Answers

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Practice Paper 1A: English and Verbal Reasoning

English: The Hourglass Book (pages 6–8)

		me me grace zeem (pages e e)
1	D	The piles of books are described using a metaphor: 'Rickety battlements of heavy tomes, faded pamphlets and tatty paperbacks rose from every flat surface.'
2	С	Samira's grandad becomes serious because he is about to reveal an important secret to her for the first time.
3	A	Samira has a chair regarded as 'her' chair in the study and she knows the armoire is always locked. Both suggest familiarity with the study as a result of spending time in it.
4	E	Curious. Examples in the text include a reference to her nosiness, her questions, her excitement about what her grandad is going to reveal and her awe at the hourglass book.
5	В	The hourglass book is described as not having 'the heft or flex she was expecting', meaning it is lighter and stiffer than she thought it would be. The other descriptions are true, but they are not described as contrary to Samira's expectations.
6	D	The hourglass turns back time by one hour. This is evidenced by the clock striking two o'clock shortly after it struck three o'clock.
7	В	Here the word 'void' is used as a noun meaning 'a hole'.
8	С	To wait 'with bated breath' is an idiom that means 'to wait in a state of nervous excitement and anticipation'. 'Bated' means 'restrained', as in to hold one's breath.
9	D	The word 'from' is a preposition that is used before the noun phrase 'his cardigan pocket.'

Mirage (page 9)

1	D	A capital letter is needed for the proper noun, here the name of a place: 'the Sahara'.
2	C	A possessive apostrophe is needed to show that the face belongs to the character, Aksil: 'Aksil's face was smeared'.
3	В	A capital letter is needed at the start of the sentence: 'and dust. His sister raised'.
4	D	An apostrophe is needed for the contraction: "it's" (here, meaning 'it is', referring back to Sakina's water bottle).
5	С	A colon is needed to introduce the second clause that further explains the first clause: "We have to find the oasis: it's our only hope."
6	N	No mistake
7	В	A comma is needed to separate the fronted adverbial: 'Just when hope seemed lost, a shimmering pool'. Note that this fronted adverbial is also a subordinate clause.
8	D	A hyphen is needed to join up the adjectival compound word: 'sun-baked'.
9	A	A closing speech mark is needed at the end of the first clause of direct speech and before the reporting clause: "We made it!" Sakina exclaimed.

Spelling (page 10)

1	С	informally This word takes the prefix 'in-', not 'im-'.
2	В	thieves This is the plural of the noun 'thief', so drop the '-f' and add '-ves'.
3	N	No mistake
4	D	plane The word 'plain' is a homophone of 'plane', which is an abbreviation of 'aeroplane' here.
5	В	colourful This word takes the suffix '-ful', not '-full'.
6	Α	separate This word has a Latin origin from 'se-' (apart) and 'parare' (make ready). It is commonly misspelt as 'seperate' because of how it is pronounced.
7	С	creation The suffix '-ion' is often used if the root word ends in 't' or 'te', for example, 'create – creation'.
8	Α	bow The word 'bough' is correctly spelt but means 'a large branch of a tree'. The word 'bough' is a homophone of 'bow', which means 'the front of a ship' here.

Grammar (page 11)

		" "
1	В	opened The simple past tense is needed here: 'the new pool opened'.
2	D	late This is the correct adverb. It is preceded by a qualifying adverb, 'so'. Note that 'lately' means 'recently', which has a different meaning to 'late'.
3	С	funniest This is the superlative form of the adjective 'funny'. Note that the 'y' is changed to an 'i' when the suffix -est is added.
4	E	myself This reflexive pronoun is used to refer back to the subject (here, 'I') and emphasises it.
5	A	An The indefinite article 'an' is needed here as it comes before a noun beginning with a vowel sound, because there is a silent 'h' in 'hour'.
6	С	army This is part of a collective noun phrase: an army of ants.
7	D	towards This preposition is often used as a preposition of movement or direction. It can also be used as a preposition of time, indicating an approach to a particular point in time: 'towards the end of the 11th century.'
8	E	were delivered This sentence is in the passive voice. Note that the object is implied rather than stated (someone unstated delivered the package) so there is no 'by' followed by the object.

