BROAD HORIZON
TUITION

11+ Tuition

Year 5 - Online

Assessment Test 3

ANSWERS

Total: /183 %

Pass mark is 70% 128 / 183

Contents

Maths

Multiplying numbers by 10, 100 and 100

1) 7.54 x 10 = 75.4

2) 254 ÷ 1000 = 0.254

3) 0.012 x 100 = 1.2

4) 2 ÷ 100 = 0.02

5) 7824 ÷ 1000 = 7.824

6) 61 ÷ 100 = 0.61

7) 25.6 ÷ 100 = 0.256

8) 123 ÷ 10 = 12.3

9) 0.0145 x 100 = 1.45

(9 marks)

BIDMAS – Order of operations

1) $(12 \times 5 + 3^2) + 3$ 72

2) $(9 \times 3 + 5^2) + 2$ 54

3) $(84 - 6^2) \div (10 - 2)$ 6

4) $(35 - 5) \div 6 + 2^2$ 9

(4 marks)

Round each number to the nearest 10 and 100

Club	Average attendance	Rounded to 1 000	Rounded to 10 000
Manchester United	73 452	73,000	70,000
Arsenal	60 079	60,000	60,000
Newcastle United	50 517	51,000	50,000
Manchester City	46 974	47,000	50,000
Liverpool	44 748	45,000	40,000
Chelsea	41 462	41,000	40,000

(12 marks)

Column Multiplication

1281 x 89	1843 x 86	1334 x 81	1694 x 18
114,009	158,498	108,054	30,492

Mean, mode, median and range

(4 marks)

1) 3, 8, 2, 3

Mean 4 Median 3 Mode 3 Range 6

2) 7, 9, 7, 9

Mean 8 Median 8 Mode 7 & 9 Range 2

3) 6, 7, 3, 3, 6, 5

Mean 5 Median 5.5 Mode 3 & 6 Range 4

4) 8, 5, 3, 8

Mean 6 Median 6.5 Mode 8 Range 5

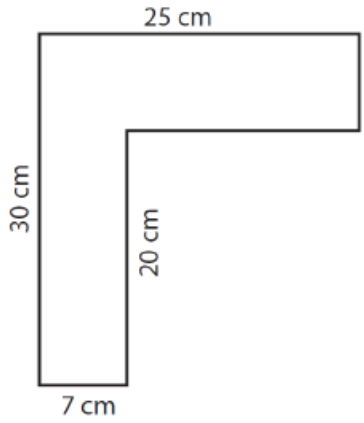
Find the elapsed time

(How much time has gone by between the start time and the end time)

Q.No	Start Time	End Time	Elapsed Time
1)	6:40 A.M.	9:55 A.M.	3 hours 15 minutes
2)	8:55 P.M.	11:25 P.M.	2 hours 30 minutes
3)	1:40 A.M.	9:30 A.M.	7 hours 50 minutes
4)	6:30 P.M.	10:35 P.M.	4 hours 5 minutes
5)	7:35 A.M.	11:20 A.M.	3 hours 45 minutes

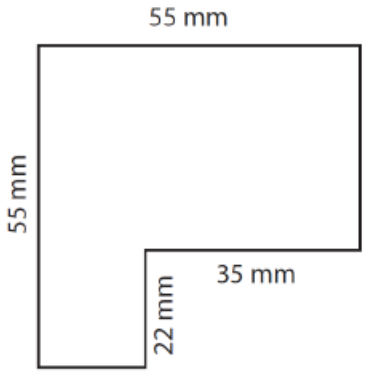
Find the missing lengths and then workout the perimeter and area

1)



Q1) Perimeter = 110cm

2)



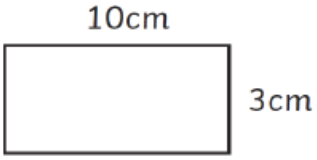
Q2) Perimeter = 220cm

3.

Q3) Perimeter = 26cm

Q3) Area = 40cm sq

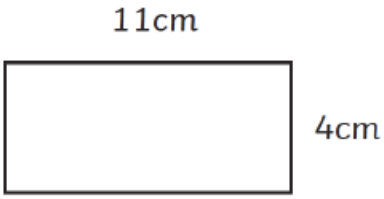
4.



Q4) Perimeter = 26cm

Q4) Area = 30cm sq

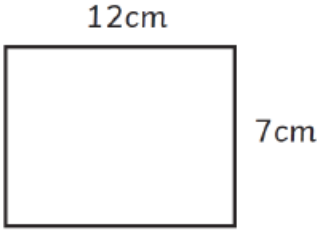
5.



Q5) Perimeter = 30cm

Q5) Area = 44cm sq

6.



