

PRACTICE EXAM 3: CCAT-7 LEVEL 10 SIMULATION (176 QUESTIONS)

PART ONE — VERBAL BATTERY (60 questions, 30 minutes)

Section A — Verbal Analogies (Questions 1–24)

1. Astronaut is to space as ____ is to ocean

- A. boat
- B. fish
- C. captain
- D. diver

2. Frantic is to calm as crowded is to ____

- A. empty
- B. noisy
- C. busy
- D. full

3. Telescope is to stars as microscope is to ____

- A. eyes
- B. lab
- C. germs
- D. light

4. Bouquet is to flowers as herd is to _____

- A. grass
- B. cattle
- C. farmer
- D. field

5. Vault is to bank as cell is to _____

- A. body
- B. small
- C. lock
- D. prison

6. Yawn is to tired as shiver is to _____

- A. fever
- B. cold
- C. afraid
- D. wet

7. Dictionary is to words as atlas is to _____

- A. maps
- B. countries
- C. world
- D. travel

8. Orchard is to apples as vineyard is to _____

- A. wine
- B. fruit
- C. grapes
- D. farm

9. Compass is to direction as thermometer is to _____

- A. weather
- B. temperature
- C. heat
- D. mercury

10. Actor is to stage as athlete is to _____

- A. coach
- B. uniform
- C. medal
- D. field

11. Granite is to mountain as sand is to _____

- A. beach
- B. small
- C. stone
- D. sea

12. Surgeon is to operate as judge is to _____

- A. court
- B. lawyer
- C. decide
- D. trial

13. Pearl is to oyster as honey is to _____

- A. flower
- B. bee
- C. sweet
- D. hive

14. Chapter is to novel as verse is to _____

- A. poem
- B. word
- C. line
- D. song

15. Tundra is to cold as jungle is to _____

- A. tree
- B. wet
- C. dense
- D. humid

16. Shepherd is to sheep as beekeeper is to _____

- A. honey
- B. flower
- C. bees
- D. hive

17. Sneeze is to allergy as cough is to _____

- A. illness
- B. throat
- C. flu
- D. germ

18. Penguin is to flightless as bat is to _____

- A. fast
- B. nocturnal
- C. small
- D. dark

19. Summit is to climb as depth is to _____

- A. ocean
- B. deep
- C. lower
- D. dive

20. Diary is to private as billboard is to _____

- A. street
- B. advertise
- C. public
- D. large

21. Barn is to farm as garage is to _____

- A. home
- B. car
- C. driveway
- D. tool

22. Current is to river as breeze is to _____

- A. wind
- B. weather
- C. cool
- D. air

23. Toddler is to child as _____ is to plant

- A. flower
- B. seedling
- C. soil
- D. seed

24. Compass is to navigator as stethoscope is to ____

- A. patient
- B. heart
- C. doctor
- D. hospital

Section B — Sentence Completion (Questions 25–44)

25. After hours of intense rehearsal, the orchestra finally performed the symphony with ____ that left the audience speechless.

- A. precision
- B. mistakes
- C. silence
- D. delay

26. The scientist's discovery was so ____ that it changed how researchers understood the universe forever.

- A. predictable
- B. ordinary
- C. simple
- D. groundbreaking

27. Despite numerous warnings from the meteorologist, the campers ____ to set up their tents in the open meadow.

- A. refused
- B. proceeded

- C. forgot
- D. decided not

28. The detective's ____ observation led her to notice the small fingerprint on the window frame.

- A. careless
- B. quick
- C. keen
- D. brief

29. The volunteers worked ____ throughout the night to clear the rubble after the earthquake.

- A. lazily
- B. tirelessly
- C. occasionally
- D. silently

30. The new exhibit was so ____ that visitors lined up for hours just to catch a glimpse of the ancient artifacts.

- A. spectacular
- B. boring
- C. dim
- D. usual

31. Even though Maya had never skied before, she demonstrated remarkable ____ on the snowy slopes.

- A. fear
- B. clumsiness

C. exhaustion

D. agility

32. The chef carefully _____ the ingredients to ensure that each dish would taste exactly as intended.

A. ignored

B. discarded

C. measured

D. forgot

33. The detective unraveled the mystery by piecing together every _____ clue scattered throughout the crime scene.

A. obvious

B. large

C. coloured

D. subtle

34. After the heavy snowfall, the entire valley appeared _____, with every roof and tree branch coated in white.

A. transformed

B. unchanged

C. dirty

D. small

35. The marathon runner's _____ determination kept her moving forward even when her legs burned with exhaustion.

- A. weak
- B. small
- C. unwavering
- D. slight

36. The judges declared the performance ____ — the dancers had clearly rehearsed every step to perfection.

- A. clumsy
- B. flawless
- C. ordinary
- D. boring

37. Although the puzzle was incredibly ____, Maya spent the entire afternoon solving it without complaint.

- A. simple
- B. small
- C. brief
- D. intricate

38. The astronomer waited patiently for the rare comet to ____ across the night sky as predicted.

- A. streak
- B. fall
- C. land
- D. stop

39. The fierce loyalty of the dog ____ the family during their difficult move to the new house.

- A. confused
- B. comforted
- C. annoyed
- D. ignored

40. The chef's secret recipe had been ____ from generation to generation for over two centuries.

- A. forgotten
- B. lost
- C. passed
- D. ignored

41. The mountain climber needed ____ planning to ensure her safety during the dangerous ascent.

- A. meticulous
- B. quick
- C. brief
- D. casual

42. The architect's bold design was both ____ and functional, drawing praise from critics worldwide.

- A. plain
- B. boring
- C. simple
- D. innovative

43. Standing at the edge of the cliff, the hikers gazed out at the ____ landscape stretching to the horizon.

- A. ordinary
- B. small
- C. breathtaking
- D. plain

44. The young pianist's ____ performance earned her a standing ovation from the audience.

- A. weak
- B. brilliant
- C. brief
- D. quiet

Section C — Verbal Classification (Questions 45–60)

