BROAD HORIZON
TUITION

11+ Tuition

Year 5

Week 6 – Lesson

ANSWERS

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Question	Answer
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2	20
3	35
4	7.5
5	60
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7	45
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9	10
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Question	Answer
16	2.5
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18	27.5
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20	37.5
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26	555
27	7.5
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29	440
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Question	Answer
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4	9
5	24.5
6	77.4
7	17.5
8	25.2
9	5.3
10	14.4
11	49.7
12	30.4
13	9.9
14	24.2
15	32.5

Question	Answer
16	13.6
17	10.8
18	87.3
19	1.1
20	48.1
21	185.5
22	342
23	8.5
24	461.7
25	464.1
26	87.3
27	242.5
28	640
29	467.2
30	243

Question	Answer
1	25.2
2	7.28
3	22.8
4	14.3
5	65.96
6	46.62
7	37.63
8	25.2
9	28.42
10	38
11	81
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13	50.92
14	32.34
15	4.59

Question	Answer
16	15.36
17	8.84
18	19.35
19	3.36
20	1.32
21	78.03
22	221.34
23	115.5
24	24.9
25	72
26	587.07
27	386.1
28	36.4
29	93.84
30	328.95

	Item	Full Price	Sale Price	Challenge (+25% Price)
1.	Trainers	£46.20	75% = £34.65	£57.75
2.	Book	£12.80	75% = £9.60	£16.00
3.	Hairdryer	£16.40	75% = £12.30	£20.50
4.	Mobile phone	£63.60	75% = £47.70	£79.50
5.	Tablet	£141.00	75% = £105.75	£176.25
6.	Jeans	£28. 80	75% = £21.60	£36.00
7.	Pencil case	£4.40	75% = £3.30	£5.50
8.	T-Shirt	£9.20	75% = £6.90	£11.50
9.	Football	£6.88	75% = £5.16	£8.60
10.	Guitar	£32.64	75% = £24.48	£40.80

Starter Task – Quick Revision

STARTER TASK ANSWERS

1) 85% of 240 = **204**

2) the mean of 13, 5 and 19 = **12.33...**

3) What is $\frac{3}{7}$ of 224 ? **= 96**

4) $\frac{2}{9} + \frac{1}{2} = \frac{13}{18}$

5) Convert 36ml to litres = **0.036L**

6) Convert 2.97L to ml = **2970ml**

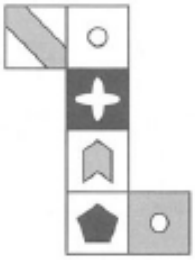
7) What is 0.23 x 6.5 = **1.495**

8) What are the three things to look out for in Non-verbal reasoning, when solving the cube net type questions?

a.

b.

c.



Fill in the following (11 marks)

Fraction	Decimal	Percentage
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%
$\frac{1}{8}$	0.125	12.5%
$\frac{1}{9}$	0.111	11.1%
$\frac{1}{10}$	0.1	10%
$\frac{1}{20}$	0.05	5%

$\overline{21}$

Starter task – Vocabulary Homework Test

Exercise C

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

Maths

Roman Numerals

Try writing the following in roman numerals:

1) 247 = CCXLVII

2) 398 = CCCXCVII

3) 1350 = MCCCL

4) 1987 = MCMLXXXVII

5) 3478 = MMMCDLXXVIII

Practice – Long Maths Word Problems

Test 11 — pages 36-38

1. 168

21 breaks down into 20 + 1. 20 × 8 = 160 and 1 × 8 = 8, so 21 × 8 = 160 + 8 = 168 pencils.

2. 30°

The angles in a quadrilateral add up to 360°. 135° + 135° + 60° = 330° (you can use the column method here). Subtracting this from 360° gives 360° – 330° = 30°.

3. A

Putting the measurements in order gives: 23.9 g, 26.9 g, 28.7 g, 37.8 g, 42.7 g. There are 5 values, so the third is the middle value, which is 28.7 g.

4. 30 g

Find the total for all 7 days and divide by 7. 160 + 26 + 24 = 210 g. 21 ÷ 7 = 3, so 210 ÷ 7 = 30 g.

5. 45.40 m

A pentagon has five sides. 9.08 × 5 breaks down into 9 × 5 + 0.08 × 5 = 45 + 0.4 = 45.4 m.

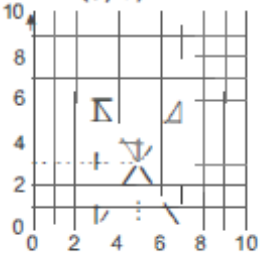
6. £70

14 salads cost 20 – 6 = £14, so each salad cost £1. 70 salads cost 70 × 1 = £70.

7. D

MMXIII = 2013.
The first series was made in 2013 – 8 = 2005.
2005 is MMV in Roman numerals.

8. (5, 3)



The lines meet at point (5, 3).

9. 750 cm³

Each book has a volume of 0.5 × 20 × 25 = 10 × 25 = 250 cm³.
So the volume of three books is 250 × 3 = 750 cm³.

10. B

3 boxes of x sweets gives $3x$. Mike eats two sweets per bag, so you have to subtract 2, which gives $3x - 2$.

11. 10

100 – 40 – 20 = 40% of the sweets are mints.
10% of 25 is 2.5, so 40% of 25 is 2.5 × 4 = 10 mints.

12. D

Adding up the prime numbers up to 13 gives 2 + 3 + 5 + 7 + 11 + 13 = 41. The next prime number is 17, and 41 + 17 = 58, which she can't make because she only has 50 marbles.

Test 12 — pages 39-41

1. 12 000

The volcano erupted 11 982 years go. You're rounding to the nearest 100 so look at the tens. 8 is bigger than 5, so round up

2. 9 m²

The sail is a triangle, so its area is $\frac{1}{2} \times 6 \times 3 = 3 \times 3 = 9$ m².

3. £15.00

The smaller sail is $\frac{1}{3}$ the area of the larger one, so the cost is 45 ÷ 3 = £15.

4. D

The number of snails decreases by 2 each day. There were 15 on Thursday, so there were 13 on Friday and 11 on Saturday.

5. A

The total length of the shelves is 0.8 × 3 = 2.4 m. 1 m is 1000 mm, so 2.4 m = 2.4 × 1000 = 2400 mm.

6. 33

Ava has 11 × 9 = 99 t-shirts in total. 99 ÷ 3 = 33 (you can use partitioning here).

7. D

Use estimating here — round £11.20 down to £10 and 386.8 m up to 400. Then 10 × 400 = £4000. The only answer close to that is D

8. D

Add together the fractions of pop and rap songs, and subtract from 1. $\frac{1}{3} = \frac{5}{15}$ and $\frac{1}{5} = \frac{3}{15}$. $\frac{5}{15} + \frac{3}{15} = \frac{8}{15}$. $1 - \frac{8}{15} = \frac{7}{15}$ of the playlist.

