BROAD HORIZON
TUITION

11+ Tuition

Year 5

Week 5 – Lesson

ANSWERS

Contents

Core Maths – Elapsed time practice

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

Note: the elapsed time is how much time has gone by. So, if Q1 starts at 4:30am and 3 hours go by, what is the end time? **Answer = 7:30am**

Question 3, the end time was 8:30am and 6 hours an 30 mins had gone by, so you need to subtract 6 hours and 30 minutes from 8:30am, first subtract the whole hours then the minutes.

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

Q.No	Start Time	End Time	Elapsed Time
1)	6:40 A.M.	9:55 A.M.	3 hours and 15 minutes
2)	8:55 P.M.	11:25 P.M.	2 hours and 30 minutes
3)	1:40 A.M.	9:30 A.M.	7 hours and 50 minutes
4)	6:30 P.M.	10:35 P.M.	4 hours and 5 minutes
5)	7:35 A.M.	11:20 A.M.	3 hours and 45 minutes
6)	2:55 A.M.	8:25 A.M.	5 hours and 30 minutes
7)	9:10 P.M.	10:30 P.M.	1 hour and 20 minutes
8)	3:00 A.M.	9:05 A.M.	6 hours and 5 minutes
9)	Noon	10:20 P.M.	10 hours and 20 minutes
10)	9:15 A.M.	11:55 A.M.	2 hours and 40 minutes
11)	6:30 A.M.	10:45 A.M.	4 hours and 15 minutes
12)	1:30 P.M.	7:20 P.M.	5 hours and 50 minutes
13)	4:35 A.M.	7:10 A.M.	2 hours and 35 minutes
14)	2:55 A.M.	4:10 A.M.	1 hour and 15 minutes
15)	3:30 P.M.	9:30 P.M.	6 hours

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

Q.No	Start Time	End Time	Elapsed Time
1)	4:02 A.M.	7:23 A.M.	3 hours and 21 minutes
2)	9:32 P.M.	11:48 P.M.	2 hours and 16 minutes
3)	1:10 A.M.	9:44 A.M.	8 hours and 34 minutes
4)	5:12 P.M.	7:27 P.M.	2 hours and 15 minutes
5)	3:18 A.M.	10:09 A.M.	6 hours and 51 minutes
6)	11:10 P.M.	11:52 P.M.	42 minutes
7)	2:33 A.M.	8:47 A.M.	6 hours and 14 minutes
8)	4:54 P.M.	6:03 P.M.	1 hour and 9 minutes
9)	7:16 A.M.	9:28 A.M.	2 hours and 12 minutes
10)	5:59 P.M.	11:04 P.M.	5 hours and 5 minutes
11)	1:08 A.M.	3:17 A.M.	2 hours and 9 minutes
12)	10:22 P.M.	Midnight	1 hour and 38 minutes
13)	2:45 A.M.	8:33 A.M.	5 hours and 48 minutes
14)	6:11 P.M.	10:10 P.M.	3 hours and 59 minutes
15)	2:14 A.M.	6:36 A.M.	4 hours and 22 minutes

Starter Task – Quick Revision

STARTER TASK ANSWERS

Q1) 0.623

Q2) 83.75

Q3) A Number with 2 factors, one and itself

Q4) 31, 37, 41, 43, 47

Q5) 8

Q6) 325

Q7) 1, 2, 3, 4, 6, 9, 12, 18, 36

Q8) 18.55

Q9) 12

Q10) 8

Starter task – Vocabulary Homework Test

Exercise C

1. Delude
2. Primitive
3. Wince
4. Persuasive
5. Eccentric
6. Excursion
7. Hysterical
8. Facility
9. Administrator
10. Imminent

Maths

Practice – Long Maths Word Problems

Test 9 — pages 29-31

1. 96 litres

There are 24 hours in a day, so there are $2 \times 24 = 48$ hours in two days. Two litres drip every hour, which in total gives $2 \times 48 = 96$ litres.

2. 8

Add up the number of fights and divide by the number of months. $4 + 9 + 8 + 11 = 32$. $32 \div 4 = 8$.

3. D

65 mm is the same as 6.5 cm.
$6.5 + 11.7 = 18.2$ cm (use partitioning here).

4. £9.00

It costs 1p to make each dummy, so it costs 100p = £1 to make a pack of 100 dummies. They are sold for £10, so each pack makes a profit of $10 - 1 = £9$.

5. 10 km

He has to make $12 \div 4 = 3$ trips to move all of his belongings. So he needs to go to the new house 3 times, but he only needs to come back to his old house twice in between, making a total of 5 trips. So he has to travel 5×2 km = 10 km.

6. £14.00

The reduced price is $100 - 65 = 35\%$ of the full price. 10% of £40 is £4, so 30% is $4 \times 3 = £12$, and 5% is $4 \div 2 = £2$. So 35% is $12 + 2 = £14$.

7. 88 seconds

Lighthouse A will shine on B every 11 seconds, so it will always be a multiple of 11. Similarly, Lighthouse B will shine on A on multiples of 8. So they will shine on each other on multiples of both 8 and 11. The next one will be after $8 \times 11 = 88$ seconds.

8. A

6 squares left of Lighthouse B is (2, 4).
2 squares down from there is (2, 2).

9. 20

The first path splits into 2 paths. Each of these splits into 5, so there are $2 \times 5 = 10$ paths. Each of these paths splits again into 2 paths, so there are $2 \times 10 = 20$ paths and 20 end places.

10. 30

3 cubes go into the width of the box completely, because $3 \times 10 = 30$, which is less than 35. 5 cubes go into the length of the box, because $5 \times 10 = 50$. 2 cubes go into the height of the box completely, because $2 \times 10 = 20$, which is less than 25. So in total $3 \times 5 \times 2 = 3 \times 10 = 30$ cubes go into the box completely.

11. A

There are 6 extra cubes in the box and the mass is $750 - 150 = 600$ g more. So each cube has a mass of $600 \div 6 = 100$ g. One cube and the box weigh 150 g, so the box weighs 50 g.

12. E

20% is the same as $^1/_5$. Sharing $^1/_5$ between three is the same as dividing by 3. $^1/_5 \div 3 = {}^1/_{15}$.

Test 10 — pages 32-34

1. C

5 jam tarts cost 5 × 25 = 125p. £2 is the same as 200p, so 200p – 125p = 75p.

2. 5

You can make £36.50 from a £20 note, a £10 note, a £5 note, a £1 coin and a 50p coin. This is 5 in total.

3. 150°

The angles in a quadrilateral add up to 360°.
The three known angles add up to 3 × 70 = 210°.
360 – 210 = 150°.

4. 88 ounces

5 × 16 = 80 (you can use partitioning if you need).
80 + 8 = 88.

5. E

25th July is a Saturday and there are 31 days in July. So counting on you get that 1st August is also a Saturday. So the 8th August and 15th August are Saturdays. The 14th August is the day before Saturday, so it is a Friday.

6. 11

The new shape on the left has one more face than the original cube, so it has 6 + 1 = 7 faces. The new shape on the right has 4 faces, so in total there are 7 + 4 = 11 faces.