45. Scalpel, forceps, syringe — which word belongs with these?

- A. nurse
- B. doctor
- C. patient
- D. stethoscope

46. Anaconda, viper, python — which word belongs with these?

- A. cobra
- B. lizard
- C. tortoise
- D. crocodile

47. Mongolia, Vietnam, Thailand — which word belongs with these?

- A. France
- B. Brazil
- C. Cambodia
- D. Egypt

48. Lavender, rose, jasmine — which word belongs with these?

- A. grass
- B. lilac
- C. tree
- D. cactus

49. Kayak, canoe, raft — which word belongs with these?

- A. dinghy
- B. car
- C. truck
- D. surfboard

50. Amethyst, topaz, jade — which word belongs with these?

- A. metal
- B. necklace
- C. ring
- D. opal

51. Pythagoras, Einstein, Newton — which name belongs with these?

- A. Shakespeare
- B. Galileo
- C. Mozart
- D. Picasso

52. Ankle, wrist, elbow — which word belongs with these?

- A. finger
- B. bone
- C. knee
- D. toe

53. Geology, biology, chemistry — which word belongs with these?

- A. history
- B. math
- C. art
- D. physics

54. Ladder, escalator, elevator — which word belongs with these?

- A. staircase
- B. door
- C. window
- D. roof

55. Lukewarm, scorching, freezing — which word belongs with these?

- A. wet
- B. boiling
- C. windy
- D. sunny

56. Abacus, calculator, slide rule — which word belongs with these?

- A. ruler
- B. compass
- C. computer
- D. paper

57. Valley, canyon, gorge — which word belongs with these?

- A. mountain
- B. plateau
- C. hill
- D. ravine

58. Telescope, binoculars, microscope — which word belongs with these?

- A. mirror
- B. spectacles
- C. magnifying glass
- D. camera

59. Tokyo, Cairo, Sydney — which word belongs with these?

- A. Moscow
- B. continent
- C. country
- D. river

60. Dolphin, whale, manatee — which word belongs with these?

- A. shark
- B. seal
- C. octopus
- D. crab

PART TWO — QUANTITATIVE BATTERY (54 questions, 30 minutes)

Section D — Number Analogies (Questions 61–78)

61. (4, 16) is related to (5, 25). What number completes (6, ?)?

- A. 36
- B. 30
- C. 42
- D. 48

62. (15, 5) is related to (24, 8). What number completes (33, ?)?

- A. 9

- B. 10
- C. 11
- D. 12

63. (3, 11) is related to (5, 17). What number completes (7, ?)?

- A. 21
- B. 23
- C. 25
- D. 27

64. (50, 25) is related to (40, 20). What number completes (60, ?)?

- A. 20
- B. 25
- C. 27
- D. 30

65. (8, 64) is related to (5, 25). What number completes (9, ?)?

- A. 81
- B. 72
- C. 90
- D. 100

66. (12, 4) is related to (18, 6). What number completes (24, ?)?

- A. 6

- B. 7
- C. 8
- D. 9

67. (11, 22) is related to (15, 30). What number completes (19, ?)?

- A. 32
- B. 34
- C. 36
- D. 38

68. (28, 7) is related to (32, 8). What number completes (40, ?)?

- A. 8
- B. 10
- C. 12
- D. 14

69. (3, 27) is related to (4, 64). What number completes (5, ?)?

- A. 125
- B. 100
- C. 75
- D. 50

70. (45, 9) is related to (35, 7). What number completes (25, ?)?

- A. 7

- B. 6
- C. 4
- D. 5

71. (2, 7) is related to (4, 11). What number completes (6, ?)?

- A. 13
- B. 15
- C. 17
- D. 19

72. (16, 4) is related to (25, 5). What number completes (36, ?)?

- A. 4
- B. 5
- C. 6
- D. 7

73. (5, 13) is related to (7, 17). What number completes (9, ?)?

- A. 21
- B. 19
- C. 23
- D. 25

74. (60, 5) is related to (48, 4). What number completes (84, ?)?

- A. 4

- B. 5
- C. 6
- D. 7

75. (4, 12) is related to (6, 18). What number completes (10, ?)?

- A. 24
- B. 27
- C. 30
- D. 33

76. (100, 10) is related to (81, 9). What number completes (64, ?)?

- A. 7
- B. 8
- C. 9
- D. 6

77. (2, 5) is related to (3, 7). What number completes (8, ?)?

- A. 13
- B. 14
- C. 15
- D. 17

78. (15, 3) is related to (25, 5). What number completes (45, ?)?

