many students like both Boxing and Volleyball but not Skiing ? 18
- 2) How many students only like Volleyball ? 2
- 3) How many students like Skiing or Boxing or Volleyball ? 78
- 4) How many students like both Skiing and Volleyball ? 39
- 5) How many students do not like either Boxing or Volleyball ? 13

**(5 marks)**

### Column Multiplication

1)	3	2	4		2)	6	7	9			3)		4	5	8	
	x		8			x		7				x		7	9	
	<b>2</b>	<b>5</b>	<b>9</b>	<b>2</b>			<b>4</b>	<b>7</b>	<b>5</b>	<b>3</b>			<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>
												<b>3</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>0</b>
												<b>3</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>2</b>

**(3 marks)**

**Short Division**

1)			<b>7</b>	<b>6</b>	<b>4</b>			2)			<b>9</b>	<b>6</b>	<b>1</b>		
	3	2	2	9	2				8	7	6	8	8		

**(2 marks)**

**Mean Mode Median Range**

3, 4, 9, 3, 11

Mean **6** Mode **3** Median **4** Range **8**

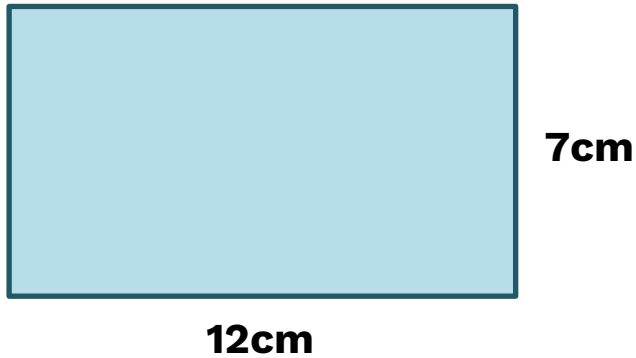
**(4 marks)**

**Time Differences**

Fill in the gaps

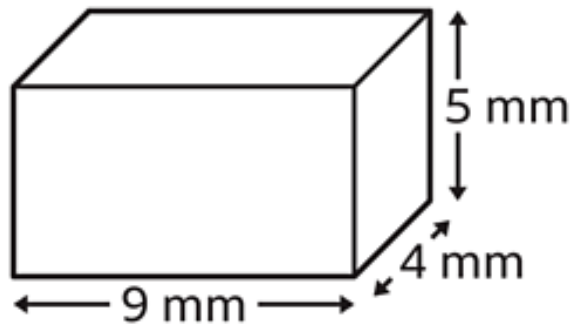
	<b>Start Time</b>	<b>End Time</b>	<b>Time Difference</b>
1)	7:30am	10:30am	<b>3 hours</b>
2)	2:45pm	<b>6:00pm</b>	3 hours 15 minutes
3)	<b>11:00am</b>	5:00pm	6 hours

**(3 marks)**

**Area, Perimeter and Volume**

**Area = 84 cm sq.**

**Perimeter = 38cm**



**Volume = 180mm cubed**

**(3 marks)****Multiplying and Dividing by 10/100/1000**

**1)  $637 \div 100 = 6.37$**

**2)  $2.5 \times 10 = 25$**

**3)  $6.4 \times 1000 = 6400$**

**4) Convert 2Kg to grams = 2000 grams**

**(4 marks)**

**Adding & Subtracting Fractions**

$$1) \quad \frac{2}{5} + \frac{3}{10} = \frac{7}{10}$$

$$2) \quad \frac{7}{8} - \frac{1}{2} = \frac{3}{8}$$

**(2 marks)****Fractions of Numbers**

$$1) \text{ Workout } \frac{3}{4} \text{ of } 88 = \mathbf{66}$$

$$2) \text{ Workout } \frac{5}{6} \text{ of } 720 = \mathbf{600}$$

**(2 marks)****BIDMAS**

$$1) \quad \begin{aligned} 8^2 + 25 \div 5 &= \\ 64 + 25 \div 5 &= \\ 64 + 5 &= \\ &= \mathbf{69} \end{aligned}$$

$$2) \quad \begin{aligned} (1 + 2)^2 + 4 \times 5 &= \\ (3)^2 + 4 \times 5 &= \\ 9 + 4 \times 5 &= \\ 9 + 20 &= \\ &= \mathbf{29} \end{aligned}$$

