BROAD HORIZON
TUITION

11+ Tuition

Year 5 - Online

Assessment Test 5

Answers

Total: /150 %

Pass mark is 70% 105/150

Contents

Overview of Your Scores		
	Your Score	**%**
Algebra	/ 19 marks	
Probability	/ 13 marks	
Solving Money Problems	/ 10 marks	
Percentage increase/decrease	/ 10 marks	
Ratio	/ 16 marks	
Angles	/ 13 marks	
GL Techniques	/ 52 Marks	
Non-Verbal	/ 17 Marks	

Maths	**/81**	**%**
Verbal Reasoning	**/52**	**%**
Non-Verbal	**/17**	**%**
Total	**/150**	**%**

Maths

Algebra

1. Complete these tables

n	7n - 12
5	23
10	58
15	93
8	44
11	65
6	30
0	-12

n	4n + 17
5	37
10	57
15	77
8	49
12	65
6	41
0	17

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

   a. 4A – 3C = 9

   b. 2(3B + C) = 26

   c. 5A – 2B + 3C – 1B = 6

   d. 10C – 4C + 6B = 30

   e. 15B + 4C – 3A = 55

(19 marks)

Probability

What is the probability of these events happening? Write your answers as fractions.

1. Throwing a die and getting a 4. 1/6
2. Throwing a die and getting a 7. 0
3. Throwing a die and getting an even number. 1/2
4. Throwing a die and getting a number less than 8. 1
5. Throwing a die and getting a number greater than 3. 1/2
6. 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? 3/13
   b. What is the probability the marble is red? 2/13
   c. What is the probability the marble is green? 8/13
7. At Heathfield Primary School there are 300 boys and 450 girls. What is the probability of selecting a boy at random? 2/5
8. A pack of playing cards has 52 cards.
   a. What is the probability of selecting a hearts? 1/4
   b. What is the probability of selecting a Queen? 1/13
   c. What is the probability of selecting the six of spades? 1/52
9. A spinner has numbers from 1 to 20 on it. If it is spun, what is the chance of getting a number which is a multiple of three? 3/10

(13 marks)

Solving Money Problems

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. Simon bought five books. Altogether they cost £12.50.
   What was the cost of one book? £2.50

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

6. A family of two parents and two children went to the cinema.
   Adult's tickets cost £3.60 each and children's tickets cost £1.80 each.
   How much did it cost the family to go to the cinema? £10.80

7. Two people had a ride on a fairground costing £1.70 each. They paid with a £20 note. How much change did they get? £16.60

8. Peter has saved £142.70 and Michael has saved £204.56.
   How much more has Michael saved than Peter? £61.86

9. What is the difference between £30 and £17.80 ? £12.20

10. What is the cost of one book if 100 cost £93 ? £0.93/93p

(10 marks)

Answers Percentage increase and decrease

1) 495
2) 315
3) 648
4) 925
5) 162
6) £1.00
7) 2 hours
8) 325 kg
9) £49.50
10)28.8 miles

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 oranges

2. Rupra is picking strawberries. For every 5 strawberries she puts in her basket, she eats 2. If she picks 28 strawberries, how many does she eat and how many does she put in the basket?

eats 8 and 20 in basket

3. A bag of sweets contains red sweets and yellow sweets. The ratio of red to yellow is 3:7. If there are 40 sweets altogether, how many yellow sweets are there?

28 yellow

4. Jack has 30 sweets. He shares his sweets with his friend. When he gives his friend a sweet, he has 2 for himself. How many sweets do they each have?

Jack 20 and friend 10

5. In a field there are some sheep and some goats. The ratio of sheep to goats is 3:1. If there are 3 goats, how many sheep are there?

9 sheep

6. Lucy has a necklace which has red beads and blue beads. For every red bead, there are four blue beads. There are 20 beads in total. How many of these are blue?

16 blue

7. In the school choir there are 30 children. The ratio of girls to boys is 4:1. How many boys are in the choir?

6 boys

8. Tasneem brings some sweets to school on her birthday. In the bag, there are chocolates and toffees. The ratio of chocolates to toffees is 5:3. If there are 40 sweets, how many are chocolates?

25 chocolates

1. Ali has invited 12 friends round for supper. He is cooking curry and rice. He needs 150g of uncooked rice per person. How many grams of rice does he need? Don't forget - Ali will be eating too!

1950 g

2. Steffi is painting her house. She has calculated she needs 40 litres of paint in total. She has decided to mix pink paint. She will need 3 litres of white for every 2 litres of red. How many litres of each colour will she need to buy?

24L white and 16L red

3. In a pack of balloons, there are 3 different colours: red, blue and green. The ratio is 5:2:1 (red: blue: green). If there are 8 blue balloons in the pack, how many balloons are there in total?