9. 8

The 'other' segment on the pie chart represents a quarter of the people Chris asked.
40 + 4 = 10. $\frac{1}{5}$ of this is 10 ÷ 5 = 2, so $\frac{4}{5} = 2 \times 4 = 8$.

10. 40%

Together the 'walk' and 'car' segments make up half the pie chart, and half is the same as 50%. 4 pupils is 10% of 40, so 50 – 10 = 40% arrived by car.

11. C

Go through each option. 40 isn't a multiple of 3, so you can rule out option A. 27, 15 and 45 are odd numbers, so can't be divided by 4, so you can rule out options B, D and E. 60 can be divided by all four numbers, so the answer is C.

12. B

35p = £0.35. Pavel earns £0.35 for each dish and washes d dishes, which gives $0.35d$. He earns 1.75 when he starts, so in total he earns $1.75 + 0.35d$.

Test 6 — pages 19-21

1. 2500
The digit to the right of the hundreds column in 2456 is 5, so the number rounds up to 2500.

2. A
There are 10 small divisions between 1 and 2, so each one is worth $1 \div 10 = 0.1$. The arrow is pointing $6\frac{1}{2}$ divisions past 1, so it's at $1 + 0.6 + 0.05 = 1.65$.

3. 13
$2 + 6 + 5 = 13$ people have 0, 1 or 2 TVs.

4. D
D has one horizontal and one vertical line of symmetry
A has 4 lines of symmetry, B has 1, C has none and E has 6.

5. E
Acute angles are less than 90°.

6. 221 g
In size order, the values are:
198g, 213 g, 213g, 221 g, 226g, 229g, 248g.

7. 36
Counting up from −11 takes 11 to get to zero, which leaves $47 - 11 = 36$ to count above zero.

8. C
The shape has one pair of parallel sides, so it must be a trapezium. For all the other options, the shape would need two pairs of parallel sides.

9. 49
The difference between the terms increases by 1 each time:
4 (+ 7 =), 11 (+ 8 =), 19 (+ 9 =), 28 (+ 10 =),
38 (+ 11 =), 49.

10. 6
Reading off the graph, there were 11 hats sold on Tuesday and 5 hats sold on Thursday. $11 - 5 = 6$.

11. 45
The mean is 30 s, so the total must be $6 \times 30 = 180$ s.
The other times add up to $32 + 38 + 20 + 19 + 26 = 135$ s.
So the missing time is $180 - 135 = 45$ s.

12. D
Only 48 is in both the 4 and 6 times tables.

13. 0.56
$\frac{14}{25} = \frac{56}{100}$ (multiply top and bottom by 4). $\frac{56}{100}$ is the same as $56 \div 100 = 0.56$.

14. 8208
Using long multiplication:

$$\begin{array}{r} 432 \\ \times\ 19 \\ \hline 3888 \\ +\ 4320 \\ \hline 8208 \end{array}$$

15. C
Angles in a quadrilateral add up to 360°. The given angles add up to $90° + 74° + 36° = 200°$. So the remaining angle q must be $360° - 200° = 160°$.

16. D
$\frac{1}{3}$ of $54 = 54 \div 3 = (30 \div 3) + (24 \div 3) = 10 + 8 = 18$.
So $\frac{2}{3}$ of $54 = 2 \times 18 = 36$.

17. 16:37
1 $\frac{1}{2}$ hours = 1 hour + 30 minutes. 1 hour after 15:07 is 16:07. 30 minutes after 16:07 is 16:37.

18. 162 mm
1 m = 1000 mm, so 0 1 m = $0.1 \times 1000 = 100$ mm.
1 cm = 10 mm, so 4 cm = $4 \times 10 = 40$ mm.
$100 + 40 + 22 = 162$ mm.

19. A
If you put $n = 1$ into all the expressions, the only one that gives you an answer of 2 (the 1st term of the sequence) is A.

20. 64 cm²
Area of parallelogram = base × height = $(4 + 6) \times 8 = 10 \times 8 = 80$ cm². Area of white triangle = $\frac{1}{2} \times$ base × height = $\frac{1}{2} \times 4 \times 8 = 16$ cm². So blue area = $80 - 16 = 64$ cm².

21. E
The ratio of blue to red is 42:12. Dividing both sides of the ratio by 6 gives 7:2.

22. (7, 4)
P is at (4, 6). Translating the square 3 units right and 2 units down gives new coordinates of $(4 + 3, 6 - 2) = (7, 4)$.

Comprehension Practice

Test 2 - A Little Princess

Question	Answer	Source of Answer
1	B	Reader's personal judgement required. Refer to the description of the weather in lines 1-2 to help form an opinion as to which of the given options provides the best description. As words such as 'dark', 'winter' and 'fog' are used in line 1, the best option is 'gloomy'.
2	D	Refer to lines 1-2: '...in the streets of London...'
3	A	Knowledge of vocabulary required. The word 'blazed' means to burn or shine brightly. A synonym is a word that means the same, or nearly the same, as another word. Therefore, the option here that is the best synonym for 'blazed' is 'shone'.
4	B	Reader's logical inference required. Refer to the description of the way they were sitting in lines 5-6 to make a decision as to how they are likely to feel towards one another. As they are sitting so close to one another, the best option is that they love each other.
5	D	Refer to lines 12-13: 'She felt as if she had lived a long, long time.'
6	A	Knowledge of grammar required. An adjective is word that describes a noun or a pronoun. Therefore, the adjective here is 'big' as it is describing the ship.
7	C	Refer to line 22: 'She found this so puzzling that she moved closer to her father.'
8	B	Refer to line 23: '"Papa," she said in a low, mysterious little voice which was almost a whisper...'
9	C	Refer to lines 9-10: '...Sara Crewe was only seven.'
10	C	Refer to lines 31-32: 'Her mother had died when she was born, so she had never known or missed her.'
11	A	Refer to lines 43-44: 'During her short life only one thing had troubled her, and that thing was "the place" she was to be taken to someday.'
12	B	Refer to lines 44-45: 'The climate of India was very bad for children, and as soon as possible they were sent away from it...'
13	E	Reader's logical inference required. Refer to the phrases 'She did not care very much for other little girls...' (line 63) and 'She liked books more than anything else...' (lines 64-65) to infer that she must have been looking forward most to reading books at school.
14	D	Reader's personal judgement required. Refer to words and phrases such as 'lonely' (line 71) and '...he held her very closely in his arm...' (line 74) to help form an opinion as to how he might have been feeling. From these, it can be inferred that he was feeling sad at the prospect of leaving her, so the best option is 'melancholy'.
15	C	Knowledge of grammar required. 'A Little Princess' is a title. A title is the name of a creative work such as a book, published text, or programme.

Verbal Reasoning

Paper 11 (pages 46–50)

1 **Houses are popular.** This is supported by the information, 'People like living in houses.' The other sentences may be true but are not supported by the information given.

2 **Houses need some form of heating.** This is supported by the information, 'Houses have to be heated.' The other sentences may be true but are not supported by the information given.