**(2 marks)**

## Reading Comprehension

1. **D** — *In the passage it says that there have been “attacks on livestock.”*
2. **B** — *The passage says that “anxious” people have reported sightings — “anxious” is closest in meaning to ‘concerned’.*
3. **C** — *The passage says that the reports are often regarded as “hoaxes, mistakes or fantasies” and the article also tells us that many people believe the reports to be real. So, the only option not given as a reason is that the sightings are dreams.*
4. **E** — *The passage says that “An increasing number of people believe there are too many witnesses for the rumours to be unfounded.”*
5. **E** — *The passage says “some areas produce more reports of mysterious creatures than others, leading to local legends such as Cornwall’s famous Beast of Bodmin”. This suggests that there have been many sightings of strange animals in Cornwall.*
6. **A** — *In the passage it says that farmers “know the countryside well”.*

7. **C** — *The passage says that people “were no longer permitted to keep” big cats.*
8. **C** — *The word “rage” suggests that people feel strongly about them.*
9. **B** — *“rural” is closest in meaning to ‘rustic’. It means ‘in the countryside’.*
10. **D** — *“mysterious” is closest in meaning to ‘inexplicable’. It means that people can’t explain the cause of these sightings.*
11. **B** — *“exotic” is closest in meaning to ‘foreign’. It means that big cats are not native to the United Kingdom.*
12. **A** — *“United Kingdom” is a proper noun because it is the name of a particular place. Proper nouns always begin with a capital letter.*
13. **A** — *The article is biased — it provides more evidence that the sightings are true.*
14. **B** — *“wild” is an adjective. It describes a noun.*

**(14 marks)**

## Verbal Reasoning

### GL Techniques

#### Verbal Type 21:

In the following questions write in the brackets the ONE letter which will finish the first word and begin the second. The same letter is used for both pairs of words. Here is an example:

SEL ( F ) A M E : S H E L ( F ) E W

- 1) R
- 2) R
- 3) F

T21/2

#### Verbal Type 23:

A, B, C, D and E are 5 cars. A, C and D have automatic gears, the others have manual gears. A and E are sports cars while the others are saloons. B and C seat 6 people, the others seat 4. Only B, D and E have sunroofs. Now circle the correct answers in the brackets:

- 4) C
- 5) 2

T23/2

**Verbal Type 24:**

All the following questions are concerned with numbers. Write your answer in the brackets. Here is an example:

15 is 3 more than half this number. . . ( 24 )

6) **72**

7) **16**

**T24/3**

**Verbal Type 26:**

There is a different rule connecting each of the numbers in the following rows. Find the next number in each of the series and write it in the brackets.

8) **24      15**

9) **36      81**

10) **47      95**

**T26/3**

**Verbal Type 28:**

The three numbers in each group are related in the same way. Two groups have been completed for you. Find the rule that connects them and complete the third group of numbers in the same way by writing your answer in the brackets. Here is an example:

2      ( 7 )      14                  7      ( 3 )      21                  4      ( 5 )      20

11) **22**      X2 the first number then minus the last number

12) **12**      (first ÷ third) + 3.

**T28/3**

**Verbal Type 29:**

The table below shows the number of marks out of 150 which five girls scored in English tests for the years 1988 to 1992:

	Sophie	Rachel	Joanna	Gemma	Zoe
1988	123	68	74	90	63
1989	94	80	106	106	88
1990	132	59	63	97	79
1991	81	70	65	89	126
1992	128	57	108	69	81

Now answer the following questions by circling the correct answer in the brackets:

13) **R**14) **3**15) **R G****T29/3****(15 marks)**

## Vocabulary Test

Write the definition for each word. (2 marks for each word!)