Verbal Reasoning (page 12)

1	A, D	fluid, liquid The words 'firm', 'solid' and 'stiff' are different adjectives to describe something hard. The other two words describe something that can flow.
2	C, D	root, stem The words 'cottage', 'detached' and 'bungalow' are different types of house. The other two words describe parts of a tree or plant.
3	A, B	gather, collect The words 'cast', 'fling' and 'hurl' are different verbs to describe throwing. The other two words describe different ways of picking up something.

4	A, E	during, until The words 'along', 'towards' and 'through' are all prepositions used to describe movement. The other two words are prepositions of time.
5	B, C	sink, bathtub The words 'drain', 'pipe' and 'sewer' are all used to bring water or take it away. The other two words are used to contain water.

(page 13)

1	E	final song The hidden word is 'also'. The popstars performed their fin al so ng.
2	В	vessel left The hidden word is 'sell'. Our vessel left port this morning.
3	С	cargo net The hidden word is 'gone'. Unfortunately the cargo net came loose.
4	В	sleeve ripped The hidden word is 'ever'. My sleeve ripped at the top.

(page 14)

1	С	bear – first letter from the first word and third, fourth and fifth letters from the second word. (carry [card] award) (booth [bear] clear)
2	E	mock – second letter from the first word and second, third and fourth letters from the second word. (skull [king] hinge) (small [mock] rocky)
3	Α	iris – third and fourth letters from the first word and second and third letters from the second word. (tutor [tomb] amber) (dairy [iris] misty)
4	D	mane – third, fourth and fifth letters from the first word and last letter from the second word. (water [tern] known) (human [mane] since)
5	В	ears – fourth letter from the first word and first, second and third letters from the second word. (least [stop] topic) (money [ears] arson)

(page 15)

1	D	ARQV Count –3 letters back from each letter in given word. HELP – EBIM: H–E (–3), E–B (–3), L–I (–3), P–M (–3) DUTY – ARQV: D–A (–3), U–R (–3), T–Q (–3), Y–V (–3)
2	В	SQUID Word to code: count -2 letters back from each letter in the given word. NIGHT - LGEFR: N-L (-2), I-G (-2), G-E (-2), H-F (-2), T-R (-2) Code to word: count +2 letters forward. QOSGB - SQUID: Q-S (+2), O-Q (+2), S-U (+2), G-I (+2), B-D (+2)
3	С	ANIJT Count +5 letters forward from each letter in given word. AFTER – FKYJW: A–F (+5), F–K (+5), T–Y (+5), E–J (+5), R–W (+5) VIDEO – ANIJT: V–A (+5), I–N (+5), D–I (+5), E–J (+5), O–T (+5)
4	E	UNCLE Word to code: count +3 letters forward from each letter in the given word. RAPID – UDSLG: R–U (+3), A–D (+3), P–S (+3), I–L (+3), D–G (+3) Code to word: count –3 letters back. XQFOH – UNCLE: X–U (–3), Q–N (–3), F–C (–3), O–L (–3), H–E (–3)

5	В	GKCFDP Count the number pattern going 1 back and
		2 forward: (-1), (+2), (-1), (+2), (-1), (+2) BETTER – AGSVDT: B–A (-1), E–G (+2), T–S (-1), T–V
		BETTER - AGSVDT: B-A (-1), E-G (+2), T-S (-1), T-V
		(+2), E-D (-1), R-T (+2)
		HIDDEN - GKCFDP: H-G (-1), I-K (+2), D-C (-1), D-F
		(+2), E-D (-1), N-P (+2)

(page 16)

1	C, Y	juvenile, mature 'Juvenile' is used to describe someone who is childish. 'Mature' is used to describe someone who behaves in a responsible, adult way.
2	A, Z	separate, fuse When you 'separate' something, you break it up into different parts. When you 'fuse' something together, you join different parts into a whole.
3	B, Z	exhibit, conceal When you 'exhibit' something, you put it on show or display. When you 'conceal' something, you hide it away from view.
4	C, Y	dear, cheap 'Dear' is used to describe something that is expensive or precious. 'Cheap' is used to describe something that is inexpensive or of little worth.