3 **Not all gardens are looked after.** This is supported by the information, 'Some gardens are neglected.' The other sentences may be true but are not supported by the information given.

4–5

	T		A		W
J	I	N	G	L	E
	S		R		A
A	S	S	E	S	S
	U		E		E
F	E	U	D	A	L

6–7

	B		W		Y
B	R	A	I	S	E
	E		N		L
P	A	R	C	E	L
	C		E		O
S	H	A	D	O	W

8 **cool** 'Cool' means the same as fresh and unheated; it also means poised and controlled.

9 **correct** 'Correct' means the same as exact and precise; the verb 'correct' also means the same as to amend and to repair.

10 **bill** A 'bill' is a beak or nose; it is also a term associated with money, as are 'charge' and 'account'.

11 **draw** 'Draw' is a word associated with art, as are 'sketch' and 'picture'; it is also associated with gambling as 'lottery' and 'sweepstake'.

12 **claw** 'Claw' as a noun means the same as 'talon' and 'nail'; as a verb, it also means the same as to scratch and to scrape.

13 **roundabout**

14 **somehow**

15 **justice**

16 **ballroom**

17 **spokesman**

18 **pen**

19 **foal**

20 **crowd**

21 **notion**

22 **join**

23 **l** growl, lad; petal, loft

24 **a** plea, arc; banana, answer

25 **e** ease, earn; taste, elm

26 **t** might, team; toast, twin

27 **k** teak, kind; lark, kill

28 When does the next **term** **start**?

29 **I** must try to **be** neater.

30 I'd **love** a bicycle **for** my birthday.

31 Where **did** you put the **paper**?

32 It is **very** lovely **living** in the country.

33–34 To get from the word to the code, move each letter forward two places.

33 **UKZVJ**

34 **HQWTVJ**

35–37 To get from the word to the code, move each letter backward one place.

35 **EHQRS**

36 **EQNMS**

37 **AHFFDQ**

38–42 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.

38 **0** (5 x 0) ÷ 2 = 0 (Multiplying any number by 0 gives the answer 0.)

39 **0** 2 x 10 x 0 = 0 (Multiplying any number by 0 gives the answer 0.)

40 **10** 3 + 5 + 0 + 2 = 10

41 **91** $10^2 - 3^2 = 91$

42 **5** (10 ÷ 5) + 3 = 5

43 **pear** All the words are names of fruit.

44 **laugh** All the words are verbs associated with expressing laughter.

45 **enormous** All the words are adjectives meaning large.

46 **twinkle** All the words are verbs associated with sparkling.

47 **upset** All the words are verbs meaning to spill.

48 **deliver** 'Collect' means to pick up and take away; 'deliver' means to bring.

49 **result** 'Cause' means the reason why something has happened and comes before the event; 'result' is the effect something happening and comes after the event.

50 **least** 'Most' means the greatest quantity of something; 'least' means the smallest quantity of something. ('None' would imply 'nothing of something', so it is the reverse of 'some' or 'a lot'.)

51 **complete** The word 'partial' means part of something; the word 'complete' means whole.

52 **late** 'Prompt' means 'on schedule' or 'in good time'; 'late' means 'behind schedule'.

53 **trace** There is no 'e' in 'custard', so this word cannot be made from its letters.

54 **read** There is no 'r' in 'pleased', so this word cannot be made from its letters.

55 **dear** There is no 'd' in 'manager', so this word cannot be made from its letters.

56 **tart** There is only one 't' in 'depart', so this word cannot be made from its letters.

57 **hatchet** There is only one 't' and one 'h' in 'teacher', so this word cannot be made from its letters.

58 **mink** The pattern is to remove the 'k' from the beginning of the first word and replace it with 'm'.

59 **sole** The third letter becomes the first letter followed by the second, first and fourth.

60 **slowing** The root word is followed by the 'ing' suffix.

61 **rote** The fourth letter becomes the first letter and is followed by 'o', then the first and second letters.

62 **goal** The second and third letters swap places.

63 **RAIN** sprained

64 **LIVE** delivered

65 **SHIN** polishing

66 **EASE** ceaseless

67 **PENS** suspense

68 **t** rain, told

69 **a** bet, gain

70 **t** plan, tent

71 **s** mile, cosy

72 **c** rust, cold

73 **32, 16** The number divides by 2 each time.

74 **10, 27** The sequence alternately adds 7 and 5: +7, +5, +7, +5, +7.

75 **24, 96** The number multiplies by 2 each time.

76 **23, 30** The number added increases by 1 each time: +3, +4, +5, +6, +7.

77 **100, 83** The number subtracted decreases by 1 each time: –9, –8, –7, –6, –5.

78–80 To solve these quickly, write a shortened version of the months in alphabetical order. It is then easier to answer the questions:
Apr, Aug, Dec, Feb, Jan, Jul, Jun, Mar, May, Nov, Oct, Sep

78 **September**

79 **April**

80 **August**

Paper 12 (pages 50–55)

1 **individual, different** Both words mean unlike others, unique.

2 **crime, offence** Both words mean an illegal act.

3 **value, worth** Both words mean how much importance something has, or how much money would be paid for it.

4 **obtain, acquire** Both words mean get.

5 **ordinary, normal** Both words mean usual or standard.

6–10 Use the grids as shown below to help work out the missing word.

6 **PART**

4	3		1				2			4	3		1				2	
M	I	S	T		R	A	R	E		T	R	I	P		B	E	A	N

7 **ONCE**

		1	2		4	3					1	2		4	3		
B	A	K	E		P	E	S	T		I	R	O	N		E	C	H	O

8 **SIGN**

3	2				1	4				3	2				1	4		
L	I	N	T		P	E	N	S		G	I	R	L		S	N	O	W

9 **TEAM**

		1	2			3		4			1	2			3		4
B	U	S	T		B	U	L	B		F	A	T	E		C	A	L	M

10 **EARN**

4						1	2	3		4						1	2	3
K	E	P	T		T	W	I	N		N	O	T	E		F	E	A	R

11 **CROW** crown
12 **WARM** swarmed
13 **OARS** hoarse
14 **MARK** supermarket
15 **SOUR** source
16 **e** pulse, elder; three, equal
17 **k** crank, king; break, know
18 **b** stab, boil; kerb, bee
19 **d** braid, dwell; pod, drain
20 **p** trip, pain; carp, please
21 **bead**
22 **face**
23 **deed**
24 **efface**
25 **café**
26 **keyhole**
27 **nosedive**
28 **network**
29 **loudspeaker**
30 **outlook**
31 **vein** I have information for you
32 **rest** They are staying in a nearby hotel.
33 **twin** Be careful! They'll get wind of it soon.
34 **suet** You must pursue the course.
35 **sank** (The boy broke his ankle.)
36 **TRAY, TRAM**
37 **BENT, BEND**
38 **TRAP, TRIP**
39 **HOLE, HOLD**
40 **FAKE, FARE**
41–45 Try each of the words in the first set of brackets. Do they make sense with any words in the second and third set of brackets? Only once combination of three words makes sense.
41 **book, couple, travelled**
42 **cheers, world, boat**
43 **rain, snow, ground**
44 **give, cause, worker**
45 **tidied, night, bed**
46 There was a **table** with a lamp on it by the **window**.
47 He **got** up and so did **she**.
48 I **think** that is right as **far** as it goes.
49 **You** have been really helpful to **us**.
50 For the moment **nothing** was **done** at all.
51 **start, begin** 'Finish' is the opposite of 'begin' in the same way as 'complete' is the opposite of 'start'.
52 **sight, sound** A 'book' is experienced through 'sight', in the same way as a 'radio' is experienced through 'sound'.
53 **fib, honest** 'Lie' and 'fib' are synonyms in the same way as are 'truthful' and 'honest'.
54 **select, collect** 'Choose' and 'select' are synonyms in the same way as are 'gather' and 'collect'.
55 **talent, cure** 'Gift' and 'talent' are synonyms in the same way as are 'heal' and 'cure'.

