Answers

Practice Paper 1A: English and Verbal Reasoning

English: The Birds of Atrium Island (pages 6–8)

1	E	Reno thought his parents only chose activities meant for kids. In line 2 its says, 'Miniature golf, building sandcastles and visiting a ruined castle was for kids!'.
2	B	Reno wanted to go inside the shed because 'curiosity got the better of him'.
3	D	The woman was angry because Reno was rude about the birds. In lines 24–25 he said, '"I thought you were one of those awful birds"'.
4	C	We know Reno is turning into a bird because firstly he 'squawked' like a bird when he was guzzling down the broth and secondly he 'felt a powerful urge to make flapping movements with both his arms'.
5	A	Reno seems to have transformed into a bird, which means that it is likely that the other birds by the cabin were also once human like him.
6	E	The word 'difficult' is closest in meaning to 'strenuous'.
7	D	The word 'thrilled' is closest in description to the phrase 'over the moon'.
8	B	The word 'slowly' is an adverb.
9	C	The quote in lines 6–7 'the bright sunshine lit up the ripples of the waves like lines of sparkling diamonds', is a simile. It compares the sunlit wave ripples to sparkling diamonds. It uses the word 'like' for the comparison.

Punctuation (page 9)

1	N	No mistake
2	C	A possession apostrophe is needed to show the engine belongs to the rocket: 'when the **rocket's engine** caught fire.'
3	C	A semicolon is needed to separate the two clauses. Both clauses can independently stand alone: 'Lia shivered with cold as she booked in at the **reception; the** hotel was made of ice!'
4	C	A capital letter is needed for the proper noun for the name of '**N**iagara' (Niagara Falls).
5	B	A comma is needed in the list of adjectives: '…his pair of **smelly, old** slippers…'.
6	B	An apostrophe is needed for the contraction: 'have**n't**'.
7	D	A question mark is needed at the end of the question sentence: '"Where are the candles**?**" asked Mum.'
8	A	An exclamation mark is needed after the exclamation: '"Oh no**!**"'.

Spelling (page 10)

1	A	**yacht** This is a common exception word. The 'ach' makes a short /o/ vowel sound.
2	C	**illegal** We add the prefix 'il' before a root word that begins with 'l'.
3	N	**No mistake**
4	C	**height** There is a silent 'e' in the word 'height'.
5	B	**minute** This is a common exception word. The u-e makes a short /i/ sound (i-e).
6	B	**audience** This word ends in 'ence'. We use 'ence' if the 'c' has a soft /s/ sound.
7	A	**allowed** 'allowed' and 'aloud' are homophones. The correct word for the sentence is 'allowed' which means 'to let someone/something do an action'. The word 'aloud' means 'out loud' or 'audibly'.
8	C	**probably** This word has a short /a/ vowel sound instead of a short /e/ vowel sound.

Grammar (page 11)

1	C	**their** This is the only correct word for the sentence to make sense. It is also the correct word compared to its two homophones 'there' and 'they're'.
2	A	**although** This is a subordinating conjunction. It links contrasting ideas. It is used to show the good and bad points of the swimming pool. It is the only subordinating conjunction that would make sense in the sentence.
3	B	**had worn** This sentence is in the past perfect tense. We use 'had' before the past participle for 'wear', which is 'worn'.
4	E	**who** This is a relative pronoun. It links extra information about the main subject 'Keisha'. It is the only relative pronoun that would make sense in the sentence.
5	D	**heaviest** This is a superlative adjective. For adjectives ending in '-y', we replace the 'y' with an 'i' before we add '-est': heav + i + est. It is the only correct word that would make sense in the sentence.
6	C	**advise** This is a verb that means 'to offer help or ideas'. It can be confused with the word 'advice', which is a noun. In the sentence, 'advise' is correct as it is used as a present-tense verb.
7	A	**under** This is a prepositional word. It tells us the position of something/someone. It is the only preposition that would make sense in the sentence.