- A. 9

- B. 10
- C. 11
- D. 12

Section E — Number Series (Questions 79–96)

79. 1, 4, 9, 16, 25, ?

- A. 30
- B. 36
- C. 32
- D. 40

80. 2, 3, 5, 8, 13, ?

- A. 21
- B. 18
- C. 19
- D. 20

81. 7, 14, 28, 56, ?

- A. 84
- B. 96
- C. 100
- D. 112

82. 100, 75, 50, 25, ?

A. -5

B. 5

C. 0

D. 10

83. 1, 8, 27, 64, 125, ?

A. 200

B. 216

C. 175

D. 250

84. 3, 4, 6, 9, 13, 18, ?

A. 21

B. 22

C. 23

D. 24

85. 96, 48, 24, 12, ?

A. 6

B. 8

C. 4

D. 9

86. 5, 10, 20, 40, ?

- A. 60
- B. 70
- C. 80
- D. 90

87. 81, 27, 9, 3, ?

- A. 0
- B. 1
- C. 2
- D. 1.5

88. 1, 3, 6, 10, 15, 21, ?

- A. 25
- B. 26
- C. 27
- D. 28

89. 7, 14, 21, 28, ?

- A. 31
- B. 33
- C. 35
- D. 37

90. 144, 121, 100, 81, ?

- A. 64
- B. 60
- C. 72
- D. 56

91. 2, 6, 12, 20, 30, 42, ?

- A. 54
- B. 56
- C. 58
- D. 60

92. 2, 6, 18, 54, 162, ?

- A. 324
- B. 405
- C. 486
- D. 500

93. 5, 9, 17, 33, 65, ?

- A. 115
- B. 121
- C. 127
- D. 129

94. 100, 90, 80, 70, ?

- A. 60
- B. 65
- C. 55
- D. 50

95. 8, 16, 32, 64, ?

- A. 100
- B. 120
- C. 128
- D. 132

96. 4, 9, 16, 25, ?

- A. 30
- B. 36
- C. 42
- D. 49

Section F — Number Puzzles (Questions 97–114)

97. $? \times 8 = 48 + 24$

- A. 7
- B. 8
- C. 9
- D. 10

98. If $\diamond \times 5 = 35$, what is $\diamond + 9$?

A. 16

B. 14

C. 18

D. 12

99. $7 + 8 \times 2 = ?$

A. 17

B. 19

C. 21

D. 23

100. If $\Delta = 6$ and $\circ = 4$, what is $\Delta^2 - \circ$?

A. 30

B. 32

C. 34

D. 36

101. $60 \div ? = 6 \times 2$

A. 5

B. 6

C. 4

D. 8

102. If $\star + 11 = 20$, what is $\star \times 6$?

- A. 50
- B. 52
- C. 54
- D. 56

103. $90 \div ? = 5 \times 3$

- A. 9
- B. 8
- C. 7
- D. 6

104. $4 \times ? + 6 = 38$

- A. 6
- B. 8
- C. 10
- D. 12

105. If $\diamond = 9$ and $\circ = 4$, what is $\diamond \times 2 - \circ$?

- A. 14
- B. 16
- C. 12
- D. 18

106. $75 - ? = 5 \times 12$

- A. 11
- B. 13
- C. 15
- D. 17

107. If $\Delta \times 7 = 56$, what is Δ^2 ?

- A. 49
- B. 64
- C. 81
- D. 100

108. $? - 25 = 18 + 17$

- A. 50
- B. 55
- C. 58
- D. 60

109. $6 \times ? = 9 \times 8$

- A. 12
- B. 14
- C. 16
- D. 18

110. If $\star = 11$, what is $\star \times 2 + 7$?

- A. 25
- B. 27
- C. 28
- D. 29

111. $100 - ? = 60 + 5$

- A. 25
- B. 30
- C. 35
- D. 40

112. $8 + 9 + ? = 30$

- A. 11
- B. 13
- C. 15
- D. 17

113. If $\diamond \times \circ = 36$ and $\diamond = 4$, what is $\circ + 5$?

- A. 10
- B. 12
- C. 14
- D. 16

114. $3 \times 4 \times ? = 60$

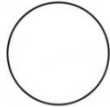



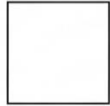



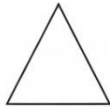


- A. 5
- B. 6
- C. 7
- D. 4

PART THREE — NONVERBAL BATTERY (62 questions, 30 minutes)

Section G — Figure Matrices (Questions 115–136)

115. Which figure completes the 3×3 grid?

Figure
PQ-1

| | | | |
|---|---|---|---|
|  |  |  |  |
|  |  |  |  |
|  |  | |  |

- A. small black triangle
- B. medium grey triangle
- C. large white triangle
- D. large black triangle

116. Which figure completes the 3×3 grid?

| | | | |
|----------|----------------------|----------------------|------------------------|
| F | e^o | F^o | 180^o |
| R | R | P | ? |

- A. R rotated 270° clockwise
- B. R rotated 180°
- C. R upright
- D. R mirrored horizontally