32 balloons

4. Susie is saving for a new pair of trainers. Every week she saves £5 of her pocket money and her mum gives her £3. If the trainers cost £56, how many weeks will it take her to have enough money to buy them? How much money will she have saved and how much will her mum have given?

7 weeks
Saved £35
Mom £21

5. 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

6. Class 6 do a survey to find out which sport children like best. For every child who said they like rounders, there were three children who liked football and two who said they like swimming best. There were 20 children who said they liked swimming. How many children took part in the survey?

60 children

7. A printing press prints 120 sheets in 3 minutes. How many sheets are printed in 30 minutes?

1200 sheets

8. Farmer Giles and Farmer Jones have chickens. Farmer Giles' chickens lay 2 brown eggs for every 5 white eggs. Farmer Jones' chickens lay 3 brown egg for every 4 white eggs. On Monday Farmer Giles' chickens laid 35 eggs and Farmer Jones' chickens laid 28 eggs. Which farmer's chickens laid more brown eggs?

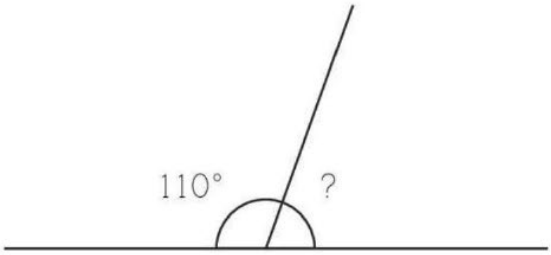
Farmer Jones

(16 marks)

Angles

Calculate the missing angles

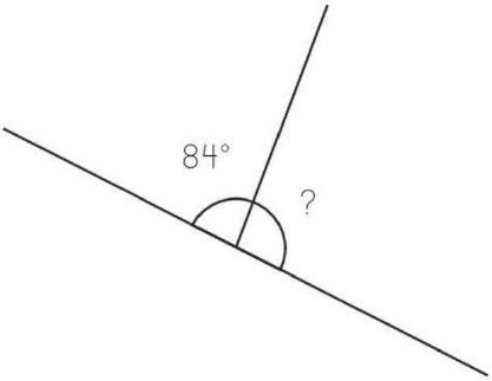
1.



The missing angle is:

70

2.



The missing angle is:

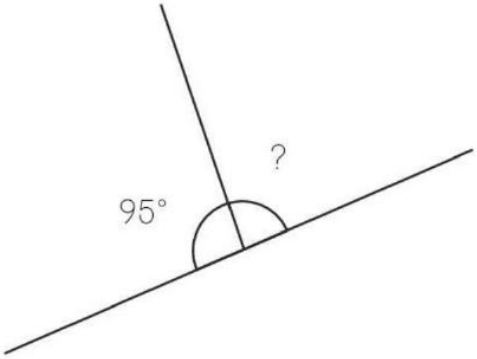
96

3.

The missing angle is:

163

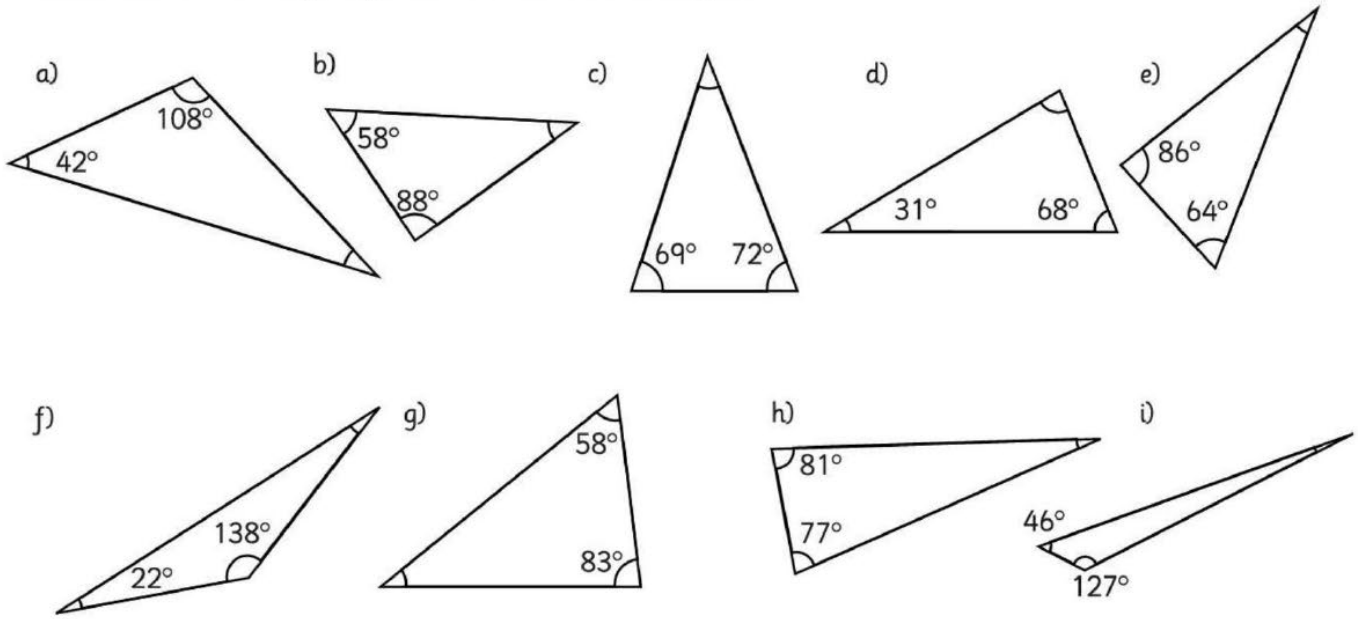
4.