8. D

Add up the bars to find the total number of houses on sale: 2 + 7 + 3 + 2 + 4 = 18 houses. The number of houses under £200 000 is 2 + 7 = 9 houses. So they can afford $^{9}/_{18}$ of the houses, which is the same as $^{1}/_{2}$.

9. 9

On each day she adds two more tiles than the day before. On Day 4 she adds 7 tiles, so on Day 5 she adds 7 + 2 = 9 tiles.

10. D

On each day the number of tiles is the Day number multiplied by itself. So on Day 10 there are 10 × 10 = 100 tiles.

11. 13

Abi gets 9 × 10 = 90° and Elvera gets 14 × 10 = 140°. The angles round a point add up to 360, so Tina gets 360 – 90 – 140 = 130° of cake. This is her age multiplied by 10, so Tina is 130 ÷ 10 = 13 years old.

12. 17 and 19

They live at odd numbers next to each other that are both prime. The only options that add up to a number less than 50 are: 3 and 5, 5 and 7, 11 and 13, 17 and 19. Out of these the only pair that add up to a square number is 17 + 19 = 36, so these must be their house numbers.

Practice – Quick Maths Questions

Test 5 — pages 15-17

1. C
5 is in the thousandths column, so its value is 0.005.

2. 63 cm
A regular heptagon has seven sides of equal length, so the perimeter is 9 × 7 = 63 cm.

3. £15.20
£1.60 × 3 = (£1 × 3) + (£0.60 × 3) = £3 + £1.80 = £4.80. £20 – £5 = £15, so £20 – £4.80 is 20p more than this, so £15.20.

4. C
The factors of 6 are 1, 2, 3, 6. Of these, only 1 and 2 are factors of 56. So 2 factors of 56 are also factors of 6.

5. C
When folded up, the four triangles around the outside will meet to form a point, with a square as the base. So the shape formed is a square-based pyramid.

6. E
$50^2 = 50 \times 50 = 2500$.

7. 12°
Angles on a straight line add up to 180°, so the size of angle a is 180 – (97 + 71) = 180 – 168 = 12°.

8. D
The grid contains 20 squares, of which 16 are shaded blue. $^{16}/_{20} = {}^{80}/_{100} = 80\%$.

9. 1456
1 week = 7 days, so there are 7 × 208 = (7 × 200) + (7 × 8) = 1400 + 56 = 1456 days in 208 weeks.

10. B
$92\% = {}^{92}/_{100}$. 92 and 100 are both divisible by 4, so $^{92}/_{100}$ can be simplified to $^{23}/_{25}$.

11. A
The kite has only one line of symmetry, as shown.

12. D
12 845 is not a multiple of 9, because 1 + 2 + 8 + 4 + 5 = 20, which is not divisible by 9.

13. 80
$x = 6$, so $11x + 14 = (11 \times 6) + 14 = 66 + 14 = 80$.

14. 10 cm²
Half of the shape contains 4 full squares + 2 half squares = 5 squares. The whole shape will contain 5 × 2 = 10 squares when reflected in the mirror line, so its area is 10 cm².

15. 10 850 g
1 kg = 1000 g, so 11 kg × 1000 = 11 000 g.
11 000 – 150 = 10 850 g.

16. C
East is 90° clockwise from north and south is 180° clockwise from north on a compass. 135° is halfway between 90° and 180°, so the answer is south-east (SE).

17. 0.125
$^1/_{16} \times 2 = {}^2/_{16} = {}^1/_8$. $^1/_8$ is half of $^1/_4$.
$^1/_4 = 0.25$, so $^1/_8 = 0.25 \div 2 = 0.125$.

18. C
Translating P up 2 squares increases the y-coordinate by 2 to give (1, 1). The x-coordinate is unchanged.

19. 97 m²
The area of the shaded section is
$(8 \times 14) - ({}^1/_2 \times 5 \times 6) = 112 - 15 = 97$ m².

20. 132
Using long division:

```
        1 3 2
   11 | 1 4 5 2
        1 1
          3 5
          3 3
            2 2
```

21. C
Square numbers smaller than 74: 1, 4, 9, 16, 25, 36, 49, 64.
25 + 49 = 74. Difference = 49 – 25 = 24.

22. 117
The n^{th} term of the sequence is $n^2 + 4n$, so the ninth term in the sequence is $9^2 + (4 \times 9) = 81 + 36 = 117$.

English – Comprehension

Comprehension Practice

Test 1 - Alice in Wonderland

Question	Answer	Source of Answer
1	D	Refer to lines 1-2: 'Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do.'
2	A	Refer to lines 2-3: '...it had no pictures or conversations in it, "and what is the use of a book," thought Alice, "without pictures or conversations?"'
3	C	Reader's personal judgement required. Refer to the referenced lines in order to help form an opinion as to how this passage should be described. The idea of a rabbit talking and carrying a watch is comical, so the best option is 'humorous'.
4	B	Reader's logical inference required. Refer to the description of the well in lines 19-30 to make a decision as to which of the given options provide the best description. As Alice takes a very long time to fall down the well and the sides were filled with cupboards and bookshelves, the best options are 'long' and 'magical'.
5	B	Reader's logical inference required. Use own knowledge to make a decision as to why Alice might be feeling disappointed. 'She would have liked to try some of it' is the most likely option as there is no other information given that suggests any of the other options are likely.
6	D	Knowledge of grammar required. A verb is a word that conveys an action. The action in this sentence is 'coming', so the verb is 'come'.
7	A	Knowledge of literary techniques required. 'Thump' is an example of an onomatopoeia. An onomatopoeia is a word that phonetically imitates the sound it is describing.
8	E	Reader's logical inference required. Refer to lines 30-35 to make a decision as to how Alice might be feeling. The sentence 'There was nothing else to do, so Alice soon began talking to herself.' gives the impression that Alice was bored.
9	C	Refer to line 14: '...burning with curiosity...'
10	D	Refer to lines 49-51: '...either the locks were too large, or the key was too small, but, at any rate, it would not open any of them.'
11	E	Reader's logical inference required. Refer to the quoted text within the context of the passage to make a decision as to whom Alice is speaking to. As there are no other characters around at this point, the reader can infer that Alice is speaking to herself.
12	D	Reader's personal judgement required. Refer to the quoted text within the context of the passage to help form an opinion as to how Alice might be feeling. As Alice has been portrayed as a likeable character, the image of her sitting down and crying evokes sympathy in the reader.
13	E	Knowledge of vocabulary required. The word 'seldom' means rarely. Therefore, the best option is 'not often'.
14	C	Reader's logical inference required. Refer to lines 92-93 to make a decision as to why Alice only eats a small amount of the cake. 'She has learned to be more cautious' is the most likely option as there is no evidence to imply that any of the other four are true.
15	B	Reader's personal judgement required. Look at the text as a whole, focussing on Alice's opinions, reactions and actions, to help form an opinion as to how old Alice might be. She is unlikely to be 5 years-old or younger as she forms articulate, advanced and considered decisions. Equally, she is unlikely to be older than 13 years-old as she is sufficiently curious to spend her day following a rabbit.