1) Machinery	<ul style="list-style-type: none"> <li>• Machines or tools that help people do work.</li> <li>• Big equipment used in factories or building sites.</li> </ul>
2) Interrogate	<ul style="list-style-type: none"> <li>• To ask someone many questions to get information.</li> <li>• To question someone in a serious or firm way.</li> </ul>
3) Ponder	<ul style="list-style-type: none"> <li>• To think carefully about something.</li> <li>• To take time to decide what to do.</li> <li>• To imagine or wonder about an idea.</li> </ul>
4) Crucial	<ul style="list-style-type: none"> <li>• Something very important</li> </ul>
5) Midst	<ul style="list-style-type: none"> <li>• The middle of something.</li> <li>• At the centre of a place or situation.</li> </ul>
6) Generous	<ul style="list-style-type: none"> <li>• Happy to share with others.</li> <li>• Giving more than is expected.</li> </ul>
7) Mutter	<ul style="list-style-type: none"> <li>• To speak quietly so others can hardly hear.</li> <li>• To talk under your breath or mumble your words</li> </ul>
8) Emergency	<ul style="list-style-type: none"> <li>• A sudden problem that needs quick action.</li> <li>• A dangerous situation</li> </ul>
9) Pity	<ul style="list-style-type: none"> <li>• Feeling sorry for someone's trouble.</li> <li>• Wishing someone wasn't suffering.</li> <li>• A sad feeling when something bad happens</li> <li>• A thing that is unfortunate or a shame.</li> </ul>
10) Virtue	<ul style="list-style-type: none"> <li>• A good quality in a person.</li> <li>• Doing the right and kind thing.</li> </ul>

Write a Sentence for each word. (2 marks for each word)

1) Precise	
2) Emit	
3) Peculiar	
4) Dissolve	
5) Invaluable	
6) Hoarse	

**Pick a missing word to fill each sentence. (2 marks for each word)**

1. The football coach stated that we were too ..... on our star player.

- a: ruffle      **b: reliant**      c: repetition

2. The security guard questioned Jasmine for over half an hour before he was ..... that she was not a thief.

- a: satisfied**      b: premier      c: loneliness

3. Billy's mum was very .....ed after his rowdy behaviour caused them to be thrown out of the restaurant.

- a: embarrass**      b: interview      c: wisp

4. Some birds will stretch out and ..... their neck feathers by shaking their bodies vigorously.

- a: premier      b: insist      **c: ruffle**

5. The government is introducing new policies to help reduce ..... amongst Britain's elderly population, many of whom have no relatives.

- a: loneliness**      b: wisp      c: reliant

6. The police wanted to ..... every employee regarding the theft of the priceless watch.

- a: embarrass      b: ruffle      **c: interview**

7. The teacher said that any ..... of the previous week's disruption in class would result in detentions being given.

- a: premier      **b: repetition**      c: satisfy

8. My grandfather was almost bald but had small .....s of hair on the top of his head.

- a: insist      b: loneliness      **c: wisp**

9. Mr Shue continued to ..... that our choir perform at the music concert and we eventually agreed.

- a: interview      **b: insist**      c: embarrass

**(50 marks)**

# Non-Verbal Reasoning

## ASSESSMENT TEST 8

### Section 1 — Reflect the Figure

1. C

Option A is a 90 degree anticlockwise rotation.

Option B is a downwards reflection. In option D, the black shape has become white.

2. D

Option A is the wrong shape. Option B is a downwards reflection. Option C is a 180 degree rotation.

3. B

Option A is a downwards reflection. Option C is a rotation (and the stripes have changed). Option D is a reflection but the black and grey shading has swapped.

4. C

In option A, the triangles are reflected but the parallel lines are positioned incorrectly. Options B and D are the wrong shape.

### Section 2 — Complete the Square Grid

1. B

Working from left to right, just the top shape is shaded grey, then both shapes are shaded grey, and then just the bottom shape is shaded grey.

2. B

The shapes in each column are the same and the positions of the lines through the shapes stay the same in each row.

3. E

Each figure only appears once in each row and column.

### Section 3 — Cubes and Nets

1. B

Option A is ruled out because the face with the black triangle and the face with the white triangle must be on opposite sides.

Option C is ruled out because the net doesn't have a face with a five-sided shape on it. Option D is ruled out because the net doesn't have a face with a black square on it.

2. D

Option A is ruled out because the net doesn't have a face with a black triangle on it. Option B is ruled out because the face with the hexagon and the face with the black stripe must be on opposite sides. Option C is ruled out because the net doesn't have a face with a black circle on it.

3. C

Option A is ruled out because the face with the grey square and the face with the parallel lines must be on opposite sides.

Option B is ruled out because the net doesn't have a face with a 'Z' on it. Option D is ruled out because the net doesn't have a face with double parallel lines crossing in the centre on it.

### Section 4 — Complete the Pair

1. B

The small shape becomes hatched, while the large shape becomes white.

2. B

The shape becomes a star with the same number of points as the shape had corners. The corners are marked with black circles which stay in the same position.

**END OF ASSESSMENT**



**(12 marks)**