Verbal Reasoning (page 12)

1	A, Z	**pack; age** The two words together make the compound word 'package'. The other words don't make compound words.
2	B, X	**key; word** The two words together make the compound word 'keyword'. The other words don't make compound words.
3	C, Y	**leaf; let** The two words together make the compound word 'leaflet'. The other words don't make compound words.
4	A, Z	**car; go** The two words together make the compound word, 'cargo'. The other words don't make compound words.

Verbal Reasoning (page 13)

1	B, D	**cavern; glacier** The three words 'planet', 'comet' and 'asteroid' are connected to space. The other two words are found on Earth.
2	B, C	**twist; glide** The three words 'stroll', 'walk' and 'amble' are different verbs to describe walking. The other two words describe other ways of moving.
3	A, E	**friend; neighbour** The three words 'aunt', 'uncle' and 'cousin' are names used to describe members of a family. The other two words describe other people who are not family members.
4	B, E	**cushion; pillow** The three words 'kettle', 'fridge' and 'cooker' are items that are usually found in a kitchen. The other two words are items that can be in other rooms.
5	A, D	**gymnastics; judo** The three words 'cricket', 'rounders' and 'football' are all team sports using a ball. The other two words are sports for one or two people and do not use a ball.

(page 14)

1	B	**gran grew** The hidden word is 'rang'. My g**ran g**rew a huge marrow.
2	B	**attic key** The hidden word is 'tick'. This at**tic k**ey is very rusty!
3	B	**brown earth** The hidden word is 'near'. Put brow**n ear**th across the bulb.
4	E	**beast again?** The hidden word is 'stag'. Did you see that bea**st ag**ain?

(page 15)

1	C	**LDKNM** Count –1 letter back from each letter in given word. APPLE – ZOOKD: A–**Z** (–1), P–**O** (–1), P–**O** (–1), L–**K** (–1), E–**D** (–1) MELON – LDKNM: M–**L** (–1), E–**D** (–1), L–**K** (–1), O–**N** (–1), N–**M** (–1)
2	B	**FOHYHU** Count +3 letters forward from each letter in given word. SILLY – VLOOB: S–**V** (+3), I–**L** (+3), L–**O** (+3), L–**O** (+3), Y–**B** (+3) CLEVER – FOHYHU: C–**F** (+3), L–**O** (+3), E–**H** (+ 3) V–**Y** (+3), E–**H** (+3), R–**U** (+3)
3	D	**CHAIR** Word to code: count +2 letters forward from the normal alphabetical letter order. TABLE – VCDNG: **T**–V (+2), **A**–C (+2), **B**–D (+2), **L**–N (+2), **E**–G (+2) Code to word: count –2 letters back. EJCKT – CHAIR: E–**C** (–2), J–**H** (–2), C–**A** (–2), K–**I** (–2), T–**R** (–2)
4	C	**WHALE** Word to code: count –4 back from the normal alphabetical letter order. ZEBRA – VAXNW: **Z**–V (–4), **E**–A (–4), **B**–X (–4), **R**–N (–4), **A**–W (–4) Code to word: count + 4 letters forward. SDWHA – WHALE: S–**W** (+4), D–**H** (+4), W–**A** (+4), H–**L** (+4), A–**E** (+4)
5	A	**DPLYPYA** Count the number pattern going forward and backwards: (+1), (–2), (+3), (–4), (+5), (–6), (+7). HOCKEY – IMFGJS: **H**–I (+1), **O**–M (–2), **C**–F (+3), **K**–G (–4), **E**–J (+5), **Y**–S (–6) CRICKET – DPLYPYA: C–**D** (+1), R–**P** (–2), I–**L** (+3), C–**Y** (–4), K–**P** (+5), E–**Y** (–6), T–**A** (+7)

(page 16)

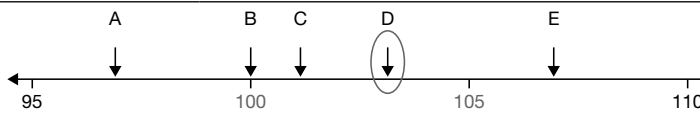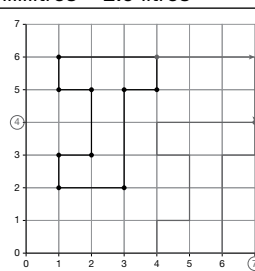| 1	A, Y	**lock; fasten** Both words can mean to shut or secure something tightly.
2	C, Y	**thaw; defrost** Both words can mean melting of something very cold.
3	B, X	**roar; bellow** Both words can mean a loud, deep sound made by animals or people.
4	C, Z	**announce; proclaim** Both words can mean to state publicly something of importance.