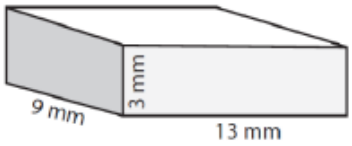
Q6) Perimeter = 38cm

Q6) Area = 84cm sq

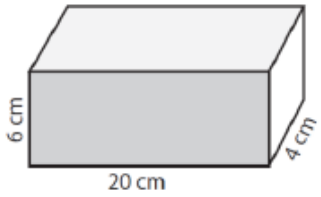
(10)

Find the volume of each of the cuboids below

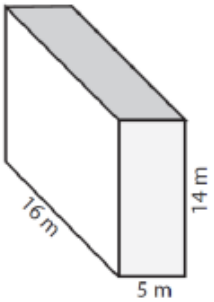
1)



2)



3)



Q1) Volume = 351cm cubed **Q2) Volume =** 480cm cubed **Q3) Volume =** 1120cm cubed

(3)

Now work out the surface area of the above shapes.

1) Surface area of shape 1 = 366cm sq

2) Surface area of shape 2 = 448cm sq

3) Surface area of shape 3 = 748cm sq **(3)**

Adding Fractions

Remember to simplify!
One mark is for a correct answer and an extra mark ifsimplified correctly!

1) $\frac{6}{10} + \frac{2}{4} =$ 22/20 = 11/10 = 1 and 1/10

***Use the dash to write your fraction. E.g. 2/5**

2) $\frac{5}{10} + \frac{1}{4} =$ 15/20 = 3/4

3) $\frac{1}{3} + \frac{2}{5} =$ 11/15

(5)

Subtracting Fractions

4) $\frac{1}{2} - \frac{1}{3} =$ 1/6

5) $\frac{3}{4} - \frac{6}{10} =$ 3/20

6) $\frac{9}{10} - \frac{3}{5} =$ 3/10

Fractions of numbers

1) Find $\frac{4}{8}$ of 224 = 112

2) Find $\frac{3}{4}$ of 36 = 27

3) Find $\frac{1}{5}$ of 20 = 4

4) Find $\frac{2}{3}$ of 48 = 32

5) Find $\frac{6}{10}$ of 300 = 180

Percentages of numbers

1) Find 10% of 240 = 24

2) Find 35% of 70 = 24.5

3) Find 20% of 150 = 30

4) Find 85% of 400 = 340

5) Find 6% of 20 = 1.2

6) Find 27% of 35 = 9.45

Find the highest common factor of the following;

1. 48 and 36 = 12

2. 56 and 42 = 7

3. 35 and 50 = 5

Find the lowest common multiple of the following;

1. 8 and 3 = 24

2. 6 and 5 = 30

Homework – Memorise the following two page:

Fraction	Decimal	Percentage
$\frac{1}{1}$	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%

Conversion Rates

Time

1 Minute = **60** seconds

1 Hour = **60** Minutes

1 Day = **24** Hours

1 Week = **7** Days

1 Fortnight = **2** Weeks

1 Year = **52** Weeks

1 Year = **12** months

1 Year = **365** Days

1 Decade = **10** Years

1 Century = **100** Years

1 Millennium = **1000** Years

Weight

1 Tonne = **1000** Kilograms

1 Kilogram = **1000** Grams

1 Gram = **100** Centigrams

1 Gram = **1000** Milligrams

1 Stone = **14** Pounds

1 Pound = **16** Ounces

Length

1 Centimetre = **10** Millimetres

1 Metre = **100** Centimetres

1 Kilometre = **1000** Metres

5 Miles ≈ (approximately equal to) **8** Kilometres

1 Foot = **12** Inches

1 Yard = **3** Feet

Capacity

1 Kilolitre = **1000** Litre

1 Litre = **1000** millilitres

1 Litre = **100** centilitres

1 Centilitre = **10** millilitres

Learn a few of these each day!

Perhaps you could tick them off as you learn them?

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. For Example:

1) trunk stem
2) water fire
3) clock thermometer T2/1

Type 4:

A word on the left-hand side will join with a word on the right-hand side to form a completely new and proper word. The word on the left-hand side always begins this new word. Underline the two words, one from each group. For Example:

sit / will / *man* : now / *age* / ton

4) indeed
5) thinnest
6) instead T4/1

Type 5:

Here you must find the FOUR-letter word which is hidden BETWEEN the words in each of the following sentences. Write this word in the brackets. Here is an example:

Girls are made o*f all* things nice . (_*fall*_)

6) vest
7) dust
8) them T5/1

Type 6:

In each of the following questions you must change one letter in the top word to make a new sensible word. By changing a different letter in this new word it is possible to make the bottom word which is given. Write out the sensible word on the line provided. Here is an example:

Here there were two letters that needed changing in the first word to make the second word (R to F, and D to M). If the R remains unchanged while the D changes to an M we make the sensible word *ROAM*. The R changes to F on the second stage to make the word given, FOAM. Now answer the following questions:

WEAN CASE

9) LEAN

10) CAME T6/1

Type 7:

There are two groups of words in each question below. Choose TWO words, one from each group which are OPPOSITE in meaning to each other. Here is an example:

big / *rich* / man : *poor* / bank / beautiful

11) rough calm

12) give receive

13) expensive cheap T7/1

Type 8:

Write in brackets the word needed to complete the third pair of words. This pair follows the same pattern as the first two pairs of words. For Example:

stone tone / slate late / cream (_*ream*_)

14) hares

15) male

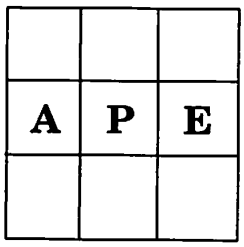
16) pass

17) let

T8/1

Type 9:

The following are a type of crossword. Complete each puzzle by fitting the five words on the right-hand side of the grid horizontally and vertically into the correct positions. One word has been included already. Here is an example:



SAM
MEN
TEN
APE
SAT

becomes

S	*A*	*M*
A	*P*	*E*
T	*E*	*N*

18) BAD EGO GET

19) ATE NOW TOE T9/1

Type 10:

There is a connection between the 2 words on the outside of the brackets and TWO of the words inside the brackets. Underline the two words. For Example:

DOG HAMSTER (*cat*, doll, pet, *rabbit*, black)

20) princess woman
21) silver lead
22) jumper shirt T10/1

Type 11:

23) A
24) B
25) B
26) E
27) A
28) E
29) D
30) C
31) C

Type 12:

Each of the following pairs of brackets has ONE word which does not belong to the rest. Underline this 'odd one out'.

32) person
33) ball
34) cup T12/1

Type 13:

Underline the word which would come in the MIDDLE if the following were put in order of size, sequence or position. Here is an example:

(youth adult *child* toddler baby)

35) dog
36) orange
37) hour T13/1

Type 14:

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

38) meant
39) track T14/2

Type 15:

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

The following questions are all concerned with the alphabet.

40) 21st
41) it
42) E T15/2

Type 16:

In the questions below there are two pairs of letters that are related in some way. Write in the brackets the pair of letters that completes the second relationship in the same way. Here is an example:

A C is to B D as M O is to (_*NP*_)

43) QG
44) KW
45) OV T16/2

Non-Verbal Reasoning

ASSESSMENT TEST 4

Section 1 — Complete the Hexagonal Grid

1. B

Going in a clockwise direction from the top hexagon, the heart shape increases in size.

2. B

The hexagons on opposite sides of the hexagonal grid are identical.

3. A

Going in an anticlockwise direction from the top hexagon, each circle gains an extra line. The lines are added end-to-end in an anticlockwise direction.

Section 2 — Find the Figure Like the First Two

1. B

All figures must be cross-hatched.

2. A

All figures must have three copies of the same shape, arranged one inside the other.

3. C

All figures must have two lines that cross each other.

4. A

All figures must have an arrow pointing in a clockwise direction around a shape.

Section 3 — Reflect the Figure

1. B

Option A is not reflected and there is only one line. Option C is a 90 degree anticlockwise rotation. Option D is a 180 degree rotation.

2. C

Options A and B are the wrong shape. Option D is a downwards reflection.

3. B

In option A, the stripe is positioned incorrectly and the shading is wrong. In option C, the stripe is positioned incorrectly. Option D is a 90 degree clockwise rotation.

4. D

In option A, the black quarter-circle's position has been reflected, but not the shape itself. In option B, the quarter-circle has been reflected, but its position has not been reflected. Option C is a 180 degree rotation.

Section 4 — Cubes and Nets

1. B

Option A is ruled out because the net doesn't have a face with a black triangle on it. Option C is ruled out because the net doesn't have a face with a 'W' on it. Option D is ruled out because the face with the grey ring and the face with the grey stripe must be on opposite sides.

2. D

Option A is ruled out because the face with the star and the grey face must be on opposite sides. Option B is ruled out because the net doesn't have a face with one grey circle on it. Option C is ruled out because the net doesn't have a face with a black square on it.

3. A

Option B is ruled out because the face with the three circles and the cross-hatched face must be on opposite sides. Option C is ruled out because the net doesn't have two identical faces. Option D is ruled out because the net doesn't have a face with a parallelogram on it.

Section 5 — 3D Rotation

1. E

Shape E has been rotated 90 degrees away from you, top-to-bottom.

2. A

Shape A has been rotated 90 degrees clockwise in the plane of the page.

3. F

Shape F has been rotated 90 degrees right-to-left.

4. B

Shape B has been rotated 90 degrees anticlockwise in the plane of the page.