Verbal Reasoning

Paper 9 (pages 36–40)

1 **loose** 'Exuberant' is the opposite of 'restrained', so' fixed' is the opposite of 'loose'.
2 **discipline** 'Penalise' and 'discipline' are synonyms in the same way as are 'flair' and 'ability'.
3 **star** 'Dart' is made from the last letter and the first three letters (going backwards) of 'trapped'; so the last letter and the first three letters (going backwards) of 'rattles' spells the word 'star'.
4 **fed** The first letter and last two letters of 'basket' spell 'bet', so first letter and the last two letters of 'failed' spell the word 'fed'.
5 **calculate** 'Reckon' and 'calculate' are synonyms in the same way as are 'humid' and 'steamy'.
6 **ARCH** par**ch**ed
7 **HERE** hemisp**here**
8 **EVER** sever**e**al
9 **LAST** pla**st**er
10 **RAIN** dr**ain**s
11 **sh** brush, shove
12 **ch** batch, chew
13 **lo** halo, love
14 **sh** radish, shine
15 **le** bridle, leader
16 **DOLPHINS, OCEAN**
17 **PYRAMIDS, RIVER**
18 **REPRODUCE, RATE**
19 **THATCHED, STRAW**
20 **EMERGENCY, DIAL**
21 **lifeless**
22 **setback**
23 **pipeline**
24 **outrage**
25 **afterwards**
26 **mile** The pattern is to remove the 'y' from the end of the word and replace it with 'ile'.
27 **stir** The pattern is to begin the word with 's', followed by the first three letters in reverse order.
28 **light** The pattern is to use the first letter followed by the letters 'ight'.
29 **spar** The pattern is to use the first four letters only / remove the last two letters.
30 **tire** The pattern is to use the fourth, third and second letters, followed by the fifth letter.

31 **b** ear, blink
32 **e** clan, breathe
33 **l** and, flake
34 **d** one, dwell
35 **l** spice, slide
36 I'm **sure** I've made **some** mistakes.
37 There are **some** bargains in **the** sale.
38 I **must** take my dog **for** a walk.
39 What is the **name** of that **boy**?
40 I **must** go to bed **soon**.
41 **restore** Choose the word that has most in common, making sure that it matches with all of the words outside the brackets.
42 **portion**
43 **curb**
44 **puzzling**
45 **eject**
46 **CE, EK** The first letter in the pair moves forward by one letter each time. The second letter in the pair moves forward by three letters each time.
47 **ZA, QJ** The first letter in the pair moves back by five letters then forwards by three letters, repeating the pattern. The second letter in the pair moves forward by five letters then back by three letters, repeating the pattern.
48 **KM, MI** The first letter in the pair moves forward by three letters then back by one letter, repeating the pattern. The second letter in the pair moves back by two letters each time.
49 **BC, FG** Each letter in the first pair moves forward to four letters in the following pair.
50 **UP, CL** The first letter in the pair moves forward by four letters each time. The second letter in the pair moves back by two letters each time.
51 **AD, EH** Each letter in the first pair moves forward to four letters in the following pair.
52 **27, 34** The sequence alternately adds 7 and 5: is +7, +5, +7, +5, +7, +5, +7.
53 **3, 19** The sequence alternately subtracts 2 then adds 9: –2, +9, –2, +9, –2, +9, –2.
54 **46, 82** Each number in the sequence increases by 9.
55 **9, 14** The number added increases by 1 each time: +3, +4, +5, +6, +7, +8, +9.
56 **9, 6** There are two sequences which alternate. The first, third, fifth and seventh numbers follow the first sequence; the second, fourth, sixth and eighth numbers follow the second sequence. In the first sequence the number increases by 2 each time. In the second sequence the number decreases by 1 each time.
57 **CHIORST**
58 **N** (A A A E G **N** R T T V X)
59 Arrange the words in a grid to make it easier to put them in the correct alphabetical order.

C	L	A	P		
C	L	A	S	P	
C	L	E	A	N	
C	L	I	N	G	
C	L	O	S	E	

60–61 Place the letters of the word below or above the coded word to make coding and decoding easier:

6	H	7	C	4	X
F	A	C	I	L	E

60 **FACE**
61 **CLIFF**
62–64 Place the letters of the word below or above the coded word to make coding and decoding easier:

4	X	Y	6	A	T
P	A	S	T	R	Y

62 **4XA6**
63 **6XY6T**
64 **Y6XA6**
65–66 Place the letters of the word below or above the coded word to make coding and decoding easier:

X	4	3	Y	Z
L	O	W	E	R

65 **ROWER**
66 **WOOL**
67 **Fire engines are red.** This is supported by the information, 'My car is red; so are fire engines.'
68 **Ford make cars.** This is supported by the information, 'My sister's car is a Ford.'
69 **All wasps do not have bones**. This is supported by the information: 'Wasps are insects. Insects do not have internal skeletons.'
70 **You do not need bones to fly.** This is supported by the information: 'Wasps are insects.' 'Insects do not have internal skeletons.' 'Many insects can fly.'
71–75 To complete this type of question, follow the rules of BIDMAS: complete the brackets first, then the multiplication or division and finally the addition or subtraction. In algebra, if letters or numbers are placed next to each other without a + – × or ÷ sign then multiply them.
71 **1.5** (6 + 5 + 4) ÷ 10 = 1.5
72 **3** (6 x 5) ÷ 10 = 3

73 **10** (4 x 3 ÷ 6) + 8 = 10
74 **4** (4 x 10) ÷ (2 x 5) = 4
75 **4** (2 x 10 x 8) ÷ (2 x 5 x 4) = 4
76 **music, volume** The other words are instruments.
77 **sufficient, adequate** The other words mean 'insufficient'.
78 **azure, navy** The other words are colours associated with red.
79 **outfit, material** The other words all mean 'the same'.
80 **ear, eye** The other words are all verbs related to the senses.

Paper 10 (pages 41–45)