(page 17)

1	D	37 Add 7 to each number: 9 (+ 7), 16 (+ 7), 23 (+ 7), 30 (+ 7), 37.
2	В	22 Add 3 to the first, third and fifth numbers: 21 (+ 3), 24 (+ 3), 27 (+ 3), 30; subtract 3 from the second, fourth and sixth numbers: 31 (-3), 28 (-3), 25 (-3), 22.
3	Α	81 Subtract 2 from the first number, and then subtract one more each time: 101 (-2), 99 (-3), 96 (-4), 92 (-5), 87 (-6), 81
4	E	95 Double the number and then add 1: 5 (×2 +1), 11 (×2 +1), 23 (×2 +1), 47 (×2 +1), 95. Or the difference between the number doubles each time: 5 (+6) 11 (+12) 23 (+24) 47 (+48) 95
5	С	32 Halve the number until you reach 4: 32 (÷2), 16 (÷2), 8 (÷2), 4. Then double the number to repeat the pattern: 4 (×2), 8 (×2), 16 (×2), 32.

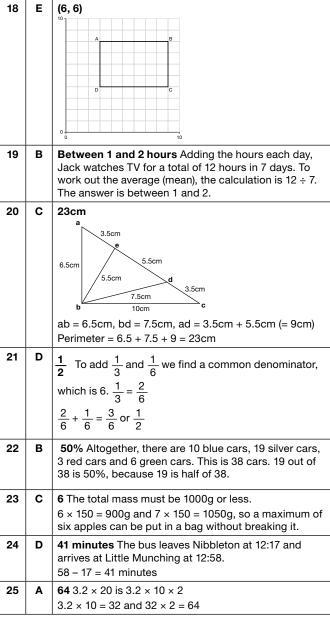
Reading Question (page 17)

1	D	'Leo has more money to spend than Aisha' must be true.
		Leo has more money to spend than Evie, who spends £25. However, Aisha has £20 to spend, so Leo's available amount must be greater than £25, meaning he has more money to spend than Aisha. This also means that C cannot be true.
		For A, it is not clear whether Aisha spends all of her £20.
		For B, there is no information on how much money Leo spends.
		For E, it is not clear that £25 is the total amount Evie has available to spend.

Practice Paper 1B: Mathematics and Non-verbal Reasoning

Mathematics (pages 19-24)

1	С	16 4² means 4 × 4, which is 16.
2	С	260,000 In the number two-hundred and sixty-three thousand, seven hundred and nine, sixty-three thousand rounds down to sixty thousand, so the full answer is 260,000 to the nearest 10,000.
3	E	Two pets occur wherever two circles intersect, but not where all three circles intersect (this is three pets). So, 2 + 3 + 4 = 9. Nine children have two pets.
4	В	14 <i>x</i> + 17 = 31, so <i>x</i> = 31 – 17, <i>x</i> = 14
5	Α	30 20% is 1 in 5, or $\frac{1}{5}$. $\frac{1}{5}$ of 150 = 30 (150 ÷ 5 = 30)
6	С	£52.50 To calculate $21 \times £2.50$, $20 \times £2.50$ is $2 \times 10 \times £2.50 = 2 \times £25 = £50$, plus one more £2.50 donation = £52.50
7	D	450ml 1 litre is 1000ml, so there is 1000 – 550ml left to fill, so Tina needs 450ml to fill the jug.
8	В	5 and 11 100 – 55 = 45, so the two prime numbers multiply to give 55, which can only be 5 and 11.
9	D	0.166 0.165 is halfway between 0.16 and 0.17, and the box is just over this line, so 0.166 is the only possible answer.
10	В	24m The area of a square is the length of a side multiplied by itself, or squared. $6^2 = 36$, so the side length is 6m. The perimeter of a square has four equal sides, so perimeter = $4 \times 6 = 24$ m.
11	A	15 When $a = 40$ the equation is $40 = 25 + b$ (or $b + 25 = 40$). So $b = 40 - 25$, $b = 15$.
12	В	It has two sides of equal length. An isosceles triangle ALWAYS has two sides of equal length, so B is the only answer that is always true.
13	A	15 To find the number of brown cows: $\frac{1}{2}$ of $60 = 30$ To find the number of brown cows less than three years old: $\frac{1}{2}$ of $30 = 15$
14	С	35 There are 48 cars and 13 buses, so there are 48 – 13 = 35 more cars than buses.
15	E	21:10 100 minutes = 1 hour and 40 minutes. 7:30pm + 1 hour = 8:30pm 8:30pm + 40 minutes = 9:10pm, or 21:10
16	С	1250 5000 is 100 times larger than 50, so 12.5 × 100 = 1250
17	D	The angles on a straight line add to 180°; they are supplementary angles. So $a = 180 - 40 = 140^{\circ}$