(page 17)

1	D	**46** Add the two outside numbers together for the total sum in the middle. (47 [96] 49) = 47 + 49 = 96 (38 [65] 27) = 38 + 27 = 65 (29 [46] 17) = 29 + 17 = 46
2	A	**74** The middle number is halfway between the two outside numbers. Subtract the two outside numbers together then divide by 2. (72 [60] 48) = 72 – 48 = 24 ÷ 2 = 12; 72 – 12 = 60; 48 + 12 = 60 (58 [44] 30) = 58 – 30 = 28 ÷ 2 = 14; 58 – 14 = 44; 30 + 14 = 44 (85 [74] 63) = 85 – 63 = 22 ÷ 2 = 11; 85 – 11 = 74; 63 + 11 = 74
3	B	**86** Add the two outside numbers together and then subtract two from that sum. (35 [46] 13) = 35 + 13 = 48 – 2 = 46 (67 [91] 26) = 67 + 26 = 93 – 2 = 91 (29 [86] 59) = 29 + 59 = 88 – 2 = 86

Reading Question (page 17)

| 1 | B | The sentence 'Ajay didn't find Pirate Jim's treasure chest.' is true.
Ajay only completed seven challenges which means he definitely didn't find the treasure.
A, D, E: The information doesn't tell us anything about Jared's attempts. This means that we don't know if any of the three sentences are definitely true.
C, D: The information tells us that Zofia completed more challenges that Ajay. We don't know if she definitely completed the challenges or failed to find Pirate Jim's treasure chest. |

Practice Paper 1B: Mathematics and Non-verbal Reasoning

Mathematics (pages 19–24)

1	D	**MCMXLVI** MCM = 1000 + 1000 − 100 = 1900; XL = 50 − 10 = 40; VI = 5 + 1 = 6 So, MCMXLVI = 1946.
2	B	**70°** The angle between two hours on a clock is 360° ÷ 12 = 30°. The angle between the minute hand at 20 past and the number 6 is 2 × 30° = 60°. At 6.20, the hour hand is one-third of the way between the 6 and 7, so the angle between the number 6 and the hour hand is 30° ÷ 3 = 10°. The total angle is 60° + 10° = 70°.
3	B	**17** Work backwards using reverse operations: 13 × 2 = 26 26 + 8 = 34 34 ÷ 2 = 17 Check by working forwards: (17 × 2 − 8) ÷ 2 = 13
4	B	**53,610 53,600 54,000** 53,607 is 53,610 to the nearest 10 (rounded up to 1 ten because the ones digit is 5 or more). 53,607 is 53,600 to the nearest 100 (rounded down to 6 hundreds because the tens digit is less than 5, so 53,600). 53,607 is 54,000 to the nearest 1000 (rounded up to 4 thousands because the hundreds digit is 5 or more).
5	A	**40** The sequence begins with four matchsticks and then 12 matchsticks are added each time to make the next pattern in the sequence. 4 + 12 + 12 + 12 = 40
6	C	$\frac{3}{4} \times 6 \times 8$ The total number of stickers is 6 × 8. $1 − \frac{1}{4} = \frac{3}{4}$ so Kai keeps $\frac{3}{4}$ of the stickers. So Kai keeps $\frac{3}{4} \times 6 \times 8$ stickers.
7	E	**£6.08** 0.76 × 8 = £6.08
8	B	**500** The blue sector is $\frac{1}{6}$ of the pie chart. So there are about 85 × 6 = 510 pupils, or approximately 500.
9	D	**121** The rule is add 11. 22 33 44 55 66 77 88 99 110 **121**
10	B	**40cm²** Split the area into the top triangle, the bottom-left square and the bottom-right triangle. Top triangle: $\frac{1}{2} \times 4cm \times 8cm = 16cm^2$ Square: 4cm × 4cm = 16cm² Bottom-right triangle: $\frac{1}{2} \times 4cm \times 4cm = 8cm^2$ Total: 16cm² + 16cm² + 8cm² = 40cm²
11	D	
12	A	**439** 72 × 6 = 432 882 ÷ 2 = 441 432 < **439** < 441
13	E	$\frac{7}{10}$ $\frac{6}{15} < \frac{1}{2} = \frac{7}{14} < \frac{3}{5} < \frac{7}{10}$
14	D	**20% of 55** = 11 The others are all equal to 12.
15	C	**23cm** The perimeter has ten parts. Because the triangles are equilateral, each part has the same length as the side of a pentagon. 2.3cm × 10 = 23cm
16	E	**Forty-two thousand and thirty-one** 42,000 is forty-two thousand. 31 is thirty-one. 42,031 is forty-two thousand and thirty-one.
17	D	**2.9 litres** After watering the tomato plants, he has 6 litres × $\frac{3}{4}$ = 4.5 litres left. 4.5 litres = 4500 millilitres 4500 millilitres − 1600 millilitres = 2900 millilitres 2900 millilitres = 2.9 litres
18	B	**(7, 4)**
19	A	**15** 8² − 7² = 64 − 49 = 15
20	C	**52.78** 52.68 + 0.1 = 52.78
21	E	$\frac{2}{3}$ **< 65%** $\frac{2}{3}$ is 66.666...% so, $\frac{2}{3}$ > 65%