56–57

A	S	P
S	I	R
S	P	Y

58–59

A	S	S
N	E	T
D	A	Y

60 **IKM, KMO** Each letter in the first trio moves forward by two letters in the following trio.
61 **CM, GQ** Each letter in the first pair moves forward by one letter in the following pair.
62 **JOX, GRV** The first letter in each trio alternates between J and G. The second letter in each trio moves forward by three letters each time. The third letter in each trio moves back by two letters each time.
63 **3A12, 8E8** For the first number in each trio, the number added increases by 1 each time: +1, +2, +3, +4, +5. The letter in the middle of the trio moves forward by two letters each time. The last number in the trio decreases by two each time.
64 **37, 31** The sequence alternately subtracts 6 and adds 1: –6, +1, –6, +1, –6.
65–67 Arrange the words in a grid to make it easier to put them in the correct alphabetical order.
65 **engine**

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

66 **middle**

m	i	d	d	l	e
m	i	l	l	e	t
m	i	r	r	o	r
m	o	n	k	e	y
m	o	t	i	o	n

67 **shrub**

h	o	u	s	e	
l	e	d	g	e	
l	e	v	e	l	
s	h	o	v	e	
s	h	r	u	b	

68 **ENTQ** To get from the word to the code, move each letter back one place.

69 **WRITE** To get from the code to the word, move each letter forward one place.

70–71 To get from the code to the word, move each letter back two places.

70 **NGALGA**

71 **FYR**

72 **QCR**

73 **Australians play a game that uses a ball.** This is supported by the statement, 'Cricket and football are ball games. Australians are very good at rugby and cricket.' The sentences mentioning 'a bat' and 'football' can be ruled out as these words do not feature in the statements.

74 **Cranberry sauce is sometimes served with turkey.** This is supported by the statement, 'Turkey tastes good with cranberry sauce.' The sentences mentioning 'cream' and 'mince pies' can be ruled out as these words do not feature in the statements.

75 **Guitars are stringed instruments.** This is supported by the statement, 'Guitars are musical instruments. Guitars have strings.' This is the only option that mentions 'guitars'.

76–77 **Spanish is a European language. Italians are Europeans.** These are supported by the statements, 'Spanish and Italian are languages. Spain and Italy are in Europe.' There are three options that include the word 'European'; one of them also mentions 'fun' so can be ruled out.

78 **flee, retreat**

79 **fur, coat**

80 **notice, message**

Re-order the words to make a sentence

PAGE 17 — REORDER WORDS TO MAKE A SENTENCE

Your child may have made a different sentence using the words given. This is fine, as long as the correct word has been chosen.

1. **and** — *The words can be rearranged into the sentence 'It was very dirty in the sewer.'*
2. **cinema** — *The words can be rearranged into the sentence 'The horror film gave me a nightmare'*
3. **polishing** — *The words can be rearranged into the sentence 'I took my shoes to be repaired'*
4. **sun** — *The words can be rearranged into the sentence 'It was a hot day in summer.'*
5. **tomorrow** — *The words can be rearranged into the sentence 'Greg handed the weapon in to the police.'*
6. **in** — *The words can be rearranged in to the sentence 'The disco had loud music and flashing lights.'*
7. **lights** — *The words can be rearranged into the sentence 'The old man walked down the empty street.'*
8. **weather** — *The words can be rearranged into the sentence 'A rainbow is a beautiful sight to see.'*
9. **shower** — *The words can be rearranged into the sentence 'I washed my hair and then dried it.'*
10. **went** — *The words can be rearranged into the sentence 'It is pleasant to amble in the countryside'*
11. **food** — *The words can be rearranged into the sentence 'I enjoy a cup of coffee after a meal'*
12. **mug** — *The words can be rearranged into the sentence 'You must boil water in order to make tea'*
13. **lesson** — *The words can be rearranged into the sentence 'James has been learning the piano since he was six.'*
14. **shouted** — *The words can be rearranged into the sentence 'The teacher was very angry with the naughty child.'*
15. **look** — *The words can be rearranged into the sentence 'I enjoyed watching the butterfly flutter through the air.'*
16. **adventure** — *The words can be rearranged into the sentence 'The experienced pilot successfully landed the damaged plane.'*
17. **spoon** — *The words can be rearranged into the sentence 'Take care when putting the cake mixture into the oven'*
18. **injury** — *The words can be rearranged into the sentence 'The doctor put a plaster cast on the man's broken leg'*

Using Rules of English

PAGE 18 — USING RULES OF ENGLISH

1. **because** — *The sentence should be 'I am not allowed out **because** I returned home late last night'*
2. **worst** — *The sentence should be 'Rob was playing the **worst** game of rugby of his whole career.'*
3. **woken** — *The sentence should be 'The baby had **woken** up early and was gurgling quietly.'*
4. **despite** — *The sentence should be 'Dan ran ten miles **despite** the very high temperature.'*
5. **spoken** — *The sentence should be 'He had **spoken** to them about road safety.'*
6. **ours** — *The sentence should be 'We told him that the football stickers were **ours**.'*
7. **like** — *The sentence should be 'Bob and his cousin **like** to go cycling in all conditions.'*
8. **shook** — *The sentence should be 'As he **shook** the groundsheet, a tiny spider sprang out.'*
9. **Although** — *The sentence should be '**Although** the man was in agony, he limped to the hospital.'*
10. **cut** — *The sentence should be 'Raj **cut** his glossy, curly hair when his mother was distracted'*
11. **carefully** — *The sentence should be 'There is a warning for all drivers to drive **carefully**.'*
12. **which** — *The sentence should be 'I discovered the pencil **which** I had mislaid.'*
13. **went** — *The sentence should be 'I would like to introduce you to my friend who **went** to Norway.'*
14. **When** — *The sentence should be '**When** the puppy could not go outside, it became quite lethargic'*
15. **easily** — *The sentence should be 'Davinda did not admit that she solved all of the equations **easily**.'*
16. **broken** — *The sentence should be 'Angus realised that he had **broken** his mother's priceless vase.'*
17. **bought** — *The sentence should be 'Emily **bought** her ticket from the conductor.'*
18. **have** — *The sentence should be 'Marcus should **have** washed the dog yesterday.'*