Non-verbal Reasoning: Codes (pages 25-27)

1	В	GO The first letter indicates the orientation of the triangle – G means a vertical line on the left-hand side of the triangle. The second letter indicates the size of the triangle – O is a small triangle.
2	С	N The letter indicates how many lines make up the shape – N is four.
3	E	KR The first letter indicates the direction of the swirl – K is clockwise. The second letter indicates the shape at the outer end of the swirl – R is a straight line.
4	D	LV The first letter indicates the positioning of the short diagonal lines between the outer and middles squares – L is for the top-left and bottom-right corners. The second letter indicates the direction of the parallel line shading in the inner shape – V is horizontal.

5	A	HSZ The first letter indicates the position of the symbol – H is in the left-hand section. The second letter indicates the direction in which the symbol is pointing – S means the symbol points to the right.
		The third letter indicates the symbol's line weight – Z is for a heavy line.
6	В	UO The first letter indicates the size of the circle – U is a small circle. The second letter indicates the line pattern inside the circle – O is for one horizontal and one vertical line across the diameter.
7	С	PNZ The first letter indicates the way the shape is split – P is for a diagonal line. The second letter indicates the shading of the other half of each shape – N is parallel line stripes. The third letter indicates the orientation of the shape – Z is vertical.
8	A	TW The first letter indicates the quantity of heavier line sides – T is for one. The second letter indicates the symbol in the centre of the pentagon – W is for a + symbol.
9	E	TJZ The first letter indicates the shape in the centre of the triangle – T is for triangle. The second letter indicates the type of arrowhead – J is for an open arrowhead. The third letter indicates the position of the arrow – Z is for bottom left-hand corner, pointing left.
10	D	FSX The first letter indicates the overall shape – F is a sideways V. The second letter indicates the direction of the shape – S is the 'open' end of the shape to the left. The third letter indicates the type of inner line – X is for a solid line.
11	В	JN The first letter indicates the shading of the two circles – J is both white. The second letter indicates the position of the two circles – N is on the two left-hand corners.
12	D	LPQ The first letter indicates the position of the line compared to the shape – L is where the line is to the left of the shape. The second letter indicates the shape – P is for square. The third letter indicates the line style – Q is for a zigzag line.
13	A	HL The first letter indicates the way the rectangle is divided into quarters – H is for diagonal lines. The second letter indicates the number of quarters shaded black – L is for two quarters shaded.

Non-verbal Reasoning: Merge Shapes (Addition and Subtraction) (pages 28–30)

1	D	The answer diagram uses vertical shading for the left- hand image and horizontal shading for the right-hand image.
2	С	The answer diagram uses thin lines for the left-hand image and thick lines for the right-hand image or overlapping lines.
3	Α	The answer diagram uses solid lines for the answer and dotted lines for what was subtracted.
4	E	The answer diagram uses solid lines and black circles for the answer, and dotted lines and white circles for what was subtracted.
5	С	The answer diagram uses thin lines for the left-hand image and thick lines for the right-hand image or overlapping lines.

6	В	The answer diagram uses thin lines for the left-hand image and thick lines for the right-hand image.
7	С	The answer diagram uses thin lines for the left-hand image and thick lines for the right-hand image or overlapping lines.
8	D	The answer diagram uses solid lines for the answer and dotted lines for what was subtracted.
9	В	The answer diagram uses thin lines for the left-hand image and thick lines for the right-hand image or overlapping lines.
10	Α	The answer diagram uses solid lines and black shading for the answer, and dotted lines and horizontal shading for what was subtracted.
11	E	The answer diagram uses solid lines for the answer and dotted lines for what was subtracted.
12	D	The answer diagram uses vertical shading for the left-hand image and horizontal shading for the right-hand image.
13	D	The answer diagram uses vertical shading for the left-hand image and horizontal shading for the right-hand image.

Extended answers for the question for this section are provided at: www.scholastic.co.uk/pass-your-11-plus/extras/gl or via the QR code below.