22	E	**a multiple of 2.** The example 3 – 1 = 2 rules out all options except 'a multiple of 2'.
23	D	**1, 2, 4 and 8** Factors of 24: **1**, **2**, 3, **4**, 6, **8**, 12 and 24 Factors of 32: **1**, **2**, **4**, **8**, 16 and 32 The common factors of 24 and 32 are 1, 2, 4 and 8.
24	B	**9** Middle right: 15 – 3 – 5 = 7 Bottom right: 15 – 6 – 7 = 2 Bottom left (diagonal): 15 – 6 – 5 = 4 X: 15 – 4 – 2 = 9
25	B	**64** 8 × 8 = 8^2 = 64 4 × 4 × 4 = 4^3 = 64

For question 24:

8	1	6
3	5	7
4	**9**	2

Non-verbal Reasoning: Matrices (pages 25–27)

1	B	The missing shape is a 90° rotation of the shape on the left.
2	A	Shapes in the bottom row are the bottom quarter of the shapes in the top row.
3	E	The missing shape is the middle shape with the addition of a 'D' shape to fill the gap in between the two lines.
4	B	The shape in the top middle in the right-hand column of the squares is reduced in size and moved to the top left of the square to the left. The two small shapes are enlarged and moved to the corners. The vertical (zig-zag or wavy) line is moved to a diagonal position.
5	C	Each row contains a small, medium and large version of the shape that appears in that row.
6	C	The right-hand column combines a 180° rotation of the shape in the middle column with the shape in the left-hand column.
7	D	Matching shapes are positioned in diagonal rows that run from top right to bottom left.
8	A	The shape in the bottom square is made by reflecting the shape in the top square in a horizontal line.
9	E	The shapes in the right-hand column are 90° anticlockwise rotations of the shapes in the left-hand column with the shading reversed within each shape.
10	A	The large white shape in the bottom row is reflected and made narrower for the top row. One more circle is added and one cross is taken away. The vertical lines become diagonal lines.
11	B	The middle column is a reflection in a vertical line of the left-hand or right-hand columns.
12	D	Squares in the middle row contain two lines forming an L shape in the top left corner. Each row and column contains a single circle, two concentric circles and three concentric circles. Two concentric circles are missing from the middle row and column.
13	C	The shading in the right-hand column has been moved one shape anticlockwise compared to the left-hand column. The shapes remain in the same position.