Non-Verbal Reasoning

Test 6 Answers

Section 1 : Codes

Q1 (c) : OF - 1st is shape; 2nd is shading
- 2 Y's as 1st letter, goes with shape; unknown is a square so 1st letter is O
- all different 2nd letters – shading differs; unknown is white so 2nd letter is F
- answer = OF = (c)

Q2 (d) : NB - 1st is letter; 2nd is orientation
- 2 C's as 1st letter, goes with inner letter; unknown is 'N' so 1st letter is N
- 2 Z's as 2nd letter, goes with orientation; unknown is upright so 2nd letter is B
- answer = NB = (d)

{confusing when there are letters in the figures – they aren't letters, they're pictures}

Q3 (c) : SM - 1st is number of lines; 2nd is solid / dashed pattern
- 2 A's & 2V's as 1st letter, goes with number of lines; unknown has 4 so 1st letter is S
- 2 X's & 2P's as 2nd letter, goes with line style; unknown is all solid so 2nd letter is M
- answer = SM = (c)

Q4 (b) : HT - 1st is outer outline; 2nd is inner shape
- 2 B's as 1st letter, goes with outer outline; unknown is medium bold so 1st letter is H
- 2 P's as 2nd letter, goes with inner outline or shape – how can we tell?
- must be shape as the others are both normal outline; unknown is pentagon so 2nd letter is T
- answer = HT = (b)

Q5 (e) : KN - 1st is number of shapes; 2nd is outer outline
- 2 R's & 2 A's as 1st letter, goes with number of figures; unknown has 3 so 1st letter is K
- 2 B's & 2 C's as 2nd letter, goes with outer outline; unknown is small dashed so 2nd letter is N
- answer = KN = (e)

Q6 (b) : DB - 1st is line figure; 2nd is circle position
- 2 M's & 2 L's as 1st letter, goes with arrow style; unknown is double headed so 1st letter is D
- 2 K's & 2 T's as 2nd letter, goes with circle position; unknown is top so 2nd letter is new
- answer = D-(new), must be DB so answer = (b)

Q7 (e) : HN - 1st is top shape; 2nd is lower shape(s)
- 2 G's as 1st letter, goes with upper shape; unknown is stack of boxes so 1st letter is H
- 2 C's as 2nd letter, goes with lower figures, unknown is ball & stick so 2nd letter is N
- answer = HN = (e)

Q8 (d) : RM - 1st is circle position; 2nd is circle fill
- 2 R's & 2 A's as 1st letter, goes with height of circles; unknown is at top so 1st letter is R
- 2 Z's as 2nd letter, goes with circle fill; unknown is black dot so 2nd letter is M
- answer = RM = (d)

Q9 (c) : RN - 1st is outer outline; 2nd is inner shape
- 2 L's & 2 M's as 1st letter, goes with outer outline; unknown is bold so 1st letter is R
- 2 W's & 2 P's as 2nd letter, goes with inner shape; unknown is pentagon so 2nd letter is N
- answer = RN = (c)

Q10 (b) : KN - 1st is orientation of black; 2nd is shading opposite black
- all different on 1st letters so leave for now
- 2 S's as 2nd letter, goes with shading opposite black; unknown has H=shade so 2nd letter is N
- everything else stays the same so 1st letter must be position of black
- unknown is left so 2nd letter is K; answer = KN = (b)

Q11 (c) : TN - 1st is top; 2nd is lower (ignore middle)
- 2 A's as 1st letter, goes with top shape; unknown is top parallelogram so 1st letter is T
- 2 N's as 2nd letter, goes with bottom shape; unknown is parallelogram so 2nd letter is N
- answer = TN = (c)

{middle shape isn't important as the 1st 2 have a + but have no letters in common}

Q12 (b) : RY - 1st is line endings; 2nd is number (length not important)
- 2 I's as 1st letter, goes with line endings; unknown is like 3rd so 1st letter is R
- 2 H's as 2nd letter, goes with number of lines; unknown is single so 2nd letter is Y
- answer = RY = (b)

Q13 (d) : DC - 1st is shape; 2nd is number (orientation was possible but not an option)
- 2 K's as 1st letter, goes with shape; unknown is stars so 1st letter is D
- 2 P's as 2nd letter, goes with number of figures or orientation
- if it's orientation, unknown is right diagonal = new letter – none available
- must be 2nd is number of symbols; unknown has 2 so 2nd letter is C
- answer = DC = (d)

{if simple logic doesn't give you the answer then make use of the possible answers}

Q14 (a) : DR - 1st is shape; 2nd is orientation (grey oval not coded)
- 2 Y's as 1st letter, goes with solid figure; unknown has rectangle so 1st letter is D
- 2 S's as 2nd letter, goes with orientation; unknown is like 2nd so 2nd letter is R
- grey oval doesn't go with the code letters so answer = DR = (a)

Q15 (e) : WL - 1st is number of bars; 2nd is which layer they are on
- 2 O's as 1st letter, goes with number of bars; unknown has 2 so 1st letter is W
- 2 C's & 2 I's as 2nd letter, goes with which layer; unknown has vertical on top so 2nd letter is L
- answer = WL = (e)

Q16 (b) : UK - 1st is size; 2nd is direction
- 2 D's as 1st letter, goes with size; unknown is medium so 1st letter is U
- 2nd letters all different – must be orientation; unknown points up so 2nd letter is K
- answer = UK = (b)

Section 2 : Matrix

Q1 (b) : horizontally, rotate 90° clockwise
- could be an H-flip vertically of rotation 90° clockwise on the horizontal
- try the H-flip first – symbols would still be vertical so it can't be that – must be the rotation
- top should point right, bottom should point left – rule out (a) (c) & (e)
- compare (b) & (d) – top left should be black so answer = (b)

{if you saw only the H-flip, don't think the question must be wrong – look again}

Q2 (a) : 90° rotation in rows & columns
- don't see any easy pattern along the diagonals or anything
- bottom row is 180° rotation from top middle row is in between – clockwise in outer columns
- look for horizontal pattern with black on the bottom rule out (b) (c) & (e)
- compare (a) & (d) – (d) is too fat so answer = (a)

{no clear logic to explain why the middle column rotates anti-clockwise, could have applied the same sort of thinking to the rows}

Q3 (c) : either rotate 90° clockwise in rows or 180° in columns
- same set of symbols in each frame with black in the corner – rule out (b) & (e)
- left to right is clockwise 90° ; downwards is 180° ; black should be top left - rule out (d)
- compare (a) & (c) – (a) is wrong way round so answer = (c)

Q4 (c) : 3 of each pattern
- no clear pattern but there are 3 open circles and 3 triple circles
- only 2 double circles so it's a 3 of each kind pattern – rule out (a) & (b)
- that's all so look at them (d) & (e) are the wrong size so answer = (c)