Practice Paper 2A: English and Verbal Reasoning

English: The Future of Tourism: Adventure Awaits! (pages 32, 41 and 42)

(pay	Jayes 32, 41 and 42)		
1	В	Wildlife conservation, beach clean-ups and electric vehicle tours are activities that are listed in the section about eco-friendly holidays only. The other choices include activities from other sections.	
2	С	Information about visiting fictional worlds is found in the 'Virtual Travel 'section.	
3	E	It is NOT true that tourism in the future will always be in person, as virtual experiences will be available. This is evidenced by the 'Virtual Travel' section, which details how a traveller would not need to be actually present in a place to visit it.	
4	С	Report. The text has many of the features of a non- chronological report. It starts with an introduction followed by different subtitled sections. It is written in the present and future tenses.	
5	A	The overall tone of this text is enthusiastic. Evidence for this includes references to exciting possibilities and outcomes. Lots of positive language is used: 'captivating', 'thrilling', 'transformative'. Imperative verbs are used to engage and enthuse the reader: 'Imagine', Picture this'.	
6	В	The 'rich tapestry of cultures' is a metaphor. It likens the variety of cultures around the world to a tapestry (a woven, decorative fabric) in that all cultures are interwoven to form human civilisation.	
7	С	Here the word 'profound' means 'deep'. 'A more profound understanding' means a 'deeper' understanding.	
8	D	'Immersive' means 'enveloping'. This is used to describe experiences, such as a virtual reality (VR) experience, where the person feels completely enveloped or surrounded or involved in something.	
9	E	Each of these words in these contexts are verbs. They are in the imperative form, giving the reader an instruction.	

Punctuation (page 43)

1	A	A capital letter is needed for both words of the proper noun, here the name of an ocean: 'The Arctic Ocean'.
2	С	'Children' is the irregular plural form of 'child', not 'childrens'. A possessive apostrophe is needed before the 's' to show that the toys belong to the children: 'children's toys'.
3	A	A comma is needed to separate the fronted adverbial from the main clause: 'High above, the'.
4	D	A question mark is needed at the end of the first sentence within the direct speech: 'stay for tea? It's'.
5	В	A first dash is needed to mark the start of the parenthesis: 'silent movie – the one'.
6	N	No mistakes
7	С	A comma is needed to separate the items in the list of nouns: 'vegetable pakoras, boiled eggs and'.
8	D	The full stop at the end of the direct speech is placed inside the closing speech mark: "a joke, if you like."
9	С	An apostrophe is needed for the contraction: 'should've' (here, meaning 'should have').

A Magical Night (page 44)

1	С	memorable This word has an unstressed 'o'. It is based on the word 'memory'.
2	С	doubtful This word has a silent 'b'.

3	В	relief This word follows the rule: 'i' before 'e', except after 'c' when the sound is 'ee'.
4	D	illusionist This word takes the prefix 'il-', so has a double 'l'.
5	Α	stitches The noun 'stitch' ends in 'ch', so the plural requires the suffix '-es'.
6	Α	invisible This word has a Latin origin from 'in-' (not) and 'visibilis' (that may be seen). It therefore takes the suffix '-ible', not '-able'.
7	N	No mistake
8	В	recommend This word has one 'c' and a double 'm', not double 'c' and one 'm'.

Grammar (page 45)

1	С	bettered The word here is a verb ('to better', meaning 'to improve') and the simple past tense is needed: 'The decathlete bettered her time'.
2	D	yours The possessive pronoun 'yours' is needed here, meaning 'your chocolate bar'.
3	В	Whenever This is a subordinating conjunction at the start of a subordinate clause that qualifies the main clause: 'Whenever it starts snowing, we rush outside to play.'
4	E	thus This is a causal conjunction meaning 'therefore' that links the cause ('player cheated') with the effect ('disqualified').
5	E	about The preposition 'about' is used here to mean 'on the subject of'.
6	A	Whose This is known as an interrogative determiner. Like all determiners, it introduces a noun ("Whose cup of tea"). Note that 'who's' is a contraction of 'who is', which does not make sense in this context.
7	В	known The past participle of the verb is needed here to complete the past perfect tense: 'if we had known'.
8	С	seldom This is an adverb of time meaning 'not often': 'now he seldom gets a chance.'

Verbal Reasoning (page 46)

1	В	slit, place The two new words are 'slit' and 'place'. Move the 'p' from 'split'. Add it to the front of 'lace' to make 'place'.
2	A	rank, beef The two new words are 'rank' and 'beef'. Move the 'f' from 'frank'. Add it to the end of 'bee' to make 'beef'.
3	В	curt, soap The two new words are 'curt' and 'soap'. Move the 'o' from 'court'. Add it to 'sap' to make 'soap'.
4	E	thin, like The two new words are 'thin' and 'like'. Move the 'k' from 'think'. Add it to 'lie' to make 'like'.
5	D	sole, curve The two new words are 'sole' and 'curve'. Move the 'v' from 'solve'. Add it to 'cure' to make 'curve'.