Odd One Out (pages 28–30)

1	A	The shapes that belong have top right to bottom left shading. The odd one out has top left to bottom right shading.
2	D	The shapes that belong are rotations of each other. The odd one out is a reflection of the others.
3	B	The shapes that belong have four small lines crossing the circumference of the circle. The odd one out has five lines.
4	D	The shapes that belong have two interior lines that curve in the same direction. The odd one out has two interior lines that curve in the opposite direction.
5	E	The shapes that belong have four line intersections. The odd one out has five line intersections.
6	B	The shapes that belong have one cross fewer than sides of the shape. The odd one out has the same number of crosses as sides of the shape.
7	A	The shapes that belong have the same number of 'v' shapes either side of the wavy line. The odd one out has one less 'v' shape on one side as the other.
8	D	The shapes that belong have a line of symmetry marked on them. The odd one out does not have a line of symmetry marked on it.
9	B	The ones that belong have a 'w'-shaped pattern in the middle. The odd one out has an 'm'-shaped pattern in the middle.
10	C	The ones that belong have a cross outside the circle and opposite the arrowhead. The odd one out has a triangle outside the circle and opposite the arrowhead.
11	E	The ones that belong have matching adjoining sides. The odd one out has a short and long side adjoined.
12	E	The ones that belong have a slim oval at the top. The odd one out has a slim rectangle at the top.
13	D	The ones that belong have the outer triangle on the right as an enlargement and vertical reflection of the inner triangle on the left. The outer triangle on the left is an enlargement and vertical reflection of the inner triangle on the right. The odd one out has the outer triangles as an enlargement of the triangles inside.

Practice Paper 2A: English and Verbal Reasoning

English: Puppets (pages 32 and 41–42)

1	A	The three main methods of controlling a puppet are by using hands, string and rods.
2	C	The strings or wires are attached to small wire hoops or wooden joints.

3	B	The statement 'The puppeteer controls the puppet from above.' is untrue. The text states in lines 21–22, 'The puppeteers stand behind or under a big screen…'.
4	D	Three puppeteers are needed for one bunraku puppet because they each have to control different parts of the puppet.
5	D	You can find information about Vietnamese water puppets in the 'Rod puppets' section of the text.
6	E	This is an information text. It starts with an introductory section followed by different subtitled sections about different puppets. In each section there is information about how puppets are made, and how puppeteers control them and use them in a performance. It is written in the present tense.
7	A	The word 'move' is closest in meaning to the word, 'manoeuvre'.
8	B	The word 'intricate' means 'highly detailed', such as 'highly detailed' expressions shown in a puppet's face.
9	E	The words 'above', 'under', 'behind', 'across', 'onto' are all preposition words. They tell us the position/location of where someone or something is.
10	D	The word 'controlled' is a verb. It is the past tense form for the root verb 'control'.

Barge Holidays (page 43)

1	B	A hyphen is needed to join up the adjective-verb compound word '**fun-filled**'.
2	N	No mistake
3	C	A capital letter for the proper noun is needed for a given name of a barge company: 'Goose **Walk** Barges'.
4	A	A parenthesis or end bracket is missing for '(or even longer**)**.'
5	D	A colon is needed to separate the clause that emphasises why people should look out for Merlin's tree: 'keep an eye out for Merlin's Ancient Oak**:** the tree is over 600 years old!'
6	C	Speech marks are needed to indicate that someone is speaking: **"**The best part…**"**
7	A	A possessive apostrophe is needed to show that the six locks belong to Brook Canal: 'Brook **Canal's** six locks.'.
8	C	An apostrophe is needed for the contraction: 'do**n't**'.

The Great Exhibition (page 44)

1	N	**No mistake**
2	D	**massive** This word has a double letter 'ss', not one 's'.
3	C	**sparkling** For root verbs ending in '–e', we usually drop the 'e' before we add '-ing'.
4	A	**Crystal** We use the 'i' sound spelled 'y' when it isn't at the end of a word.
5	B	**aisles** 'aisles' and 'isles' are homophones. The correct word for the sentence is 'aisles', which means a long passage as in 'shopping aisles'. The word 'isles' means small islands.
6	D	**furniture** If there is a 'chure' sound at the end of a word, it is often spelled 'ture'. This does not apply to /ch/ sounds for root words, eg teacher, catcher, etc.
7	B	**precious** This word ends with the sound /s/. This means it ends with 'cious'.
8	A	**machinery** This word has an /er/ sound for the letters 'er', not the short /a/ vowel sound.

