3.40-3 Verbal Reasoning: Letter and Number Codes Set 3: 10-minute Pack

about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

This is a 10-minute Verbal Reasoning depth practice on letter and number codes (Set 3), styled on GL Assessment 11+ multiple-choice papers. There are 40 questions across four sections: Letter Codes, Number Codes, Letters for Numbers and Substitution Ciphers. Every question is worth 1 mark, for 40 marks in total. Difficulty increases through each section and across the pack as a whole, finishing with scholarship-level stretch questions. For each question, choose the ONE best answer from the options A to E. No calculator is allowed. Read every rule or example carefully, since a different rule may apply in each question, and check whether letters or digits shift forward or backward, whether the alphabet wraps around, and whether a code table needs to be built from more than one example before you can use it.

Worked example (Letter Codes). if the code for PEAR is QFBS, what is the code for LION? **Answer: MJPO.** Comparing PEAR and QFBS shows every letter moves forward 1 place in the alphabet (P to Q, E to F, A to B, R to S). Applying the same forward shift of 1 to LION gives L to M, I to J, O to P, N to O, i.e. MJPO. Apply this same careful, letter-by-letter approach throughout the pack, even as the sections move on to number codes, letters-for-numbers and substitution ciphers, always reading the rule or example given in each question closely, since it can change from question to question, including whether letters or digits shift forward or backward, whether the alphabet wraps around, and whether a table of matched letters needs to be built up from more than one example before it can be applied to a new word.

SECTION 1: LETTER CODES (8 minutes, 10 questions)

1 Study the example word (or words) and its code to work out the rule, then apply the same rule to the new word. A different rule may apply in each question, including how far the letters shift and whether the alphabet wraps around.

Q1. In a code, each letter is replaced by the letter two places later in the alphabet. If the code for HAWK is JCYM, what is the code for LARK?

- ☐ A) NCTM
- ☐ B) LCTM
- ☐ C) NATM
- ☐ D) NCRM
- ☐ E) NCTK

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2 (Letter Codes) Q10. In a code, FLAME is written as JPEQI, and SHORE is written as WLSVI. Using the same rule, what is the code for ZEBRA?

- ☐ A) DIFVE
- ☐ B) ZIFVE
- ☐ C) DEFVE
- ☐ D) DIBVE
- ☐ E) DIFRE

SECTION 2: NUMBER CODES (8 minutes, 10 questions)

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3 Study the example number (or numbers) and its code to work out the rule, then apply the same rule to the new number. A different rule may apply in each question.

Q1. In a code, the code for a number is the number multiplied by 3. What is the code for 27?

- ☐ A) 78
- ☐ B) 84
- ☐ C) 81
- ☐ D) 30
- ☐ E) 90

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4 (Number Codes) Q2. In a code, the code for a number is the number plus 38. What is the code for 46?

- ☐ A) 8
- ☐ B) 84
- ☐ C) 74
- ☐ D) 85
- ☐ E) 83

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5 (Number Codes) Q3. In a code, each digit is replaced by (the digit plus 5), keeping only the last digit if the result is 10 or more. For example, the code for 3 is 8 (3+5=8), and the code for 7 is 2 (7+5=12, keep the last digit 2). What is the code for 384?

- ☐ A) 830
- ☐ B) 834
- ☐ C) 889
- ☐ D) 839
- ☐ E) 339

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6 (Number Codes) Q4. In a code, the digits of a number are rotated: the last digit moves to the front, and the others shift one place to the right. For example, the code for 1234 is 4123. What is the code for 6497?

- ☐ A) 9764
- ☐ B) 7469
- ☐ C) 4976
- ☐ D) 6479
- ☐ E) 7649

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7 (Number Codes) Q5. In a code, the digits of a number are first reversed, then each digit has 1 subtracted from it (a 0 becomes 9). What is the code for 5081?

- ☐ A) 0894
- ☐ B) 0794
- ☐ C) 0704
- ☐ D) 1794
- ☐ E) 0795

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8 (Number Codes) Q6. In a code, the code for a two-digit number is the sum of its two digits, doubled. For example, the code for 15 is 12 (1+5=6, then 6x2=12). What is the code for 47?

- ☐ A) 24
- ☐ B) 14
- ☐ C) 22
- ☐ D) 11
- ☐ E) 18

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9 (Number Codes) Q7. In a code, each digit is replaced by the last digit of its cube. For example, the code for 3 is 7 (3 cubed is 27, last digit 7), and the code for 6 is 6 (6 cubed is 216, last digit 6). What is the code for 4271?