(page 47)

1	C, Y	open, thin 'Shut' is an antonym of 'open'. 'Thick' is an antonym of 'thin'.
2	A, Y	sheep, goat A 'lamb' is a young 'sheep'. A 'kid' is a young 'goat'.
3	B, X	engine, sail An 'engine' requires 'fuel' to work. A 'sail' requires 'wind' to work.
4	C, Z	climb, descend 'Scale' is a synonym of 'climb'. 'Dive' is a synonym of 'descend'.

5	A, Z	knee, elbow The 'knee' is a hinged joint in the middle
		of the 'leg'. The 'elbow' is a hinged joint in the middle of the arm.

(page 48)

1	E	APT The detective chased and cAPTured the thief. The other three-letter choices do not make proper words or make sense in the sentence.
2	С	FAR A fanFARe announced the arrival of the king and queen. The other three-letter choices do not make proper words or make sense in the sentence.
3	В	RUT The explorers survived the bRUTal winter storm. The other three-letter choices do not make proper words or make sense in the sentence.
4	D	COO The hiker was coCOOned in her warm sleeping bag. The other three-letter choices do not make proper words or make sense in the sentence.
5	С	PIE It was the creePIEst movie they had ever seen. The other three-letter choices do not make proper words or make sense in the sentence.

(page 49)

1	В	LL First letters in pairs go forwards two letters from D (D, F, H, J, L); second letters in pairs go back one letter from P (P, O, N, M, L).
2	E	HL The counting pattern for the set of pairs is –1 (C–B), +4 (B–F), –1 (F–E), +4 (E–I), –1 (I–H), +4 (H–L). Start each pair with the last letter from the previous pair.
3	A	OU The counting pattern is +1, +2. The first letters in the pairs are in alphabetical order from J (J, K, L, M, N, O). The second letters in the pairs are every other letter, starting from K: K + 2 = M; M + 2 = O; O + 2 = Q; Q + 2 = S; S + 2 = U. Alternatively, the counting pattern could be described as +1, +2, +3, +4, +5, +6 The first letters in the pairs are in alphabetical order from J (J, K, L, M, N, O). The second letters in the pairs are as follows: First pair: count + 1 letter from J (J-K); second pair: count +2 letters forward from K (K-M); third pair: count +3 letters from L (L-O); fourth pair: count +4 letters from M (M-Q); fifth pair: count +5 letters from N (N-S); sixth pair: count +6 letters from O (O-U).
4	С	EV First letters in pairs go forwards +1 letter from A (A, B, C, D, E); second letters in pairs go back –1 letter from Z (Z, Y, X, W, V).
5	D	VY First, third and fifth pairs: reverse alphabetical order backwards from PO (PO, NM, LK); second, fourth and sixth pairs: count +3 letters forwards each time (P–S, S–V, V–Y).

(page 50)

1	C, X	craft, forge Both 'craft' and 'forge' are verbs that mean 'to make something', usually using materials and by hand.
2	B, Z	comic, amusing Both 'comic' and 'amusing' are adjectives used to describe something that causes laughter.
3	C, Y	interpreter, translator Both 'interpreter' and 'translator' describe someone whose job is to change spoken or written words into a different language.
4	A, Z	back, support Both 'back' and 'support' are verbs that mean 'to agree with and to encourage someone because you want them to succeed'.

(page 51)

1	E	10 27 + [?] = 45 - 8 (27 + 10 = 37) (45 - 8 = 37)
2	C	2 $6 \times 4 + 6 = 48 \div [?] + 6$ $(6 \times 4 (24) + 6 = 30) (48 \div 2 (24) + 6 = 30)$
3	В	9 $36 \div 3 \div 2 = 5 \times 3 - [?]$ $(36 \div 3 (12) \div 2 = 6) (5 \times 3 (15) - 9 = 6)$
4	D	3 $7 \times [?] + 4 = 44 \div 2 + 3$ $(7 \times 3 (21) + 4 = 25) (44 \div 2 (22) + 3 = 25)$

Reading Question (page 51)

1	E	Zahra does the most activities. She does four activities. She buys an ice cream, plays in the arcade, goes for a swim and helps build a sandcastle. Everyone else does two or three activities. Mia (2) goes on a donkey ride and buys an ice cream. Samuel (3) buys an ice cream, goes for a swim and builds a sandcastle.
		Tom (3) goes for a donkey ride, goes for a swim and helps build a sandcastle. Ovie (2) plays in the arcade and goes for a swim.