1 **ALTER, LATER**
2 **SHRUB, BRUSH**
3 **CRATE, TRACE**
4 **STABLE, BLEATS**
5 **TOWELS, LOWEST**
6 What **time** do you **think** she will arrive?
7 I hope **we** have one of **her** special lunches.
8 Where **is** your **new** coat?
9 Do **you** think she will come **by** car?
10 I hope I **will** play **well** this afternoon.
11 **contradict, agree** 'Contradict' is most opposite to 'agree' because 'contradict' means to say the opposite of a statement is true whereas 'agree' means to say that the statement is true,
12 **guilty, innocent** 'Guilty' is the most opposite to 'innocent' because 'guilty' means having committed a crime whereas 'innocent' means not having committed a crime.
13 **reduce, increase** 'Reduce' is the most opposite to 'increase' because 'reduce' means to make smaller whereas 'increase' means to make larger.
14 **glut, insufficiency** 'Glut' is the most opposite to 'insufficiency' because 'glut' means too much of something whereas 'insufficiency' means not enough of something.
15 **divide, multiply** 'Divide' is the most opposite to 'multiply' as 'divide' is to split a number into smaller parts whereas 'multiply' is to cause a number to become larger.
16 **Sweets can be damaging to people.** This is supported by the information: 'Eating sweets can damage your teeth. Eating sweets can make you ill.' The other sentences may be true but are not supported by the information given.
17 **Some rodents make good pets.** This is supported by the information: 'Rabbits and guinea pigs are rodents. Rabbits and guinea pigs make good pets.' The other sentences may be true but are not supported by the information given.
18 **A reservoir provides water.** This is supported by the information: 'A reservoir is a lake that stores water for people to use.' The other sentences may be true but are not supported by the information given.
19 **Henry was Elizabeth's father.** This is supported by the information: 'Elizabeth I was Henry's daughter.' The other sentences may be true but are not supported by the information given.
20 **care** 'Care' and 'mind' are both verbs meaning to be bothered about.
21 **lukewarm** 'Tepid' and 'lukewarm' both mean moderately warm.
22 **treasure** 'Cherish' and 'treasure' are both verbs meaning to love and care for.
23 **bake** 'Cook' and 'bake' are both verbs to do with preparing food.
24 **stop** 'Halt' and 'stop' both mean cease or come to a standstill.
25 **96, 91** Each number in the sequence decreases by 5.
26 **72, 54** Each number in the sequence decreases by 9.
27 **17, 19** The number added decreases by 1 each time: +5, +4, +3, +2, +1.
28 **6.66, 0.666** Each number in the sequence is divided by 10.
29 **16, 18** There are two sequences which alternate. In the first sequence, starting with 6, the number increases by 6 each time. In the second sequence, starting with 16, the number increases by 4 each time.
30 **soft** The letter**s oft**en arrived late.
31 **hats** I love the books in t**hat s**eries.
32 **bean** That question cannot **be an**swered.
33 **sent** 'Thi**s ent**ails a lot of work,' moaned the pupil.
34 **rope** Mrs Brown had fou**r ope**rations on her knee.
35 **rain** rainbow, rainfall, rainproof, rainwater
36 **light** lighthouse, lightship, lighthearted, lightweight
37 **day** daydream, daybreak, daylight, daytime
38 **with** withhold, without, withdraw, within
39 **black** blackcurrant, blackmail, blackbird, blackboard
40–42 Place the letters of the word below or above the coded word to make coding and decoding easier:

H	2	G	4	Z	R
F	L	O	W	E	R

40 **WELL**
41 **FLEE**
42 **RG2Z**
43–44 Place the letters of the word below or above the coded word to make coding and decoding easier:

2	4	7	3	8	X	Z
P	I	C	T	U	R	E

43 **X42Z**
44 **3X422ZX**
45–49 Arrange the words in a grid to make it easier to put them in the correct alphabetical order.
45 **forgive**

f	i	e	l	d		
f	o	r	e	i	g	n
f	o	r	f	e	i	t
f	o	r	g	i	v	e
f	u	r	r	o	w	

46 **guinea**

g	r	a	c	i	o	u	s
g	u	a	r	d			
g	u	i	l	d			
g	u	i	n	e	a		
g	y	m	n	a	s	t	

47 **quintet**

q	u	e	s	t	i	o	n
q	u	i	e	t			
q	u	i	l	t			
q	u	i	n	t	e	t	
q	u	i	t				

48 **interrupt**

i	n	t	e	r	n	a	l			
i	n	t	e	r	p	l	a	y		
i	n	t	e	r	r	o	g	a	t	e
i	n	t	e	r	r	u	p	t		
i	n	t	o							

49 **penalty**

p	e	c	u	l	i	a	r
p	e	d	i	c	u	r	e
p	e	d	i	g	r	e	e
p	e	n	a	l	t	y	
p	e	r	s	o	n		

50 **o** halo, omen polo, office
51 **c** epic, carp; panic, coat
52 **g** thing, gnaw; plug, goat
53 **d** pond, dash; blind, deep
54 **h** clash, hark; earth, hit
55 **RAN** br**an**ch
56 **EAR** b**ear**d
57 **LAD** gl**ad**ly
58 **ALL** b**all**ot
59 **OUR** j**our**ney
60 **p** lace, pride
61 **d** anger, dread
62 **r** cease, frilly
63 **l** lance, glisten
64 **l** below, bridle
65–69 When completing this type of question, it is worth remembering that the next letter after Z will be A as the alphabet will start again.
65 **INFRTSI** To get from the word to the code, move each letter forward five places.
66 **AEVR** To get from the word to the code, move each letter forward four places.
67 **2534** If the code is B = 9, A = 3, T = 4, C = 2, H = 5 then CHAT = 2534.
68 **SMALL** To get from the code to the word, move each letter back three places.
69 **CDMKT** To get from the word to the code, move the first, third and fifth letters forward one place, and the second and fourth letters back one place: the sequence is +1, –1, +1, –1, +1.
70 **move, motion** 'Broad' is associated with 'wide' in the same way as 'move' is associated with 'motion'.
71 **overseas, abroad** 'Pant' and 'gasp' are synonyms as are 'overseas' and 'abroad'.
72 **over, under** 'Over' is the opposite of 'under' in the same way as 'win' is the opposite of 'lose'.
73 **peace, war** 'Peace' is the opposite of 'war' in the same way as 'rude' is the opposite of 'polite'.
74 **clear, lucid** 'Know' and 'understand' are synonyms as are 'clear' and lucid'.

75–76

B	U	Y	I	N	G
L		A		E	
I	N	C	H	E	D
G		H		D	
H	A	T	R	E	D
T		S		D	

77–78

	D		C		S
H	E	A	R	S	E
	C		O		A
W	I	G	W	A	M
	D		N		A
P	E	R	S	O	N

79–80

P		C		S	
R	E	A	L	L	Y
I		L		E	
V	A	L	U	E	D
E		E		V	
T	A	R	G	E	T

Cloze Wordbank 58

Cloze Select the Word Test 58

Q1	*emperor*	**Q6**	*later*
Q2	*invaded*	**Q7**	*gradually*
Q3	*empire*	**Q8**	*Britain*
Q4	*bravely*	**Q9**	*built*
Q5	*Channel*	**Q10**	*wall*

Opposite meanings

PAGE 14 — OPPOSITE MEANING

1. **bright** — *'dull' means 'lacking in colour or gloss', whereas 'bright' means 'colourful or shiny'.*
2. **gaunt** — *'fat' means 'overweight', whereas 'gaunt' means 'underweight'.*
3. **modern** — *'ancient' means 'old', whereas 'modern' means 'new'.*
4. **awkward** — *'nimble' means 'light and agile', whereas 'awkward' means 'clumsy and ungraceful'.*
5. **commence** — *'cease' means 'to stop', whereas 'commence' means 'to begin'.*
6. **frenzied** — *'serene' means 'calm', whereas 'frenzied' means 'frantic'.*
7. **defend** — *'accuse' means 'to verbally attack', whereas 'defend' means 'to protect'.*
8. **youthful** — *'elderly' means 'old', whereas 'youthful' means 'young'.*
9. **separate** — *'communal' means 'shared', whereas 'separate' means 'kept apart'.*
10. **deteriorate** — *'improve' means 'to become better', whereas 'deteriorate' means 'to become worse'.*
11. **counterfeit** — *'genuine' means 'authentic', whereas 'counterfeit' means 'fake'.*
12. **concur** — *'disagree' means 'to have a different opinion', whereas 'concur' means 'to have the same opinion'.*
13. **discover** — *'misplace' means 'to lose', whereas 'discover' means 'to find'.*
14. **discouraged** — *'hopeful' means 'optimistic', whereas 'discouraged' means 'pessimistic'.*
15. **refined** — *'crude' means 'ill-mannered', whereas 'refined' means 'well-mannered'.*
16. **perplex** — *'clarify' means 'to make something clear', whereas 'perplex' means 'to make something unclear'.*
17. **taciturn** — *'talkative' means 'inclined to speak a lot', whereas 'taciturn' means 'not inclined to speak'.*
18. **mournful** — *'delighted' means 'very happy', whereas 'mournful' means 'very sad'.*
19. **fluctuating** — *'constant' means 'unchanging', whereas 'fluctuating' means 'changing'.*
20. **onerous** — *'easy' means 'simple', whereas 'onerous' means 'difficult'.*