117. Which figure completes the 3×3 grid?

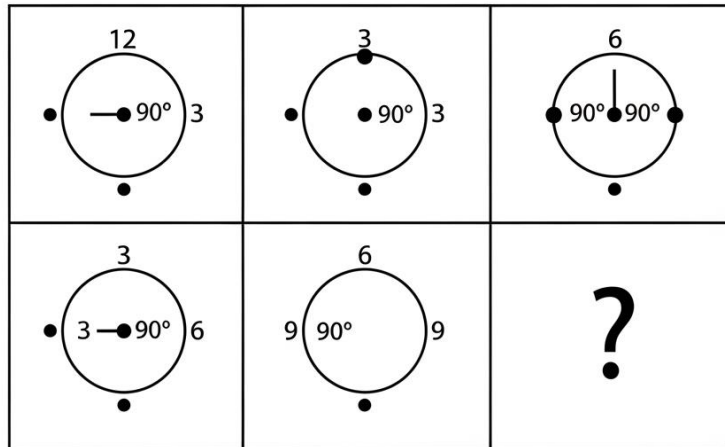
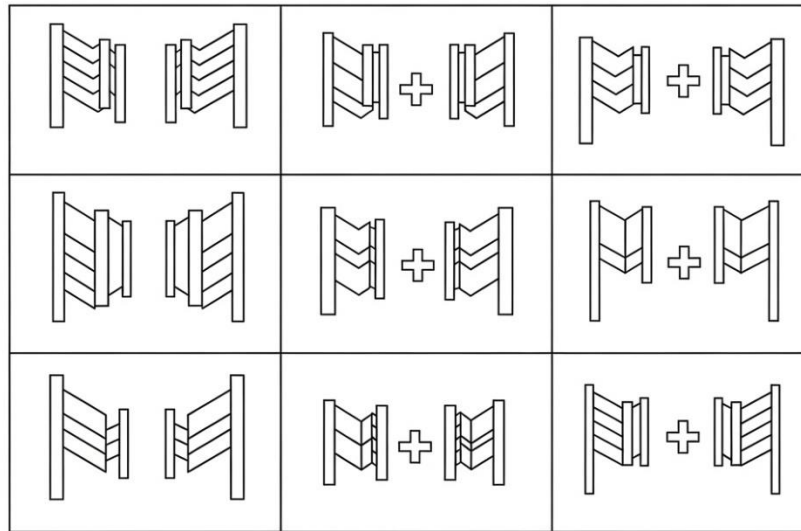


Figure PQ-3

- A. dot at 6 o'clock
- B. dot at 3 o'clock
- C. dot at 12 o'clock
- D. dot at 9 o'clock

118. Which figure completes the 3×3 grid?



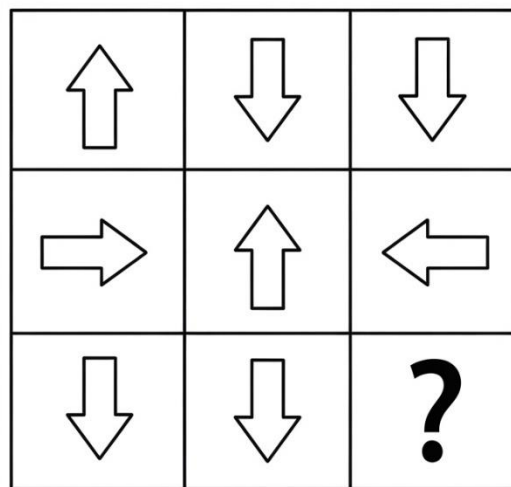
- A. full circle
- B. two half-circles facing the same direction
- C. one half-circle
- D. ellipse

119. Which figure completes the 3×3 grid?

| | | |
|----------|----------|----------|
| 1 | | 3 |
| | 3 | 4 |
| | 4 | ? |

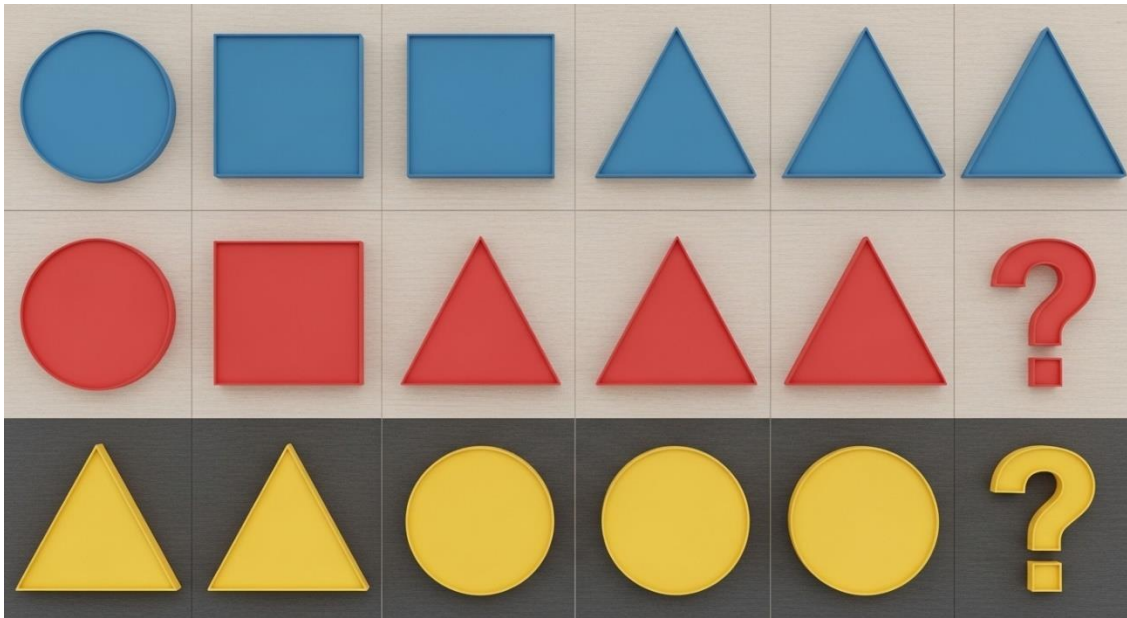
- A. 3 dots
- B. 5 dots
- C. 4 dots
- D. 6 dots