Practice Paper 2B: Mathematics and Non-verbal Reasoning

Mathematics (pages 53-58)

		(pages es es)
1	E	2048 Using place value for two-thousand and forty-eight, gives:
		Thousands Hundreds Tens Ones 2 0 4 8
2	D	x is less than y and y is greater than z
		y is greater than x and z , x is greater than z , z is less
		than x and y.
		So, the only true statement is that x is less than y AND y is greater than z .
3	С	45km The car travels at 30km per hour for one and a half hours.
		So, it travels 30km in the hour, and 15km in the half-hour. $30 + 15 = 45$ km
4	D	3
		636 4 25 ¹ 4 ² 7
5	Е	97 91 can be divided exactly by 7, 92 is even, 93
		can be divided by 3, 95 can be divided by 5. Only 97 cannot be exactly divided by another number apart
		from itself and 1.
6	В	125 5³ means 5 × 5 × 5.
		$5 \times 5 = 25$, and $25 \times 5 = 125$
7	Е	7 Wednesday has 1 and $\frac{3}{4}$ sun icons. If 1 icon stands
		for 4 hours, then $\frac{3}{4}$ is 3 hours.
		So, on Wednesday there is $4 + 3 = 7$ hours of sunshine.
8	Α	1214 M = 1000, C = 100, X = 10 and IV = 4
		So, MCCXIV = 1000 + 200 + 10 + 4 = 1214
9	E	9 Calling Peter's number x , and then writing the
		equation gives $7x - 5 = 58$
		7x = 63
		$x = 63 \div 7$
		<i>x</i> = 9
10	D	4 thousands
		Using place value: Ten
		thousands Thousands Hundreds Tens Ones
		3 4 6 1 5
		So, the 4 digit represents 4 thousands.
11	С	96 The numbers are increasing by 13 each time.
		83 + 13 = 96 Checking, 96 + 13 = 109
12	С	3
		8
		Counting, 9 out of 24 squares are shaded.
		As a fraction, $\frac{9}{24}$ simplifies to $\frac{3}{8}$
13	D	14cm area = length × width, so length = area ÷ width
		length = $70 \div 5 = 14$ cm
14	В	40p If pencils cost 16p and rulers cost half as much,
		rulers must cost 8p. So, two pencils and one ruler must cost
		16 + 16 + 8 = 40p

15	A	$ \begin{array}{c c} \textbf{4} \\ 6 \times (7 - \Box) + 3 = 21 \end{array} $
		$6 \times (7 - \square) = 21 - 3$
		7 - □ = 18 ÷ 6
		If 7 - □ = 3, then 7 = 3 + □, so □ = 4
16	D	31 when $y = 7$, $x = 5 \times 7 - 4$
		So, <i>x</i> = 35 – 4 = 31
17	E	(8, 3) The coordinates for B are (6, 7), so translating it (2, -4) gives a new position of (8, 3).
18	D	7.36 When dividing by powers of ten, we move the digits to the right.
		736 ÷ 100 moves the digits two places, and we need to insert a decimal point to give 7.36
19	С	30°
		/
		An acute angle is an angle less than 90°. The only acute angle is under 45° (so, it is less than half a right
		angle). So, 30° is the only possible answer.
20	В	29 The difference between 32 and 26 is 6. If half of these are moved there will be 32 – 3 = 29 in one class.
		and $26 + 3 = 29$ in the other.
21	D	1.98kg 180 × 11 can be calculated as 180 × 10 + 180 × 1
		This gives 1800 + 180 = 1980g
		1kg = 1000g, so 1980g = 1.98kg
22	E	12 40% of 30 is $\frac{40}{100} \times 30$, or $\frac{4}{10} \times 30$
		Simplifying the fraction gives $\frac{2}{5} \times 30$ Or $60 \div 5 = 12$
23	D	7.5 hours Time = Distance ÷ Speed
0.4		3000 ÷ 400 simplifies to 30 ÷ 4 = 7.5
24	С	$7\frac{1}{2}$
		$3 \times 2\frac{1}{2}$ can be split to 3×2 and $3 \times \frac{1}{2}$
		$3 \times 2 = 6$ and $3 \times \frac{1}{2} = 1\frac{1}{2}$ $6 + 1\frac{1}{2} = 7\frac{1}{2}$
		$6 + 1\frac{1}{2} = 7\frac{1}{2}$
25	D	74,000
		80
		000 60 60 ·
		000 60
		20
		0 1940 1950 1960 1970 1980 1990 2000 2010 2020
		The least growth was from 1990 to 2000, when the
		population grew by 3000. At the end of the 1990s and
		beginning of 2000, the population was 74,000.