Antonyms:

1. Tense
2. Filthy
3. Sieze
4. Shame
5. Shy
6. Costly
7. Muddle
8. Punish
9. Exposed
10. Relief
11. Thaw
12. ornate
13. Risky
14. Jagged
15. Rival
16. Loathe
17. Appalled
18. Straight
19. Triumph
20. Thrive

Odd One Out

PAGE 16 — ODD ONE OUT

1. **scissors** — *The other three are all tools used in building.*
2. **gold** — *The other three are non-precious metals.*
3. **upset** — *The other three are all words that mean 'irate'.*
4. **tarpaulin** — *The other three are household furnishings.*
5. **shirt** — *The other three are worn below the waist.*
6. **sock** — *The other three are all types of shoe.*
7. **chaotic** — *The other three all mean 'to mix up'.*
8. **elderly** — *The other three all describe buildings in a bad condition.*
9. **nasty** — *The other three all mean 'challenging'.*
10. **American** — *The other three are people from European countries.*
11. **suppress** — *The other three all mean 'to pacify'.*
12. **organize** — *The other three all mean 'to join together'.*
13. **fret** — *The other three all mean 'to complain'.*
14. **breach** — *The other three all mean 'to go somewhere without permission'.*
15. **allow** — *The other three all mean 'to make a choice'.*
16. **hilarious** — *The other three all mean 'stupid' or 'unwise'.*
17. **chase** — *The other three all mean 'to look for'.*
18. **sweltering** — *The other three all mean 'dry'.*
19. **shy** — *The other three all mean 'doubtful'.*
20. **successful** — *The other three all mean 'to aim for something'.*

Non-Verbal Reasoning

Test 5 Answers

Section 1 : Analogies

Q1 (a) square gives square of squares; circle gives circle of circles
- single square gives many squares – circle should give many little circles – rule out (b) (c) & (e)
- compare (a) & (d) – either could be right – square of circles or circle of circles
- better to imagine the 1st shape determines the overall shape of the 2nd so answer = (a)

{if you have to choose, go for the neater, more logical solution}

Q2 (e) inverts plus black duplicate inside
- shape rotates 180° or V-flips – rule out (b) & (d) immediately
- black copy of main part appears inside – all OK here
- check the shapes are good – (a) is dashed, (c) has doubled the black spots so answer = (e)

Q3 (e) : rotates 90° clockwise; dashed; vertical over horizontal
- rotation 90° clockwise – little circle should be at right – rule out (b) & (d)
- becomes dashed outline – rule out (a)
- compare (c) & (e) – vertical shape should be on top of horizontal so answer = (e)

Q4 (d) : dashed with larger version outside
- becomes larger with solid outline – rule out (a) & (c)
- dashed copy inside same size as original – rule out (b) & (e) leaving answer = (d)

Q5 (c) : 2 shapes swap outlines
- what a mess – shapes seem to rotate by 1 point – doesn't work with shapes on right
- better to say shapes swap outlines – look for dashed point down moon – rule out (b) & (d)
- look for solid points up moon – rule out (a) & now compare (c) & (e)
- solid shape hides dashed in (e) so answer = (c)

Q6 (d) : first 2 drop down; star above 3rd; bold outline
- outline becomes bold – rule out (c) & (e)
- shapes in top row drop down to bottom – rule out (b) & compare (a) & (d)
- need a star top right so answer = (d)

Q7 (e) : outer shapes move onto inner, pointing to its centre
- outer shapes move onto the big one - rule out (b) & (d)
- semi circles point to centre, so should triangles – rule out (a) & (c) leaving answer = (e)

Q8 (b) : rotates 90° clockwise, intermediate shape gets left diagonals
- rotation 90° clockwise – rule out (a) (d) & (e) leaving (b) & (c) to compare
- inner square should be shaded not the 'L' so answer = (b)

Q9 (d) : 90° clockwise; shapes swap & change colour, short lines become longer
- rotation 90° clockwise – rule out (a)
- inner line endings become outers and turn white – look for white bow ties at outside
- rule out (b) (c) & (e) leaving answer = (d)

Q10 (e) : 3 shapes fuse, get shaded & rotate 90°; centre shape becomes new outer
- centre right shaded shape made by fusing the original 3 – look for right shaded oval
- rule out (a) (c) & (d) leaving (b) & (e) to compare
- shape rotates 90° (can't say which way) so answer = (e)

Q11 (a) : top shape drops down onto bottom
- top shape drops down onto bottom – top will be identical to before – rule out (b) & (d)
- it will also go in a bit half way up – rule out (c) & (e) leaving answer = (a)

Q12 (a) : colour swap, arrow rotates 180° within frame
- arrows seem easiest – goes to other end of frame & changes colour & direction
- rule out (b) & (e) then look at inner pattern
- either colour swap or rotate a sector – need black at top – they all have this
- that's all that happens so compare what's left – inners are wrong in (d) & (c) so answer = (a)

Q13 (e) : colour swap for small shapes; right shade for large
- shapes don't move or rotate – rule out (b)
- base shape gets right shaded – rule out (a) & (d) leaving (c) & (e) to compare
- little shapes should colour swap so answer = (e)

Q14 (c) : shapes fuse + small shape goes 90° anti-clockwise and black
- original shapes fuse to give undivided shape – look for simple rectangle - rule out (b) & (d)
- black shape is a copy of the original smaller bit with a 90 degree rotation – rule out (a) & (e) leaving answer = (c)

Q15 (d) : mirror
- looks like a perfect H-flip or mirror image – deal with it one bit at a time
- need reversed E at the bottom – rule out (a) & (b)
- need solid moon left & solid circle right – rule out (c) & (e) leaving (d)
- check the main shape looks good so answer = (d)

Q16 (c) : lose outer half of both shapes
- 2nd shape is the middle bit of the 1st pair –need little triangle at the bottom – not (b) & (e)
- base should be horizontal so rule out (d) & compare (a) & (c)
- (a) doesn't extend the base far enough so answer = (c)

Section 2 : Matrix

Q1 (b) : vertical flip; outer triangles go black
- V-flip so rule out (c) & (e)
- outer small symbols go black – all OK
- what else? - seems to be all that happens so compare what's left
- assume the whole shape flips so (d) is wrong at the bottom
- assume the triangles should flip with their container so (a) is wrong and answer = (b)

{if in doubt take the simplest option involving fewest steps}

Q2 (c) : middle row vertical flip of top; horizontal flip of bottom
- middle row is a V-flip of the top – need narrow end at bottom – rule out (e)
- black sector will be at bottom – rule out (d)
- top black will be triangular (not (b)) with point at right so answer = (c)