120. Which figure completes the 3×3 grid?



- A. arrow left
- B. arrow down
- C. arrow right
- D. arrow up

121. Which figure completes the 3×3 grid?



- A. 3 squares
- B. 2 squares
- C. 4 squares
- D. 3 triangles

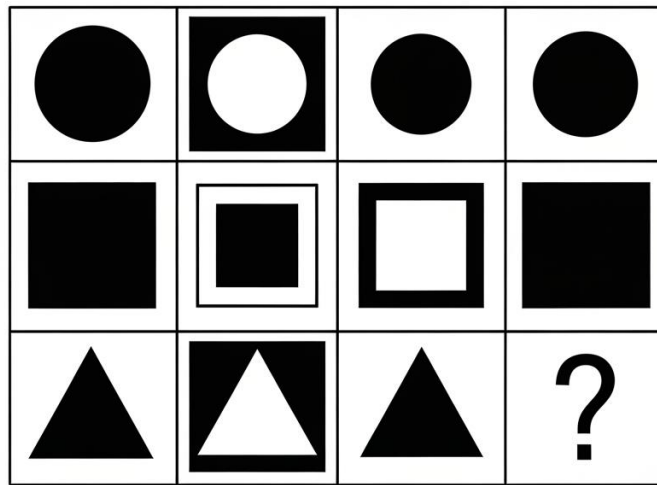
122. Which figure completes the 3×3 grid?

Figure PQ-8

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |

- A. fully white triangle
- B. fully black triangle
- C. triangle with 3/4 shaded
- D. triangle with 1/4 shaded

123. Which figure completes the 3×3 grid?

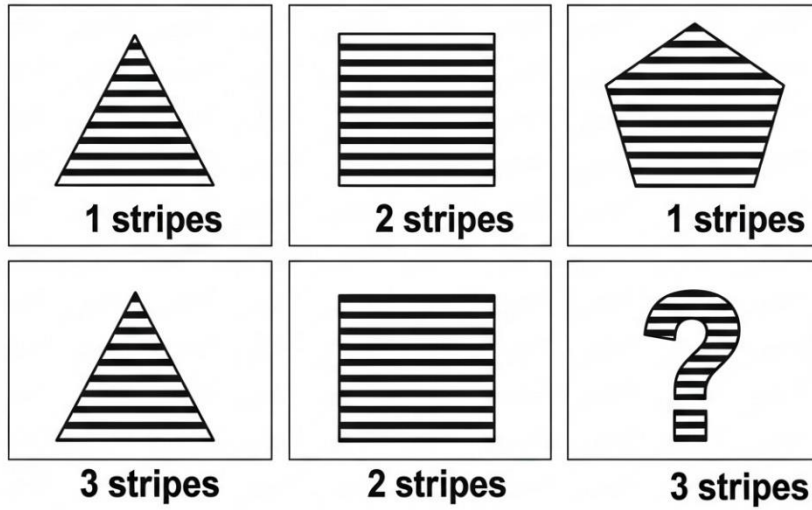


- A. black star on white
- B. black triangle on white
- C. white triangle on black
- D. grey triangle on grey

124. Which figure completes the 3×3 grid?

FIGURE PQ-10

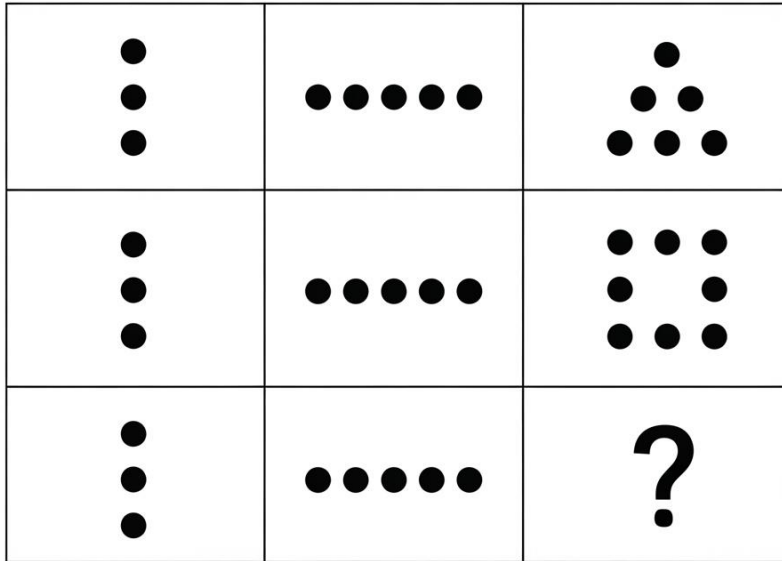
FIGURE PQ-10



- A. pentagon with 3 stripes
- B. hexagon with 3 stripes
- C. pentagon with 2 stripes
- D. square with 3 stripes