The Great Storm (page 45)

1	C	**worst** This is the superlative adjective for 'bad'. It has 'the' in front of it. The word 'worse' is a comparative adjective. It has 'than' after it: 'It is worse than…'. 'Worsen' is a verb, 'poorest' and 'bad' do not make sense in the sentence.
2	B	**Great** This is an adjective. It is the correct proper noun name for the storm in 1997 given in the title. The other words do not match the inference that it was a terrible night.
3	E	**so** The word 'so' is used before the adverb 'powerful' to intensify its meaning. The other words do not convey the correct message in the sentence.
4	A	**blew** This is the correct past tense verb for 'blow'. The other forms do not work in the sentence.
5	D	**strongest** This is a superlative adjective. It is the only correct word that would make sense in the sentence.
6	B	**soon** This is an adverb of time. It tells us that the storm moved on quite quickly. The other words do not make sense in the sentence or with the information around it.
7	C	**passed** This is the correct past tense verb for the action of moving along or moving by someone or something. The word 'past' is used to show time, eg 'In the past, we had many storms.'; 'It is past my bedtime.', etc.
8	E	**whole** In this account, the word 'whole' is an adjective. It describes the large areas of land devastated by the storm. Through inference and correct spelling, this is the only word that makes sense in the sentence.

Verbal Reasoning (page 46)

1	D	**mad** In the first word, use the third, second and first letters to get the second word: (**par**k rap) (**wes**t sew) (**dam**p mad)
2	A	**bow** In the first word, use the first, third and fourth letters to get the second word: (**t**w**in** tin) (**t**h**en** ten) (**b**l**ow** bow)
3	E	**cat** In the first word, use the first, fourth and fifth letters to get the second word: (**f**lo**at** fat) (**b**ra**in** bin) (**c**he**at** cat)
4	A	**top** In the first word, use the fifth, third and second letters to get the second word: (s**t**i**ck** kit) (e**x**a**ct** tax) (s**p**o**rt** top)
5	C	**nest** In the first word, use the third, second, first and fourth letters to get the second word: (**cine**matic nice) (**dire**ction ride) (**sent**iment nest)

1	A, Y	**boiling; frozen** A volcano is 'boiling' hot. An iceberg is 'frozen' cold.
2	A, Y	**triangular; rectangular** A pyramid is a 'triangular' shape. A brick is a 'rectangular' shape.
3	B, Z	**tiny; huge** An ant is a 'tiny' creature. A gorilla is a 'huge' creature.
4	B, Y	**wary; impulsive** 'Cautious' is a synonym for 'wary'. 'Reckless' is a synonym for 'impulsive'.

1	A	**ALL** This skyscraper is the tALLest in the city. The other three letter choices do not make proper words.
2	B	**TEN** A frighTENing shape appeared through the fog. The other three letter choices do not make proper words.
3	C	**ANT** Do you fancy a pleasANT day rowing on the river? The other three letter choices do not make proper words.
4	D	**CAR** The eerie castle ruins looked very sCARy at night. The other three letter choices either do not make proper words or do not make sense in the sentence.
5	A	**CAT** The council plan to create a new eduCATional department. The other three letter choices do not make proper words.