Q3 (b) : vertical flip; centre goes dashed
- need a V-flip – flower pot & pentagon will both point up – rule out (a) (c) & (d)
- compare (b) & (e) – inner should be dashed so answer = (b)

Q4 (e) : orientation from right diagonal; inner rectangle shading from row
- orientation same on right diagonal –pen points top right – rule out (a) (c) & (d)
- compare (b) & (e) – shading comes from row so black; answer = (e)

Q5 (e) : big figure moves to little then whole figure mirrors
- expect pentagon to be like crossed circle – one at each side – rule out (b) & (d)
- middle figure made by moving then duplicating & H-flipping main figure
- look for central figure with touching semicircles – rule out (a) & (c) so answer = (e)

Q6 (e) : centre combines upper and lower figures
- middle row gets its figures from top & bottom rows
- look for triangle at top left – rule out (b) & (d)
- look for square at bottom right – rule out (a) & (c) leaving answer = (e)

Q7 (e) : left figure separates right figure and its mirror - original now bold and shaded
- circle at corner should move to centre – they all have
- other shape should go bold with square lattice shading – rule out (a) (c) & (d)
- compare (b) & (e) – (b) is the wrong way round so answer = (e)

Q8 (b) : central figure enlarged, lines taken from columns 1 & 2
- central figure – size from column; shape from row – big pentagon – all OK
- need 2 vertical lines behind the pentagon – rule out (c) (d) & (e)
- compare (a) & (b) - need vertical line like 1st column answer = (b)

Q9 (c) : top of line figure lost; top right loses outer shape; bottom left is white
- look at corner figures – will be 'x' at top right & white square bottom left – not (a) (b) & (e)
- compare (c) & (d) – middle should be a square so answer = (c)

Q10 (c) : outline & orientation from right diagonals - dot from row
- right diagonals give orientation so should be like middle of bottom row – rule out (b) & (d)
- outline also comes from right diagonal so rule out (e)
- compare (a) & (c) where should dot be – near the cross line so answer = (c)

Q11 (e) : corners colour swap downwards; cross made out of other symbols
- 3 shapes at corners are colour swapped in bottom frames – rule out (a) (b) & (d)
- compare (c) & (e) – centre cross made from other figure on left – no colour change
- arrow heads should be white so answer = (e)

Q12 (c) : top row triangles repeat on bottom; 3 2 1 on horizontal with colour swap
- rows have a 3 2 1 series – need single line with dots at ends – rule out (d)
- corner symbols should be like 1st column – rule out (a) & (b)
- compare (c) & (e) – centre triangle should point left so answer = (c)

Q13 (d) : 90° anti-clockwise with colour swap; 2 headed arrow at open end
- shape rotates 90° anti-clockwise – rule out (a) & (e)
- black & white swap – rule out (b) & compare (c) & (d)
- need a double headed arrow at bottom so answer = (d)

Q14 (d) : orientation from left diagonal; symbol positions from horizontals
- orientation comes from left diagonal – need vertical so rule out (c) & (e)
- across rows, from right, figures move down the stick then go back to the top
- triangle will be at bottom – rule out (a) – compare (b) & (d)
- diamond will be at top – rule out (b) leaving answer = (d)

Q15 (e) : top shape becomes outer; middle smaller and black; lower smaller; triangles black to corners
- star gets smaller & black without rotating – look at hexagon – rule out (a) & (c)
- bottom container shape gets smaller – look at oval – rule out (b) as it's black
- compare (d) & (e) – big shape was top on top row so need pentagon : answer = (e)

Q16 (a) : circle position as bottom row; shading on left diagonal; 3 of each base type
- columns give shaded shape – look for hexagon – all are
- left diagonals give shading – need horizontal – rule out (b) & (c)
- corner dot should be like 1st column – will be top left – all OK
- compare the rest – differ in base type – can't see a pattern – must be 3 of each
- only 2 in the matrix have 3 prongs so take (a) as the answer

Section 3 : Series

Q1 (e) : rotates 45° anti-clockwise, ball moves away from circle
- rotating 45° anti-clockwise – will be vertical – rule out (a) (b) & (c)
- compare (d) & (e) – black one is moving to free end so answer = (e)

Q2 (b) : square loses a side anti-clockwise; corners move 90° anti-clockwise
- square loses a side in anti-clockwise sequence – not like (c) or (e)
- corners rotate anti-clockwise – will be squares at top – rule out (a) & (d) so answer = (b)

Q3 (c) : diagonal figure alternates, square at top, horizontal shade; triangle will be white

- triangle alternates so will be white – rule out (e)
- centre figure alternates will be square at top so rule out (a) & (d)
- compare (b) & (c) – shading alternates so will be horizontal; answer = (c)

Q4 (d) : ovals move left then reappear at right

- difficult – white oval alternates mid & left – should be middle but no suitable answer
- think again – the ovals could all move left then reappear on the right
- this would give us white on the right – rule out (e)
- on top grey oval also moving left – will be at left – rule out (a) & (b)
- compare (c) & (d) – white is never on top so answer = (d)

Q5 (c) : vertical hexagon with lines connecting opposite vertices

- alternating shape – will be hexagon – rule out (d) (rotated) & (e)
- will either be 3 cross lines or 1 – rule out (b)
- compare (a) & (c) – cross lines go from corners so answer = (c)

Q6 (d) : rotates 45° anti-clockwise

- just rotating 45° anti-clockwise – black square will be top right – rule out (a) (c) & (e)
- compare (b) & (d) – (b) isn't rotated enough so answer = (c)

Q7 (d) : 1 more white circle; 1 fewer white triangle; 1 more horizontal line

- top triangles reduce by 1 – need 2 – all OK
- bottom circles increase by 1 – left then right – need 2 left, 1 right – so rule out (b) & (c)
- bars increase by 1 – need 4 – rule out (a) & (e) leaving answer = (d)

Q8 (b) : left pointing black arrow with triple tail; 4 vertical arrows starting with a down

- bottom arrow alternates - will point left – rule out (c) & (d)
- bottom arrow gets extra tail – will have 3 – all OK
- top arrows alternate direction – add one pointing down – not (e) (3 downs)
- compare (a) & (b) – new down arrow will be at left so answer = (b)

Q9 (b) : hexagon 45° anti-clockwise so horizontal black at right

- alternating pattern – need hexagon – all OK
- hexagon rotates 45° clockwise – will be horizontal, black at right so answer = (b)

Q10 (a) : 5 rays on circle; 5 squares at top left; black circle at base, lowest squiggle left

- corner squares increase by 1 so need 5 – all OK
- squares go round the corners anti-clockwise – will be top left – rule out (d)
- bottom dot alternates – should be black – rule out (b)
- sun gets an extra ray – will have 5 – rule out (c) & compare (a) & (e)
- bottom squiggle always points left so answer = (a)

Q11 (b) : 1 flips each time, centre flips to give (b)

- difficult – from 1st to 2nd left shape has changed – it's a V-flip
- from 2nd to 4th both the other shapes have V-flipped - 4th to 5th, left V-flips
- must V-flip the middle shape from 2nd to 3rd so outers will look like 2nd frame
- look for left figure like 2nd frame – rule out (a) (d) & (e)
- compare (b) & (c) – middle shape should flip from 2nd so answer = (b)

{visually this is very confusing –isolate what happens to each element and eliminate options}