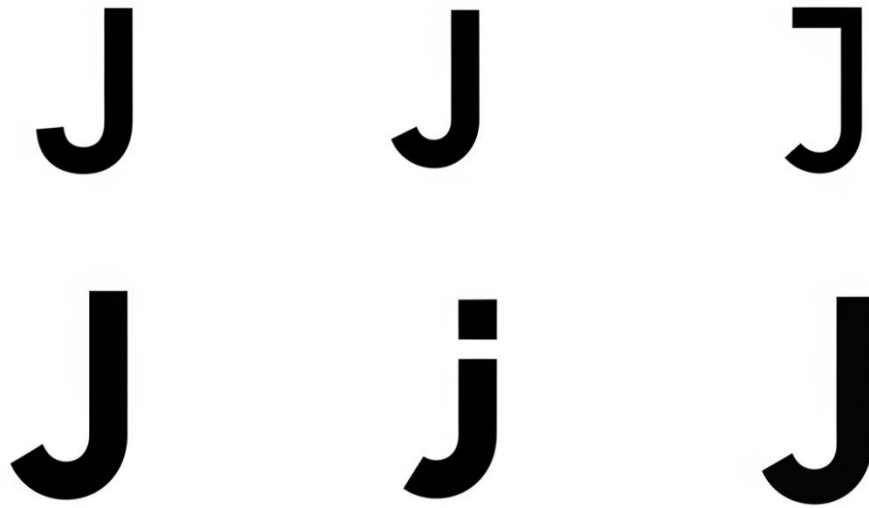
125. Which figure completes the 3×3 grid?

Figure PQ-11



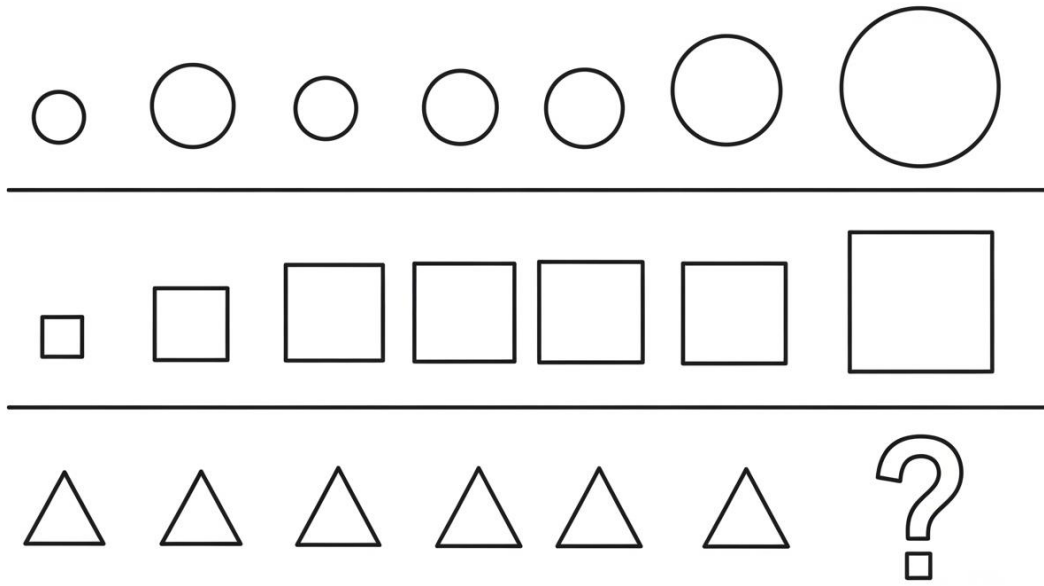
- A. 4 dots arranged in a square
- B. 5 dots in a vertical line
- C. 5 dots in a horizontal line
- D. 5 dots arranged in a pentagon shape

126. Which figure completes the 3×3 grid?



- A. T upright
- B. T rotated 180°
- C. T mirrored and rotated 90° clockwise
- D. T doubled

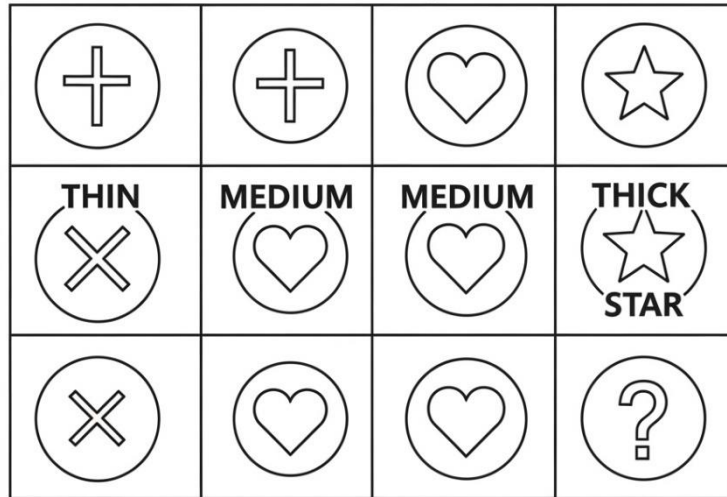
127. Which figure completes the 3×3 grid?