Q5 (d) : left to right, 90° clockwise then add copy of un-rotated inner
- outers – is it left to right, 90° clockwise or vertically V-flip?
- do the inners first – add a second copy at right angles – rule out (a) (d) (e)
- compare (c) & (d) – both have dot on the left so is is a 90° clockwise rotation
- if the figure rotates then the diamond will be horizontal – answer = (d)

Q6 (c) : arrows point to middle; rectangles on horizontals
- arrows are symmetrical about centre – should point to middle – rule out (b) & (e)
- (a) clearly too big so compare (c) & (d) – which should be black?
- black white same in rows – black at bottom so answer = (c)

Q7 (c) : rotate 45° and go dotty
- has to be dotty so rule out (b) (d) & (e)
- compare (a) & (c) - rotation is 45° (either way) – (a) isn't so answer = (c)

Q8 (e) : 3 of each inner shape, outer orientation from right diagonal
- no pattern to inners but looks like 3 of each – need a black triangle so rule out (a) (c) & (d)
- compare (b) & (e) – (b) is too big so answer = (e)
- too easy – check outers – same on right diagonals – (e) looks good

Q9 (d) : in rows, gets bolder & star becomes polygon
- right is a bolder version of left – rule out (b) & (c)
- 4 point star becomes diamond so 3 pointed star becomes triangle – rule out (a)
- compare (d) & (e) – (e) lacks rectangle in base so answer = (d)

Q10 (e) : same on right diagonals
- same on right diagonals – should be white dots – rule out (a) & (c)
- star is white – rule out (b)
- compare (d) & (e) – need white centre so answer = (e)

Q11 (e) : diagonally, outer becomes inner & vice versa; vertically outer outline retained
- where do the shapes come from? – rounded square & hexagon are both on the left diagonal
- diagonally, inner becomes outer and *vice versa* – need outer square, inner circle – all have
- square should not be rounded – rule out (a)
- outlines same in columns – need bold outer – rule out (b) & (d)
- compare (c) & (e) – which way up should the flower pot be?
- can't tell – take the simplest option – no change so answer = (e)

{the answer involving fewest changes will be the correct answer}

Q12 (b) : in rows, outer rotates 90° anti-clockwise; inner rotates 45° anti-clockwise
- inner rotates 45° anti-clockwise in rows – should point up, black on left – rule out (a) (c) & (e)
- compare (b) & (d) – outer rotates 90° anti-clockwise in rows – answer = (b)

Q13 (d) : vertically, 180° rotation and outlines swap
- vertically, 180° rotation – Pac-man should be at bottom with his mouth pointing left – rule out (c) & (e)
- lower symbol should be at top & point left – rule out (b)
- compare (a) & (d) - symbols swap outlines – arrow thing should be bold so answer = (d)

Q14 (c) : in rows, col 2 is horizontal flip of 1, col 3 is vertical flip of 1
- no obvious pattern of repeats - 1st 2 columns are H-flips of each other
- look for double headed horizontal arrow – rule out (a) (b) & (d)
- compare (c) & (e) – need an arrow at lower left so answer = (c)

Q15 (b) : diagonally inner outer swap; horizontally inner shading same
- figures shared across the right diagonal – outer becomes inner & *vice versa*
- need heart inside – rule out (e); oval outside – rule out (a)
- shading is retained horizontally – want right shading – rule out (d)
- compare (b) & (c) – hexagon didn't rotate so answer = (b)

Q16 (b) : symmetrical about centre

- star in the centre – looks like a symmetry matrix – need symmetry along the right diagonal
- black circle lower left & triple arrow top right – rule out (c) & (e)
- free white circle should be above black – rule out (a)
- compare (b) & (d) – circles should be near the middle so answer = (b)

Section 3 : Series

Q1 (c) : shading moves outwards then to centre
- black shading is moving outwards – should be outermost – rule out (a) & (b)
- right shading does the same then restarts in middle – should be 1 but middle
- rule out (d), rule out (e) (left shading) so answer = (c)

Q2 (b) : rotates 90° anti-clockwise; shading rotates with figure
- can see the white is rotating 90° anti-clockwise – should be top left – rule out (c)
- shading rotates with the figure so vertical in 2nd will become horizontal in 3rd
- need horizontal top right (not (d) & (e)), right shading bottom right - rule out (a)
- only leaves (b) – looks good so answer = (b)

{shading can rotate with the figure, can stay the same or could even rotate independently}

Q3 (d) : ball moves down 1; triangles flip horizontal; squares alternate pattern
- track the ball on the left – going down then restarts at top – will be bottom – not (c)
- triangles are doing an H-flip – should be like 1st – rule out (b) & (e)
- compare (a) & (d) – right column alternates so answer = (d)

Q4 (d) : 1 curve flips horizontally starting with top; square ascends
- black square climbs the stairs – should be at top – rule out (c)
- arrows are confusing – top one H-flips from 1st to 2nd; one but top flips 2nd to 3rd
- should be like 3rd - left right left left - with an H-flip one but bottom
- rule out (a), (b) & (e) leaving answer = (d)

Q5 (d) : small & large rotate clockwise 90°; others are anti-clockwise
- outer diamond alternates – should be long axis vertical – they all are
- grey diamonds rotating anti-clockwise – will be vertical – all are
- small diamond – rotates 90° clockwise so will be right – rule out (b) & (c)
- follow big white one – same thing – should be left – rule out (e)
- compare (a) & (d) – (a) has a small grey on top, large at bottom
- if greys are anti-clockwise then big is on top so answer = (d)

Q6 (e) : rotates 90° anti-clockwise
- will follow it from 5th to 1st – black square goes round corners clockwise
- should be bottom left – rule out (a) (b) & (d), so compare (c) & (e) next
- stick next to black square should have bar at far end so answer = (e)

{often easiest to view a series 5th to 1st if the blank frame is 1st or 2nd }

Q7 (b) : rotate 90° anti-clockwise; lose a line, add a ball
- 90° anti-clockwise so sticks at top, balls at bottom – rule out (a) & (e)
- 1 more ball each time – need 3 – they all have
- 1 less stick each time – need 3 so rule out (c) & (d) leaving answer = (b)

Q8 (d) : rotate 90° anti-clockwise; lose a white triangle
- 90° anti-clockwise so double row at bottom – rule out (e)
- single row of whites loses 1 each time – should be 2 at top right – rule out (a) & (c)
- compare (b) & (d) – black triangles don't change so (d) is right – answer = (d)

Q9 (e) : lose quarter of circle anti-clockwise; add a new line clockwise
- lose quarter circle anti-clockwise – should be bottom half left – rule out (b)
- lines are adding clockwise – should be 3 – rule out (a) & (c)
- compare (d) & (e) – (d)'s in the wrong place so answer = (e)

Q10 (c) : outer 90° clockwise; inner 90° clockwise with black at bottom
- black always at the bottom – rule out (b)
- everything else just rotates 90° clockwise – curve at top so rule out (e)
- thin diamond will be left so rule out (d) & compare (a) & (c)
- biggest diamond should be at the bottom so answer = (c)