Q12 (c) : black one disappears each time; 1 more white at bottom right

- bottom right circles increasing – need 5 so rule out (a) (b) & (d)
- compare (c) & (e) : top left dots reducing – need 3 so answer = (c)

Q13 (d) : hearts go anti-clockwise, 5 hearts at bottom right; 3 tadpoles opposite

- hearts going anti-clockwise round corners – should be bottom right – all OK
- hearts numbers go 6-3-1-3-? so need 6 again – rule out (c) & (e)
- tadpoles go anti-clockwise with numbers 3-2-1-2-? so we need 3 in top left – answer = (d)

Q14 (d) : inner hexagon loses a side clockwise, outer gains a side clockwise

- inner hexagon loses a side clockwise –need 3 sides on right hand side – rule out (a) & (c)
- outer hexagon gains a side clockwise – should be 5 sides, lower right missing
- rule out (b) & (e) – look at (d), seems good so answer = (d)

Q15 (b) : shading moving outwards; horizontal cross

- shading goes mid – outer – inner - ? – outer so should be middle – rule out (a) (c) & (d)
- compare (b) & (e) – cross alternates so should be like 2nd – answer = (b)

Q16 (d) : eclipse, white moon touching on the right

- moon swaps colours with sun – need small figure to be white – rule out (b) & (e)
- large figure also alternates so should be grey – rule out (a) & compare (c) & (d)
- moon is moving across the sun – will look like an H-flip of 2nd – answer = (d)

Section 4 : Codes

Q1 (a) : SVB - 1st is shape; 2nd is shading; 3rd is outer

- 2 G's as 1st letter goes with shape – unknown is diamond so 1st letter is S
- 2 V's as 2nd letter goes with shading – unknown is H-shaded so 2nd letter is V
- 2 K's as 3rd letter goes with presence of outer shape – unknown is alone so 3rd letter is B
- answer = SVB = (a)

Q2 (b) : FU - 1st is size; 2nd is divider

- 2 F's & 2 B's as 1st letter goes with size – unknown is small so 1st letter is F
- 2 V's as 2nd letter goes with dividing line – unknown is diagonal so 2nd letter is U

Q3 (c) : SB - 1st is size; 2nd is shading
- 2 Q's as 1st letter goes with size – unknown is small so 1st letter is S
- all different 2nd letters – shading is all different – unknown is R-shaded so 2nd letter is B
- answer = SB = (c)

Q4 (d) : CRK - 1st is direction; 2nd is semi-circle colour; 3rd is top triangle
- 2 C's as 1st letter goes with direction – unknown points left so 1st letter is C
- 2 R's as 2nd letter goes with white semicircle – unknown is white so 2nd letter is R
- 2 K's as 3rd letter goes with triangle at tip – unknown has this so 3rd letter is K
- answer = CRK = (d)

Q5 (e) : KYZ - 1st is circle colour; 2nd is direction, 3rd is size of triangle
- 2 F's as 1st letter goes with black circle – unknown is white so 1st letter is K
- all different 2nd letters – direction is all different – unknown points up so 2nd letter is Y
- 2 U's as 3rd letter, goes with arrow tip – unknown is big so 3rd letter is Z
- answer = KYZ = (e)

Q6 (c) : QB - 1st is shading; 2nd is direction
- 2 K's as 1st letter goes with 1 shaded fish – unknown is both shaded so 1st letter is Q
- all different 2nd letters – positions all different – unknown looks like 3rd so 2nd letter is B
- answer = QB = (c)

Q7 (c) : BX - 1st is overlap triangle; 2nd is main shading
- all different 1st letters so leave for now
- 2 W's as 2nd letter goes with shading of main triangles – unknown is white so 2nd letter is X
- overlap triangle differs in all of them – unknown is white so 1st letter is B
- answer = BX = (c)

Q8 (b) : GY - 1st is direction; 2nd is squares
- 2 G's 2 N's as 1st letter goes with direction – unknown points right so 1st letter is G
- 2 W's as 2nd letter goes with number of squares – unknown has 2 so 2nd letter is Y
- answer = GY = (b)

Q9 (a) : SJ - 1st is direction; 2nd is thickness
- all different 1st letters so leave for now
- 2 K's as 2nd letter goes with thickness – unknown is thin line so 2nd letter is J
- all differ in orientation – unknown is left diagonal so 1st letter is S
- answer = SJ = (a)

Q10 (b) : DKV - 1st is arrow colours; 2nd is arrow positions; 3rd is arrow direction
- 2 X's as 1st letter goes with 2 white arrows – unknown is 2 blacks so 1st letter is D
- 2 M's as 2nd letter goes with both on same level – unknown is like 3rd so 2nd letter is K
- 2 V's as 3rd letter goes with direction of arrows – unknown points left so 3rd letter is V

Q11 (c) : TC - 1st is polygon shape or shading; 2nd is outline
- all different 1st letters so leave for now
- 2 G's as 2nd letter goes with outline – unknown is solid so 2nd letter is C
- all differ in shading & shape – unknown is like middle figure so 1st letter is T either way
- answer = TC = (c)

Q12 (d) : FBT - 1st is centre figure; 2nd is next biggest figure; 3rd is presence of outer figure
- 3 C's as 1st letter goes with triangle colour in the middle – unknown is black so 1st letter is F
- all different 2nd letters so leave for now
- 2 J's, 2 T's as 3rd letter goes with presence of large figure – unknown lacks this so 3rd letter is T
- all differ in mid-sized figure – unknown has triangle so 2nd letter is B
- answer = FBT = (d)

Q13 (b) : EQ - 1st is shading; 2nd is outline
- all different 1st letters so leave for now
- 2 P's as 2nd letter goes with outline – unknown is dashed so 2nd letter is Q
- all differ in shading – unknown is V-shaded so 1st letter is E
- answer = EQ = (b)

{the orientation also differs but as 1st & 3rd were the same we knew this didn't matter }

Q14 (d) : JQ - 1st is arrow colour; 2nd is direction
- 2 J's, 2 S's as 1st letter goes with tip colour – unknown is black so 1st letter is J
- all different 2nd letters – direction differs – unknown is left diagonal so 2nd letter is Q
- answer = JQ = (d)
-

Q15 (e) : PT - 1st is direction; 2nd is colour
- all different 1st letters so leave for now
- 2 T's as 2nd letter goes with dot colour – unknown is black so 2nd letter is T
- direction differs – unknown points up so 1st letter is P
- answer = PT = (e)

Q16 (e) : KI - 1st is orientation;2nd is circles same or different
- 3 F's as 1st letter goes with orientation – unknown is horizontal so 1st letter is K
- 2 R's, 2 I's as 2nd letter goes with circles being the same or different
- unknown has circles with different shading so 2nd letter is I
- answer = KI = (e)

{the last 2 figures have the same code – this tells us that, as they have different shadings, I codes for different shadings not that grey + white has 1 code and black + white will need a new code}

Section 5 : Belongs With

Q1 (d) : figure on top has 1 more side
- triangle and a diamond; diamond and a pentagon – top one has 1 more side
- count the sides – only (d) has top with 1 more side so answer = (d)