Code letter answers		'A' is in each of the four words. It appears as a second and third letter: A = 3. 'E' is in each of the four words. It appears as a second and fourth letter: E = 1. 'M' is in three of the words. It appears as a first and third letter: M = 9. 'T' is in two of the words. It appears as a third and fourth letter: T = 4. 'N' is in two of the words. It appears as a first and fourth letter: N = 7. B is in one of the words. Its appears as a first letter: B = 5. NAME = 7391 BEAT = 5134 MATE = 9341
1	A	**9137** = MEAN
2	B	**4391** = TAME
3	D	**5174** = BENT
4	A	**MEET** = 9114
5	D	**BEAM** = 5139

1	A, Y	**hunter; prey** A 'hunter' searches or hunts for something or someone. 'Prey' is a creature or human that is hunted by a hunter.
2	B, X	**identical; different** 'Identical' means something or someone that is exactly alike. 'Different' means something or someone that is not alike.
3	A, Y	**fertile; barren** 'Fertile' means somewhere where the soil allows vegetation to be easily grown. 'Barren' means somewhere where the soil is too poor or dry to grow vegetation.
4	A, X	**hollow; solid** 'Hollow' means something which has a hole or is empty inside. 'Solid' means something which has no space or gaps.

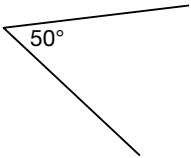| 1	B	**B = 7**: E (22) – A (6) – C (9) = 22 – 6 = 16; 16 – 9 = 7
2	D	**D = 49**: E (63) – C (33) + B (23) – A (4) = 63 – 33 = 30; 30 + 23 = 53; 53 – 4 = 49
3	C	**C = 8**: D (16) ÷ A (4) + E (24) ÷ B (6) = 16 ÷ 4 (4) + 24 ÷ 6 (4); 4 + 4 = 8
4	B	**B = 8**: D (20) × A (4) ÷ (E (22) – C (12)) = 20 × 4 (80) ÷ (22 – 12 (10)); 80 ÷ 10 = 8

Reading Question

1	B	Studio 2 has the fewest dancers.
		Studio 1 has the most dancers – the same number as both Studio 3 and Studio 4 added together. Studio 4 has more dancers than Studio 3 and 5. Studio 5 has more dancers than Studio 3 but fewer dancers than Studio 4. Studio 3 has fewer dancers than Studios 1, 4 and 5. It has more than Studio 2. Studio 2 has fewer dancers than Studio 3.

Practice Paper 2B: Maths and Non-verbal Reasoning

Mathematics (page 53–58)

1	C	**136.653** 123 + 12.3 + 1.23 + 0.123 = 136.653
2	A	**50°** 50°
3	A	**11 hours** A to B to C to E to G to F to H. 3 + 1 + 2 + 2 + 1 + 2 = 11 hours
4	B	**8:00** In 1.5 hours from 6:30 to 8:00, George delivers 30 papers. In 1 hour from 7:00 to 8:00, Fran also delivers 30 papers. At 8:00 they have both delivered the same number of papers.

5	E	**81** The sequence of cube numbers does not include 81. 1, 8, 27, 64, 125,…
6	C	**III** Work backwards using reverse operations: $24 \div 4 = 6$ $6 - 3 = 3$ (III)
7	B	$\frac{5}{12}$ Inaya $\frac{1}{3} = \frac{4}{12}$ Freddie $\frac{1}{4} = \frac{3}{12}$ Pizza eaten by Inaya and Freddie $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$ Pizza left for Amit $1 - \frac{7}{12} = \frac{5}{12}$
8	D	$\frac{5}{12}$ 10 of the 24 equilateral triangles are shaded. So $\frac{10}{24} = \frac{5}{12}$ is shaded.
9	B	**154,455** The number must be between 153,500 and 154,499 for it to be rounded to 154,000. 154,455 is the only number in that range.