The missing angle is:

85

Calculate the missing angle in these scalene triangles.



Write the answers below

a) 30

b) 34

c) 39

d) 81

e) 30

f) 20

g) 39

h) 22

i) 7

(13 marks)

Verbal Reasoning

GL Techniques

Type 2:

In each of the following there is the SAME connection between the word outside the brackets and ONE word inside each pair of brackets. Underline these words, one word from each pair of brackets. Here is an example:

Fruit is to (tree, *banana*, bowl) as
vegetable is to (*potato*, pie, meat)

1) driver pilot
2) happiness sorrow
3) hunger thirst
4) 8 6

T2/1

Type 3:

One letter from the word on the left-hand side must be taken and placed into or added to the word on the right-hand side so that TWO new and sensible words are formed which are correctly spelt. All the other letters must remain in the same position. Here is an example:

S C A R E and B O A T become (_*CARE*_) and (_*BOAST*_)
^ ^

5) FRIED DONOR
6) REAM MEDAL
7) CAMP SOLAR

T3/1

Type 7:

Underline TWO words, one from each set of words, which have the SAME or nearly the same meaning. Here is an example:

expose exchange *expand* : engage *enlarge* endorse

8) dry parched

9) succulent juicy

10) artificial false T7/1

Type 8:

Fill in the missing word in brackets which is needed to complete the third pair of words. This is formed in the same way as the second word in each of the first two pairs of words. Here is an example:

11) mat

12) pay

13) pit T8/1

Type 9:

14) PIP ARE YEN

15) ASK SEE HAG

Type 14:

Underline the ONE word inside the brackets which CANNOT be made using the letters of the word outside the brackets.

16) spread

17) patter

18) resemble

T14/2

Type 15:

19) T

20) C

21) I

T15/2

Type 16:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Using the above alphabet to help you, continue the letter series in each of the examples below, and fill in the empty brackets. Here is an example:

H I G J F (_K_) (_E_)

22) QT

23) AX

24) N J

25) G T

T16/2

Type 17:

Put the following in alphabetical order by writing your answers 1, 2, 3, 4 or 5 in the brackets.

26) 3 4 2 1 5
27) 5 2 3 1 4
28) 4 5 3 2 1 T17/2

Ty

One of the words in each of the following sentences has THREE consecutive letters missing. Without changing the order of these three letters they spell another proper word. Write this word in the brackets. Here is an example:

crowded
The fans cded around the pop-star . . . (_*row*_)

29) lid
30) too
31) pen
32) ear
33) bin T20/2

Type 2

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*) AME : SHEL(*F*) EW

34) R
35) R
36) F T21/2

Type 22:

In the following there are two sets of words. The word in the brackets on the left-hand side has been formed using some of the letters of the words on either side of its brackets. You must write the missing word in the brackets on the right-hand side which has been formed from its pair of words in the same way. Here is an example:

COST (T O O K) POKE : HEIR (*R E A R*) PART
^ ^ ^^ ^ ^ ^^

37) DUST
38) MOOD
39) LEAN
40) RUST

T22/2

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:

41) C
42) 2

T23/2

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*_)

43) 72
44) 16

T24/3

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.

45) 24 15

46) 36 81

47) 47 95

T26/3

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

48) 22

49) 12

T28/3

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:

50) R

51) 3

52) R G T29/3

(52 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.

3. C

The figure is reflected and the shading of the shape changes from white to grey or grey to white.

Section 5 — Changing Bugs

1. D

The bug's body rotates 180 degrees.

2. B

Each different shading on the bug's body moves down one segment. (When a shading reaches the bottom, it starts again from the top.)

3. B

The shape of the bug's body becomes the shape of the bug's head and the shape of the bug's head becomes the shape of the bug's body.

4. C

The bug gains an extra pair of legs. The grey segments become white and the white segments become grey.