- ☐ A) 4871
- ☐ B) 4231
- ☐ C) 6831
- ☐ D) 4841
- ☐ E) 4831

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10 (Number Codes) Q8. In a code, each digit is replaced by (the digit plus 4), keeping only the last digit if the result is 10 or more. Four of the digit codes below are correct. Which ONE is WRONG?

- ☐ A) 1 -> 5
- ☐ B) 9 -> 4
- ☐ C) 8 -> 2
- ☐ D) 6 -> 0
- ☐ E) 3 -> 7

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11 (Number Codes) Q9. In a code, the digits of a number alternate: the 1st and 3rd digits each have 2 added, and the 2nd and 4th digits each have 2 subtracted (wrapping if needed). What is the code for 3729?

- ☐ A) 1547
- ☐ B) 5941
- ☐ C) 5547
- ☐ D) 5947
- ☐ E) 5507

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12 (Letter Codes) Q2. In a code, each letter is replaced by the letter three places earlier in the alphabet. If the code for GRAPE is DOXMB, what is the code for STONE?

- ☐ A) SQLKB
- ☐ B) PTLKB
- ☐ C) PQLKB
- ☐ D) PQOKB
- ☐ E) PQLNB

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13 (Number Codes) Q10. In a code, the middle two digits of a four-digit number swap places, and the first and last digits stay the same. What is the code for 5284?

- ☐ A) 2584
- ☐ B) 4285
- ☐ C) 5248
- ☐ D) 5824
- ☐ E) 4825

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Mark scheme · 3.40-3 Verbal Reasoning: Letter and Number Codes Set 3: 10-minute Pack

Question 1

A) NCTM - comparing HAWK and JCYM shows each letter shifts 2 places forward (H to J, A to C, W to Y, K to M); applying this to LARK gives L to N, A to C, R to T, K to M, i.e. NCTM cao **B1**

Answer: A) NCTM

Question 2

A) DIFVE - both examples confirm the rule 'shift every letter forward by 4', since FLAME gives JPEQI and SHORE gives WLSVI; applying this to ZEBRA gives Z to D (wrapping past Z), E to I, B to F, R to V, A to E, i.e. DIFVE cao **B1**

Answer: A) DIFVE

Question 3

C) 81 - 27 multiplied by 3 is 81 (27+27+27=81) cao **B1**

Answer: C) 81

Question 4

B) 84 - 46 plus 38 is 84 cao **B1**

Answer: B) 84

Question 5

D) 839 - 3+5=8, 8+5=13 (keep the last digit 3), 4+5=9, giving 839 cao **B1**

Answer: D) 839

Question 6

E) 7649 - moving the last digit (7) of 6497 to the front gives 7649 cao **B1**

Answer: E) 7649

Question 7

B) 0794 - reversing 5081 gives 1805; subtracting 1 from each digit gives 1-1=0, 8-1=7, 0-1=9 (wrapping), 5-1=4, i.e. 0794 cao **B1**

Answer: B) 0794

Question 8

C) 22 - the digits of 47 are 4 and 7, and 4+7=11, then 11x2=22 cao **B1**

Answer: C) 22

Question 9

E) 4831 - the cubes are 4x4x4=64 (last digit 4), 2x2x2=8 (last digit 8), 7x7x7=343 (last digit 3), 1x1x1=1 (last digit 1), giving 4831 cao **B1**

Answer: E) 4831

Question 10

B) 9 -> 4 is wrong - by the rule, 9 plus 4 is 13, so the code for 9 should be 3 (keeping the last digit), not 4 cao **B1**

Answer: B) 9 -> 4

Question 11

C) 5547 - the 1st and 3rd digits (3 and 2) each gain 2, giving 5 and 4; the 2nd and 4th digits (7 and 9) each lose 2, giving 5 and 7; putting these in order gives 5547 cao **B1**

Answer: C) 5547

Question 12

C) PQLKB - comparing GRAPE and DOXMB shows each letter shifts 3 places back (G to D, R to O, A to X, P to M, E to B); applying this to STONE gives S to P, T to Q, O to L, N to K, E to B, i.e. PQLKB cao **B1**

Answer: C) PQLKB

Question 13

D) 5824 - swapping the middle two digits (2 and 8) of 5284, and keeping the first digit (5) and last digit (4) the same, gives 5824 cao **B1**

Answer: D) 5824

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