Q11 (d) : frame 4 = frame 1 so need to be like frame 2
- don't see much of a pattern here but 1st and 4th are the same
- since it's a series something like 2nd should be next – must be (d)
- is that all? – can't see anything better so answer = (d)

Q12 (c) : inverts and adds another line
- inverts each time so big at bottom – rule out (b)
- connecting lines – add one – need 4 – they all have but some don't look right
- not (a) (separated); not (d) (sloping); not (e) (flying) so answer must be (c)

Q13 (c) : rotates 90° anti-clockwise and 1 ball goes black
- curly arrow rotates 90° anti-clockwise – should be top right - rule out (b) & (d)
- will need 3 blacks – rule out (a) & (e) so answer = (c)

Q14 (a) : square goes white and cross rotates & flips
- cross rotates clockwise – should point bottom left – rule out (e) (too small anyway)
- black square goes white clockwise – should be 1 at mid right – rule out (b) & (d)
- compare (a) & (c) – point on cross is flipped in (c) relative to (a)
- point flips over each time it rotates – should look like (a) so answer = (a)

Q15 (c) : maze alternates orientation, ball moves from 1st corner from bar to 2nd etc

- work from right to left – bar alternates so will be top left again – rule out (b) & (e)
- (d) has 2 black balls so rule that out too and compare (a) & (c)
- where is the ball going to be – ball gets 1 corner closer to the bar each time
- ball should be at corner next to bar so answer = (c)

Q16 (e) : boat rotates 90° anti-clockwise; black moves from hull to little sail to big

- working from right to left - boat is rotating clockwise – hull will be on right – not (a) & (b)
- small sail will be below big – rule out (c) & compare (d) & (e)
- black part goes from small sail to hull to big sail – will be small sail so answer = (e)

Section 4 : Odd One Out

Q1 (e) : one of the shapes is on top of another

- 3 different sizes of the same shape – 2 rounded & 3 polygons – nothing odd here
- biggest not always in the middle so nothing odd there
- should all be on the same layer but big is in top in (e) so answer = (e)

Q2 (b) : has one more square

- can't see anything in symmetry or how the squares are connected
- better count them & write down the numbers – all have 8 except (b) so answer = (b)

Q3 (c) : is a mirror image of the others

- all look the same – not orientation – could be mirror images
- from point to black clockwise is over the convex curve except in (c)
- (c) is a mirror image of the others so answer = (c)

{this trick to identify mirror images is explained in the 'Notes' section}

Q4 (b) : arrow is the wrong way round when viewed from the square

- different orientations of very similar figures – look at the inner figures
- in (a), starting at the square, branch is on the right and curves back
- (b) is back to front but others are like (a) so answer = (b)

Q5 (c) : mirror image

- looks like the same figure everywhere – where is the ball?
- ball is next to the one but biggest projection except in (c) so answer = (c)

Q6 (c) : not a triangle

- all triangles except (c) – can it really be that easy – yes, answer = (c)

Q7 (b) : figure is not divided equally by line

- very different figures all have a dividing line – 2 different line styles
- all have a single line of symmetry – defined by the line except in (b) = odd one out

Q8 (d) : middle of 3 lines goes behind the main figure

- different rotations; lines in same positions relative to missing sector
- single lines all the same – anti-clockwise from missing sector
- triple lines – 2 in front, 1 behind – middle one behind in (d) so answer = (d)

Q9 (d) : one of them is upside down

- same figure – 1 black everywhere – 2 either side, black top left or bottom right
- look carefully – 1 of the flower pots is upside down in (d) so answer = (d)

Q10 (b) : ignoring colours, horizontal flip of the others

- 5 blacks everywhere – always 3 on the left, so nothing odd here
- look at the big whites – can be 3 or 1 so nothing odd there
- no big : big or small : small – only (b) has a small top left – is that enough?
- ignore the colours – always the same pattern of big & small except in (b) = odd one out

Q11 (e) : odd number of sides or no horizontal line of symmetry

- always a circle & a polygon – circle can be inner or outer – nothing odd here
- better count the sides : 8-4-4-6-5 : 5 is an odd number – is that it?
- could say no horizontal line of symmetry in (e) but either way answer = (e)

{may seem weak but you do see questions where the 'odd one out' is the odd number}

Q12 (c) : two rectangles

- 3 figures in each, 2 of them identical – all on the same layer so nothing odd there
- (d) & (e) both have 2 rounded figures & 1 polygon – others all polygons so no odd one
- vertical & horizontal lines of symmetry everywhere
- always have the same rectangle but (c) has 2 of them so answer = (c)

Q13 (e) : diamond is clockwise from the circle

- choice of corners but (c) & (e) are same corner yet differ
- how are they different – ball is clockwise from diamond in (c); (e) is the other way round
- ball is clockwise from diamond in all but (e) so answer = (e)

Q14 (a) : 1 line has circles at both ends

- easy – 2 black circles in (a) so answer must be (a)
- check – double arrow in all, number of free ends varies with nothing odd, 4 lines
- don't see anything else odd so answer = (a)

Q15 (b) : 1 black shape in the outer diamonds

- 2 have stars in centre, 3 have pair of stars on outsides so no odd one there
- 2 squares pentagon & circle in all – whites can be squares or circle
- 3 or 4 blacks in each; 2 whites in all but (b) which has 3
- (b) has 1 black in the outer diamonds & 3 whites so answer = (b)

Q16 (e) : figure is divided into 4 not 5 sectors (no lines cross)

- main figure is oval (2) or square (3) with 3 intersecting lines inside
- count the sectors – 5 5 5 5 4 – (e) is the odd one out

Section 5 : Analogies

Q1 (b) : gets smaller
- 2nd is just a smaller version of the 1st – rule out (a) (c) & (d) (shading on right)
- compare (b) & (e) – shading shouldn't change so answer = (b)

Q2 (b) : small shape goes inside & gets right shading ; large is right half of second figure
- small shape goes inside and gets right shading – rule out (a) (c) & (e)
- compare (b) & (d) – triangle shouldn't invert so answer = (b)

Q3 (d) : rotate 90° and outer outline dashed
- inner rotates 90° – can't tell about outer or which way – only (b) & (d) fit
- compare (b) & (d) – outer should be dashed so answer = (d)

Q4 (a) : 2 copies, upper vertical shading, lower horizontal
- lattice shaded figure splits into an H-shade & a V-shade – rule out (b) (c) & (e)
- compare (a) & (d) – V-shading should be on top so answer = (a)

Q5 (d) : inner shape gets dashed & goes to corners
- inner shape goes to corners – rule out (b) & (e)
- inner becomes dashed – rule out (a)
- compare (c) & (d) – outer shouldn't be dashed so answer = (d)

Q6 (d) : 2nd is right half of 1st
- circle becomes semi-circle – have to halve the triangle – rule out (a) (c) & (e)
- compare (b) & (d) - semi-circle is right half of circle so answer = (d)