Non-verbal Reasoning: Series (pages 59-61)

1	D	The shapes have a decreasing number of sides – octagon, heptagon, hexagon, pentagon, quadrilateral.
2	Α	One small square containing a circle is added. The shading of the circle alternates. Each time, one line is removed, working from left to right.
3	С	An alternating series. The first, third and fifth boxes have the same arrangement of V shapes but the × alternates between the top-left and bottom-right corners. The second and fourth boxes have the same arrangement of V shapes but the + alternates between the bottom-left and top-right corners.
4	E	An extra diagonal line is added, alternating between the bottom left and top right.
5	В	The pair of lines at right angles and the curved line in opposing corners move 90° anticlockwise to the next corner. The curved shape in the centre rotates 45° clockwise.
6	E	The black circle moves two vertices clockwise. The white circle moves 1.5 sides clockwise.
7	С	The line rotates 45° clockwise. One black circle moves from one side of the line to the other.
8	С	The group of three shapes rotates 90° anticlockwise while the shading swaps from one side of each small shape to the other.
9	D	The black shading moves down the 'S' shape by an increasing number of jumps – 1, 2, 3, 4.
10	A	The dots inside the hexagon rotate together 60° clockwise. The protruding black quadrilaterals move one side anticlockwise.
11	Α	This is an alternating sequence but uses the same shapes - one small square rotates 45° and the + rotates 45° each time.
12	В	The number of lines radiating from the circle dot increases by 1: 3, 4, 5, 6, 7
13	E	The arrow pointing out of the square moves one corner anticlockwise. The 'V' shape moves 45° clockwise, alternating direction pointing into or out of the square.
14	В	The square rotates 90° clockwise. The triangle changes from having a black circle to a white circle to no circle inside it on repeat.
15	С	The line in the top-left corner alternates diagonal direction. The triangle in the bottom-right corner rotates 90° clockwise. The black circle remains unchanged. The white circle moves diagonally from top right to bottom left on repeat.
16	E	The number of dots in the previous square indicates how many single shapes will appear in the next square. The new shapes are random. In the first square there are four dots so four single shapes are added to the second square (three squares at the top and one circle bottom right). In the second square there are three dots so three single shapes are added to the next square (one triangle bottom left and two circles bottom right), and so on.

Non-verbal Reasoning: Analogies (pages 62-64)

1	В	The first shape is reflected in a vertical line and positioned next to the original shape to make the second shape.
2	E	The second shape has the shading from the first shape reversed. Black becomes white and white becomes black.
3	В	The first group of shapes is rotated 180° to make the second shape.
4	D	The first shape is rotated 180° and the line shading changed from horizontal to vertical to make the second shape.

5	A	The inner shape is laid out repeatedly to create a larger version of the outer shape.
6	С	The shape is repeated the same number of times as there are x's above it and in the same arrangement as the x's with the shapes touching each other.
7	E	The shapes protruding from the sides of the first square become indented shapes on the sides of the second square, and the indented shapes on the sides of the first square become protruding shapes on the sides of the second square.
8	В	The inner shape becomes the middle shape, the middle shape becomes the outer shape and the outer shape becomes the inner shape.
9	С	The first shape is reflected in a vertical line of symmetry.
10	В	The large, outer shape is rotated 180°. The smaller, inner shapes swap both position and quantity – two of the upper shapes become one lower shape and one lower shape becomes two upper shapes.
11	Α	The first shape is rotated 120° anticlockwise to make the second shape.
12	D	The second shape is made up of two copies of the first shape – one in the same orientation and one rotated 90° clockwise about the central point.
13	Α	The first shape is reflected in a horizontal line of reflection and then overlaid on the original first shape to make the second shape.