Q2 (c) : shapes constant, little circle and rectangle not in overlap zone
- same 6 sided shape with a rectangle in it – (b) & (d) lack this
- overlapped by circle with a little circle in it – not (a) as the circle is hidden
- compare (c) & (e) – little circle shouldn't be in overlap region so answer = (c)

Q3 (e) : circle divided by solid line with solid shading at right angles
- circle divided by solid line – each side shaded differently – rule out (b) & (c)
- shading lines are at right angles – they all are
- compare the rest – don't want dotty shading lines so answer = (e)

Q4 (c) : outer figure repeated at top left; others constant
- white circle at top right – rule out (b)
- diamond at bottom – rule out (d)
- copy of outer shape at top left – rule out (a) & (e) leaving answer = (c)

Q5 (e) : diagonal flip with slight displacement
- each shape is a double with one copy flipped diagonally then displaced
- clearly not (b) (c) or (d) so compare (a) & (e)
- 1 shape is inside the other in (a) so answer = (e)

Q6 (d) : 4 triangles and 4 white circles
- don't look the same – what links them? each has 4 triangles so rule out (a) & (b)
- each has 4 circles (sizes don't matter) – rule out (c) & (e) leaving answer = (d)

Q7 (e) : same 4 symbols in rectangular array in a solid container
- same 4 symbols inside a container (any order) – rule out (c) (upside down triangle)
- container should be solid – rule out (a) – leaving (b) (d) & (e)
- must be pattern formed by symbols – should be square so answer = (e)

Q8 (c) : black eye in kite with rectangle behind
- kite with black eye in it – rule out (b) & (e)
- rectangle behind tip – rule out (a) & (d) so answer = (c)

Q9 (d) : 3 circles in dotted square with solid outer; empty side opposite black
- outer squares, inner dotted – rule out (a)
- 2 white circles & 1 black inside at mid points of sides - rule out (b) & (e)
- compare (c) & (d) – black should be opposite empty side so answer = (d)

Q10 (e) : 3 identical figures; upper overlaps both the lower which don't overlap each other
- 3 overlapping identical figures – rule out (c) & (d) – also (a) as overlap is wrong
- compare (b) & (e) – bottom figures shouldn't overlap each other so answer = (e)

Q11 (d) : 3 sizes of same figure inside a square - black middle figure
- 3 sizes of same figure inside a square – rule out (e)
- mid-sized should be black – rule out (a) (b) & (c) leaving answer = (d)

Q12 (c) : 11 sides of polygons inside a dotty oval
- dotty oval outside – rule out (a) & (d)
- no common figures inside so count – both have a total of 11 sides inside
- 12 – 11 – 10 : only (c) has 11 sides so answer = (c)

Q13 (c) : 2 identical figures (not mirrored) at right angles and overlap on same layer
- 2 identical figures on same level overlapping at right angles - rule out (a) (b) & (d)
- compare (c) & (e) – 1 figure should be a 90° rotation of the other so answer = (c)

Q14 (b) : circles at vertices of polygon with inverted copy inside
- circles at vertices of polygon & on the same level – rule out (a) (c) & (e)
- compare (b) & (d) – inner figure should be a V-flip of outer so answer = (b)

Q15 (d) : vertical line of symmetry
- outer circle, different inside – circles all OK
- vertical line of symmetry – rule out (a) (b) (c) & (e) leaving answer = (d)

Q16 (d) : solid line defines line of symmetry of pentagon
- both have a line of symmetry defined by the dividing line – rule out (a) & (c)
- divider should be solid so rule out (b)
- compare (d) & (e) – both seem fine
- return to original figures – both are pentagons, (e) isn't so answer = (d)

Quick Lesson Recap

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

3) If a jumper costs £30, what would be the price in a 60% off sale?

£12

4) Add 11ml, 245ml and 1.3L

1.556L or 1556ml

5) What is the volume of a cube with an area of $25cm^2$ on one face?

$125cm^3$

6) If W = 6, what is the value of 3W – 30?

-12

7) 0.43 x 7.9 =

3.397

Homework – Vocabulary to memorise

Vocabulary 5

Exercise A

1. Subjective
2. Condense
3. Foresight
4. Recline
5. Contemporary
6. Edible
7. Extravagant
8. Promote
9. Maroon
10. Terrify

Exercise B

1. Terrify
2. Extravagant
3. Foresight
4. Contemporary
5. Maroon
6. Recline
7. Condense
8. Edible
9. Subjective
10. Promote

Anagrams

Test 5

1.	e	Countless tears ran down my cheeks.
2.	w	Make sure your password is not weak.
3.	r	Your anger took me by surprise.
4.	n	My niece will be eleven years old tomorrow.
5.	e	Sadly, not many people write letters anymore.
6.	v	I vacuum the house every week.
7.	o	The life of a junior doctor is hard.
8.	i	I listened to your idea with interest.
9.	a	The best flavour of crisps is prawn cocktail.
10.	l	He could not solve the riddle by himself.

Related Words

Test 5

1 ewe

Solution: The words in the top row of the grid are all male animals. Their female counterparts can be found directly below (e.g. 'ram' and 'ewe').

2 kitchen

Solution: The words in the top row of the grid are all items of furniture. The word directly below gives the room where it is commonly found (e.g. a 'hob' is commonly found in the 'kitchen').

3 furious

Solution: The words in the grid are all synonyms of 'angry'. The words on the left-hand side of the grid are a less extreme form of 'angry' than the ones on the right. 'Livid' and 'furious' both describe being very angry.

4 mouth

Solution: The words in the top row of the grid are all parts of the body. The word directly below indicates where in the body it can be found (e.g. a 'canine' is found in the 'mouth').

5 gravy

Solution: Each word in the top row of the grid is a type of food or drink. The word directly below is often added to enhance it (e.g. 'gravy' can be added to 'beef').

6 cut

Solution: Each word in the top row of the grid can be joined to the word directly below to form one new word (e.g. 'longbow', 'middleman' and 'shortcut').

7 confident

Solution: The words in the top row of the grid all have a similar meaning. Each word in the bottom row is an antonym of the word directly above (e.g. 'timid' and 'confident' are antonyms).

8 grasshopper

Solution: The words in the top row of the grid are all classes of animals. Each word in the bottom row is an animal that belongs in the class directly above (e.g. 'grasshoppers' are 'insects').

9 quarries

Solution: The words in the top row of the grid are homophones. Each word in the bottom row is a synonym of the word directly above it (e.g. 'quarries' and 'preys' are synonyms meaning things that are hunted).

10 beef

Solution: The words in the top row of the grid are all animals and the words in the boxes directly beneath them are the type of meat produced by that animal (e.g. 'beef' comes from a 'cow').

Rhyming Synonyms

Test 5

1. **E** **consecutive**
   consequential → sequential → consecutive
2. **E** **nerve**
   capacity → audacity → nerve
3. **C** **seize**
   rapture → capture → seize
4. **B** **crescent**
   swerved → curved → crescent
5. **A** **communicate**
   delay → convey → communicate
6. **E** **scenic**
   hyperactive → attractive → scenic
7. **B** **nourishing**
   delicious → nutritious → nourishing
8. **A** **helpful**
   superficial → beneficial → helpful
9. **D** **shortens**
   attracts → contracts → shortens
10. **E** **headstrong**
    dissolute → resolute → headstrong