Q7 (e) : flip vertically
- black tip and white circle are both in the V-flip position but it could be 60° rotation
- rectangle remains vertical so we are looking at a V-flip
- other figure should have its 'non-right-angle' top right - rule out (b)
- noticed (c) was hopeless – only 1 figure so get rid of that
- outlines shouldn't change – dotted rectangle – rule out (a) & (d) leaving answer = (e)

Q8 (e) : flip horizontal & swap outlines
- looks like an H-flip of the figures – rule out (a) & (c)
- outlines swap over – dotted outer (not (d)); solid inner (not (b)) so answer = (e)

Q9 (c) : invert then add 2 smaller copies inside; inner & outer dashed
- inverts and gets dashed outline – rule out (b) (d) & (e)
- compare (a) & (c) – innermost should be dashed so answer = (c)

Q10 (d) : invert with vertical shading; half oval outside
- inverts and gets V-shading – rule out (b) (not flipped), (c) & (e)
- compare (a) & (d) – outer shape should be flat at bottom so answer = (d)

Q11 (b) : relationship - outer inverts; swap outlines between inner & outer; inner 2 : 1 shapes becomes 1 : 2
- dashed outer inverts / rotates & becomes solid but 3rd figure is already solid
- look for relationship between 1st & 2nd not for how 2nd is made from the 1st
- invert or rotate - 3rd is asymmetric so invert & rotate will be different
- rule out (c) as it's still the right way up – (e) is rotated, others are V-flipped
- look at inners – 2 dashed squares and a pentagon become 2 solid pentagons and a square
- need 2 solid circles and a triangle – only (b) fits so answer = (b)

Q12 (d) : 6 sided figure gives 6 joined little ones so pentagon gives 5
- 6 sided figure gives 6 joined smaller copies – need 5 pentagons – rule out (a) & (c)
- pentagons have to be joined – rule out (b)
- compare (d) & (e) – dashed one in (e) so answer = (d)

Q13 (b) : horizontal flip & swap outlines
- H-flip so rule out (a) & (c)
- outlines swap so we need dashed small triangle – only (b) fits
- check the big triangle is solid – yes so answer = (b)

Q14 (c) : outer becomes one of the inners; non square inner is new outer
- triangle & square inside pentagon becomes pentagon & square inside the triangle
- need to be inside a circle – (a) has a bite in it so (c) is the only possibility
- check there's a pentagon & square inside – good, so answer = (c)

Q15 (a) : 180° rotation of outer figures - inner turn black but don't move
- inner figures turn black but don't move – rule out (c) & (e)
- 180° rotation of outer figures – need down arrow on right – rule out (b) & (d)
- check diamonds on left in (a) – looks good so answer = (a)

Q16 (d) : overlap region of two figures retained
- right is just the middle bit of the 2 overlapping left figures – tricky
- focus on the overlap area – irregular pentagon should be present
- can only see it in (d) – rest of figure seems good so answer = (d)

Quick Lesson Recap

1) What number is CCCLXVII ?

367

2) Add 25.7, 6.4 and 9 =

41.1

3) If a regular octagon has a side of 7cm, what is the perimeter?

56cm

4) If three pencils cost 47p each, how much change would you get from a £20 note?

£18.59

5) Convert 270ml to litres =

0.27L

6) Convert 2.75L to ml =

2750ml

7) Convert 1.5kg to grams =

1500g

8) Add 47g, 1.2kg and 0.34kg, give your answer in grams =

48.54kg

9) If a triangle has base of 8cm and an area of $16cm^2$, what is its height?

4cm

10) Round £274,658.27 to the nearest pound =

£274,658

Homework – Vocabulary to memorise

Vocabulary 6

Exercise A

1. Legal
2. Inferior
3. Defendant
4. Frantic
5. Aghast
6. Enrage
7. Discipline
8. Reinforce
9. Brittle
10. Articulate

Exercise B

1. Brittle
2. Frantic
3. Reinforce
4. Discipline
5. Aghast
6. Legal
7. Defendant
8. Articulate
9. Inferior
10. Enrage

Anagrams

Test 6

1.	s	Foxes are said to be sly creatures.
2.	t	The traffic during rush hour is terrible.
3.	r	My heart was bursting with happiness.
4.	g	My grandma goes to bingo once a week.
5.	y	Your hair is looking a bit greasy today.
6.	s	The weather was a mixture of sunshine and showers.
7.	u	The comedian made me laugh out loud.
8.	r	Being a teacher can be really rewarding.
9.	c	My haircut cost me over forty pounds.
10.	i	Your insults go right over my head.

Related Words

Test 6

1 cat

Solution: Each word in the top row of the grid describes the pattern / colour of an animal. The animal with the corresponding pattern / colour is in the box directly below (e.g. a 'tortoiseshell cat').

2 plunge

Solution: The words in the top row of the grid all rhyme. Each word in the bottom row is a synonym of the word directly above (e.g. 'tumble' and 'plunge' are synonyms). Note that synonyms are always be in the same tense.

3 completely

Solution: The words in the top row of the grid are all homophones. Each word in the bottom row is a synonym of the word directly above it (e.g. 'wholly' and 'completely' are synonyms).

4 bleat

Solution: The words in the top row of the grid are all animals. Each word in the bottom row is the sound that the animal directly above it makes (e.g. the sound 'goats' make is to 'bleat').

5 as

Solution: Each word in the top row of the grid can be joined to the word directly to form a new word (e.g. 'thereupon', 'whereas', 'herein').

6 cent

Solution: The words in the top row of the grid are all names of currencies. Each word in the bottom row is a smaller value note c coin of the currency directly above (e.g. 'cents' make up 'euros').

7 apricots

Solution: The words in the top row of the grid are all categories of fruit. Each word in the bottom row is an item from the category directly above it (e.g. an 'apricot' is a fruit with a 'stone').

8 glossy

Solution: All of the words in the grid contain a double consonan In the top row, the doubles are of consecutive letters in alphabetical order (double 'k', then double 'l', then double 'm'). Ir the bottom row, again the doubles are of consecutive letters in alphabetical order (double 'r', then double 's', then double 't').

9 ounce

Solution: The words in the top row of the grid are all units of measurement. Each word in the bottom row is a smaller unit of measurement within the same system (e.g. 'ounces' make up 'pounds').

10 Finnish

Solution: The words in the top row of the grid are all countries. Each word in the bottom row is the names of the dominant language spoken in the country directly above.

Rhyming Synonyms

Test 6

1. A plentiful
trample → ample → plentiful

2. A bewildered
refused → bemused → bewildered

3. A small
eager → meagre → small

4. A obvious
ridiculous → conspicuous → obvious

5. E tender
coughed → soft → tender

6. A possible
essential → potential → possible

7. A amiable
present → pleasant → amiable

8. B succumb
slender → surrender → succumb

9. E extravagant
intensive → expensive → extravagant

10. C control
retrain → restrain → control