- A. 0 triangles (empty cell)
- B. 1 large triangle
- C. 2 large triangles
- D. 3 large triangles

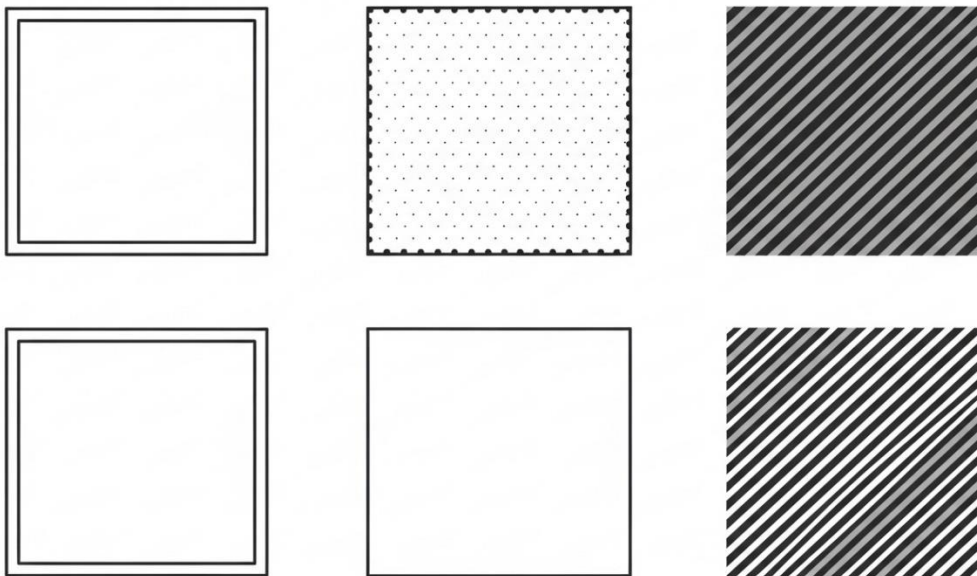
128. Which figure completes the 3x3 grid?

FIGURE PQ-14



- A. thin circle with star
- B. medium circle with star
- C. thick circle with heart
- D. thick circle with star

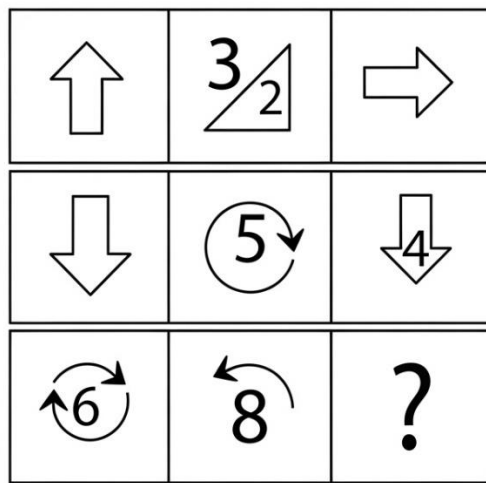
129. Which figure completes the 3×3 grid?



- A. striped hexagon
- B. outlined hexagon
- C. solid black hexagon
- D. dotted square

130. Which figure completes the 3×3 grid?

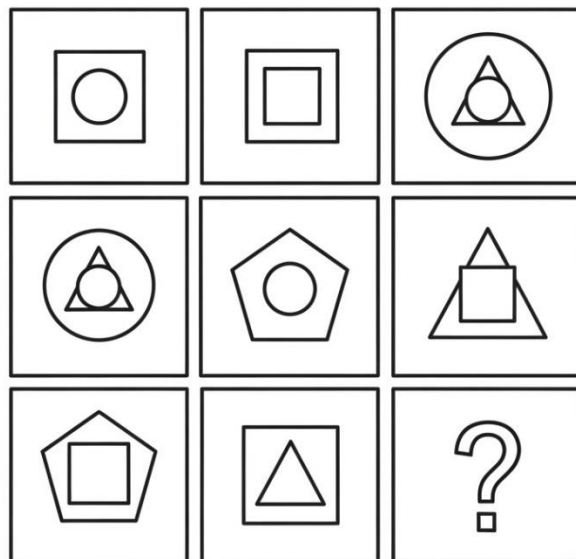
Figur PQ-16



- A. arrow up-right
- B. arrow right
- C. arrow up
- D. arrow down

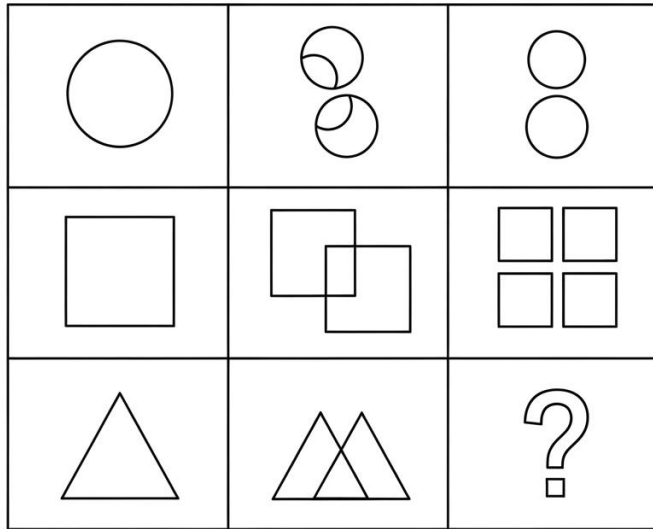
131. Which figure completes the 3×3 grid?

