

## **Verbal Reasoning**

1. True
2. False
3. False
4. Can't tell
5. True
6. False
7. True
8. True
9. True
10. Can't tell
11. False
12. True

## Quantitative Reasoning

1. Key C Skill set: table reading, addition/subtraction  
 $3 + 15 + 26 + 20 + 16 = 80$
2. Key C Skill set: table reading  
Most stores (26) between 21 and 30 miles from centre
3. Key E Skill set: table reading  
There is insufficient information to determine how many stores are precisely 3 miles from the centre.
4. Key D Skill set: table reading, addition/subtraction, multiplication/division percentages  
 $20 + 16 = 36$   
 $36 / 80 = 0.45$
5. Key E Skill set: table reading  
4% change in year 5
6. Key C Skill set: table reading, addition/subtraction  
Range of 8 percentage points between -3 and 5
7. Key A Skill set table reading, addition/subtraction, multiplication/division, percentages  
 $320 \times 0.02 = 6.40$   
 $320 + 6.40 = 326.40$   
 $326.40 \times 0.01 = 3.264$   
 $326.40 - 3.26 = 323.14$
8. Key E Skill set: table reading  
Actual values of average gas and electricity bills are unknown.
9. Key B Skill set: table reading, multiplication/division, percentages  
 $1000 \times 0.72$  (method B) = 720
10. Key B Skill set: table reading, multiplication/division, percentages  
if  $9\% = 27$ , then  $1\% = 3$   
( $27/9 = 3$ )  
 $3 \times 100 = 300$
11. Key E Skill set: table reading  
The total number of people who tested negative is not known; only the number who tested positive is known.
12. Key B Skill set: table reading, multiplication/division  
 $18,000 \times 0.09 \times \text{£}2500 = \text{£}4,050,000$   
 $2000 \times 0.14 \times \text{£}750 = \text{£}210,000$   
 $4,050,000 + 210,000 = \text{£}4,260,000$   
 $18,000 \times 0.04 \times \text{£}2500 = \text{£}1,800,000$   
 $2000 \times 0.28 \times \text{£}750 = \text{£}420,000$   
 $4,260,000 - 2,220,000 = \text{£}2,040,000$

## **Abstract Reasoning**

Set A All of the shapes in Set A have figures with curved edges. As the colour and number of figures in each shape varies, this is not part of the solution and so should be ignored.

Set B All of the shapes in Set B have straight edges. As with Set A, the number of figures and their colour varies, and so should be ignored.

1. A
2. B
3. Neither
4. A
5. Neither

Set A Each shape in Set A has two similar figures in diagonally opposite corners, though the figures may be different sizes, colours or in different orientations. As this is the only common feature of all the shapes in Set A, all other features should be ignored.

Set B Each shape in Set B has two similar figures that are either horizontally or vertically opposite each other. As with Set A, these figures do not have to be identical but they do have to be the same shape.

6. A
7. B
8. B
9. B
10. Neither

Set A All shapes in Set A have at least one white square. As this is the only common feature of the shapes in Set A, all other features should be ignored.

Set B All of the shapes in Set B have at least one black circle. As this is the only common feature of all the shapes in Set B, all other features should be ignored.

11. B
12. A
13. Neither
14. Neither
15. A

## Decision Analysis

### Question 1

Coded message: 11, 12, 7

- A) Today it is bright and sunny (best fit)
- B) The light from the sun is brighter than usual (introduces “brighter than usual”)
- C) Today the sun came up (“light” does not lead to “coming up”)
- D) Today the sun’s rays have a strange hue (introduces “strange hue”)
- E) The sun is high in the sky (no use of “today”; introduces concept of “high”)

### Question 2

Coded message: 5, 12C, 3

- A) Water is lighter than air (no use of “opposite”)
- B) Water and air don’t mix easily (introduces “mix”)
- C) Water is darker than air (not the most sensible option)
- D) Water is the opposite of air (no use of “light”)
- E) Water is heavier than air (best fit)

### Question 3

Coded message: 1, 14A, (8B) B

- A) As I look at it, the moon is increasing (no use of “positive” or 2nd “increase”)
- B) The moon is increasingly meaningful (“meaningful” not best interpretation of “positive”)
- C) I like being here when the moon is full (no use of “look”)
- D) I like looking at the full moon (best fit)
- E) The moon is bigger than it has ever been before (no use of “positive look”)

### Question 4

What would be the best way to encode the following message:

“When it is cold people like walking fast”

- A) (10E) A F(11D), 2A, 10E, (could also read as “nice people”)
- B) 11D, 2, A(10E) (only deals with today)
- C) 11D, 2, 10E (no use of “positive”)
- D) 3D, 2, A(10E) (no use of “when”)
- E) F(11D), 2, A(10E) (best fit)

### Question 5

Coded message: (1, 9)DB, 12BC

- A) My house is cold and dark (no use of “increase” or “opposite”)
- B) I live in a dwelling that has no windows (introduces “windows”)
- C) My house gets cold at night (best fit)
- D) When it is dark it gets cold (no use of “personal” or “dwelling”)
- E) The light does not shine on my cold house (introduces “shine”)

### Question 6

Coded message: 1, 203B, 12C

- A) I am worried about getting too heavy (no use of “increase”)
- B) I am frightened of the dark (best fit)
- C) I enjoy the night-time (“opposite” applied to “worried” instead of “light”)
- D) I am very worried when the light goes out (not the best option)
- E) I am heavy with gloom and foreboding (“gloom and foreboding” introduce sadness)

Question 7

Coded message: 10E, B(103,102)

- A) Walking fast means that you could hurt yourself (not the best use of “danger”)
- B) People get hurt very quickly when they move (“fast” applied to “hurt” instead of “move”)
- C) You are at increased risk if you travel (no use of “fast”)
- D) Travelling at speed increases the risk of injury (best fit)**
- E) Travel is exciting although it is dangerous (no use of “fast”; introduces “exciting”)

Question 8

Coded message: 1(13, 106), 205, 12C

- A) My bag is heavy (does not use codes)
- B) When full, my bag is heavy (no use of “surprise” and is the bag full?)
- C) I am surprised by the weight of my bag (no use of “empty”)
- D) My bag is light until it is full (no use of “opposite” or “surprise”)
- E) My empty bag is surprisingly heavy (best fit)**

Question 9

What would be the best way to encode the following message:

“Tides are caused by both the sun and the moon”

- A) 10, 5, 7, 8 (no use of “combine”)
- B) B(10, 5), 7, 8 (introduces “increase”)
- C) F(10, 5), G(7, 8) (best fit)**
- D) (10, 7), (10, 5), 8 (pairs “move” and “sun”)
- E) 10B, 7B, 8, 5 (emphasise “sun” more than “moon”)

Question 10

Which of the following would be the most useful and the second most useful additions to the codes in order to convey the following message accurately?

“I fell over and broke a leg”

- A) I (can be achieved with “personal” = 1)
- B) Fall (best fit)**
- C) Broken (can be achieved with “injury” = 102)
- D) Leg (best fit)**
- E) Over (can be achieved with new code “Fall”)

Question 11

Which of the following would be the most useful and the second most useful additions to the codes in order to convey the following message accurately?

“My bag is full of heavy and unusual toys”

- A) My (can be achieved with “personal” = 1)
- B) Full (can be achieved with “opposite” of “empty” = C106)
- C) Heavy (can be achieved with “opposite” of “light” = C12)
- D) Unusual (best fit)**
- E) Toys (best fit)**