10	E	**15kg** Week 2 hippo weight 40kg
		       Week 5 hippo weight 55kg
		       Difference 55kg − 40kg = 15kg

11	A	**£15** Spending 70% leaves 100% − 70% = 30%. So 30% of Daisy's pocket money is £4.50, so 10% is £1.50. £1.50 × 10 = £15 to find 100%, which is what she started with.
12	B	**12,111** 11,000 + 1100 + 11 = 12,111
13	D	**$(4^2 - 1) \div 3 = 5$** The other answers all equal 6.
14	C	**4** $(4 + 2)^2 = 36 > 30$
15	E	**(3, 6)**
16	D	**70p** £1.55 × 6 = £9.30 £10.00 − £9.30 = 70p
17	B	
18	D	**65%** 218 is a bit more than 200 and 336 is a bit more then 300. So 218 ÷ 336 is similar to 200 ÷ 300 which is 66.66...%, which is close to 65%.
19	A	**110**
20	C	**6 weeks** 1 week = 24 hours × 7 days = 168 hours 1000 hours ÷ 168 hours is approximately 6 weeks.
21	C	**3000 litres** Twelve small boxes fit inside the large box. 12 × 250 litres = 3000 litres
22	C	**49** 7 × 7 = 49 so 49 is NOT prime. A square number is never prime.
23	D	**32** 8 × 4 = 32
24	A	**1, 2 and 5** They are all factors of 10.
25	E	The taller section of the shape is on the wrong side of the smaller section of the shape.

Non-verbal Reasoning: Codes (in a box) (page 59–61)

1	A	The top letter indicates the position of the shape. The bottom letter indicates the shape itself. S is for bottom position and B is for a wide x shape.
2	D	The top letter indicates the number of small > shapes. The bottom letter indicates the number of large < shapes. N is one small > and L is three large <.
3	E	The top letter indicates the shape. The bottom letter indicates the shading. I is a rectangle and V is diagonal shading top left to bottom right.
4	D	The top letter indicates the number of shapes. The bottom letter indicates the shape. D is two shapes and L is diamonds.
5	B	The top letter indicates the line position above the circle. The bottom letter indicates the shape inside the circle. H is for two diagonal lines above the circle and C is for a triangle inside the circle.
6	B	The top letter indicates the size of the black circle. The bottom letter indicates the direction of the curved shape. O is a small black circle and H is a C shape.
7	A	The top letter indicates the direction of the swirl. The bottom letter indicates the position of the parallel lines. P is an anticlockwise swirl and F is parallel lines at the top of the box.
8	C	The top letter indicates the shading of the outer ring. The bottom letter indicates the shading of the middle ring. M is a horizontally striped outer ring and S is a white middle ring.
9	E	The top letter indicates the size of the rectangle. The bottom letter indicates the direction and position of the arrow. A is a wide rectangle and T is an arrow pointing up on the left-hand side.
10	E	The top letter indicates the number of black/white circles. The bottom letter indicates the direction of the diagonal line. F is two black/two white circles and K is a diagonal line from top right to bottom left.
11	B	The top letter indicates the way the hexagon has been divided. The bottom letter indicates the position of the small white circle. S is a line cutting the hexagon in half and M is the small white circle at the bottom vertex.
12	D	The top letter indicates the number of lines alongside the square. The bottom letter indicates the position of the black triangle. E is one line alongside the square and Q is the black triangle in the bottom right.
13	A	The top letter indicates the line directions. The bottom letter indicates the triangle position. B is two / lines plus one \ line and X is the triangle in the bottom right-hand corner.

Like Figures (pages 62–64)

1	E	The shapes that are alike have a vertical open-headed arrow and four more parallel and perpendicular lines.
2	A	The shapes that are alike have a large shape that contains a small shape with one side fewer than the bigger outer shape.
3	C	The shapes that are alike have a line of symmetry marked on a large shape with a small black circle in one half of the shape. A smaller version of the large shape overlaps the larger shape.
4	B	The shapes that are alike have a vertical line of symmetry.
5	A	The shapes that are alike have two similar shapes that overlap with a third similar shape inside one of the larger shapes.
6	D	The shapes that are alike have shading lines that are parallel to the line of symmetry.
7	B	The shapes that are alike have a black corner triangle opposite two diagonal lines with two small crosses also in the square.
8	E	The shapes that are alike contain parallelograms that are rotations of each other.
9	A	The shapes that are alike have three curved sides and three straight sides.
10	B	The shapes that are alike are half shaded.
11	E	The shapes that are alike are split in half with one half then split further into three unequal size pieces.
12	D	The shapes that are alike have one rectangular 'petal' fewer than line 'leaf' on the 'stem'.
13	C	The shapes that are alike have one smaller matching shape inside the larger shape.