PQ-17



- A. small triangle inside circle
- B. small square inside circle
- C. small pentagon inside triangle
- D. small circle inside triangle

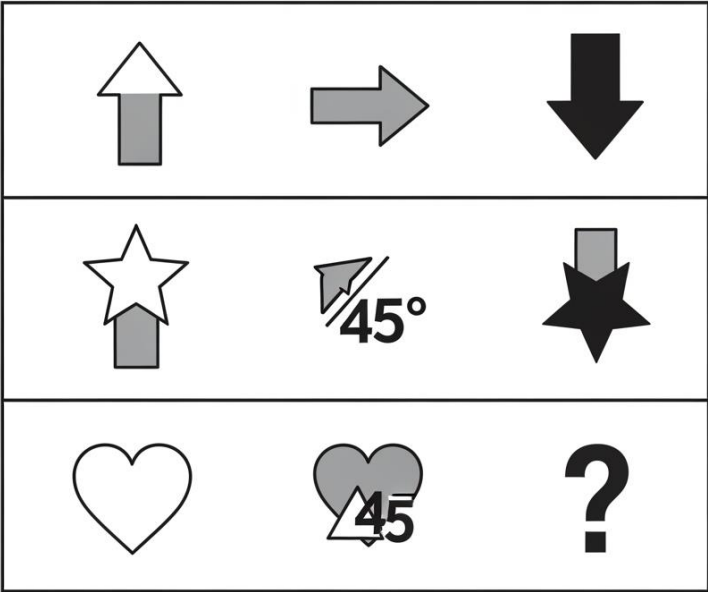
132. Which figure completes the 3×3 grid?



- A. 4 triangles stacked
- B. 3 triangles stacked
- C. 1 triangle
- D. 5 triangles stacked

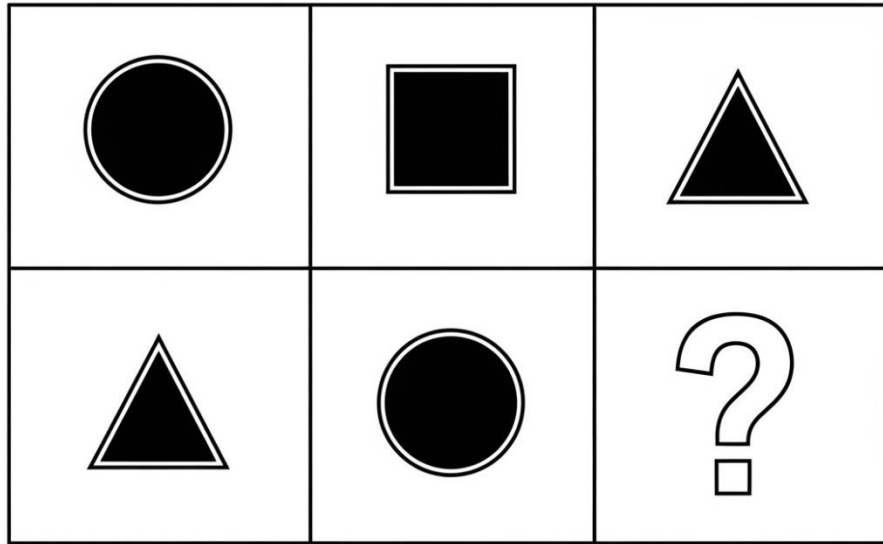
133. Which figure completes the 3×3 grid?

Figure PQ-19



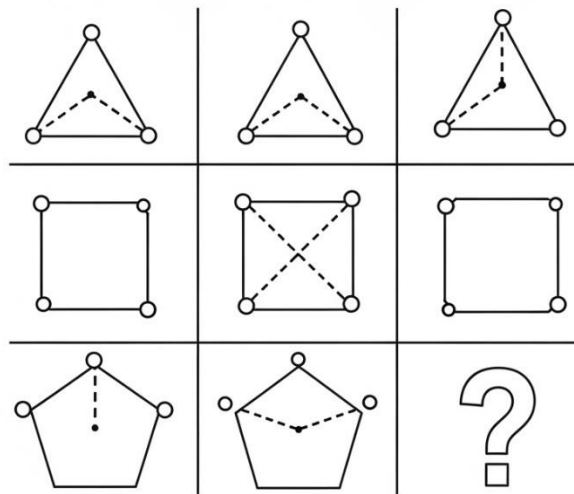
- A. large black heart inverted
- B. small black heart upright
- C. medium white heart
- D. large grey heart tilted

134. Which figure completes the 3x3 grid?



- A. triangle
- B. star
- C. pentagon
- D. square

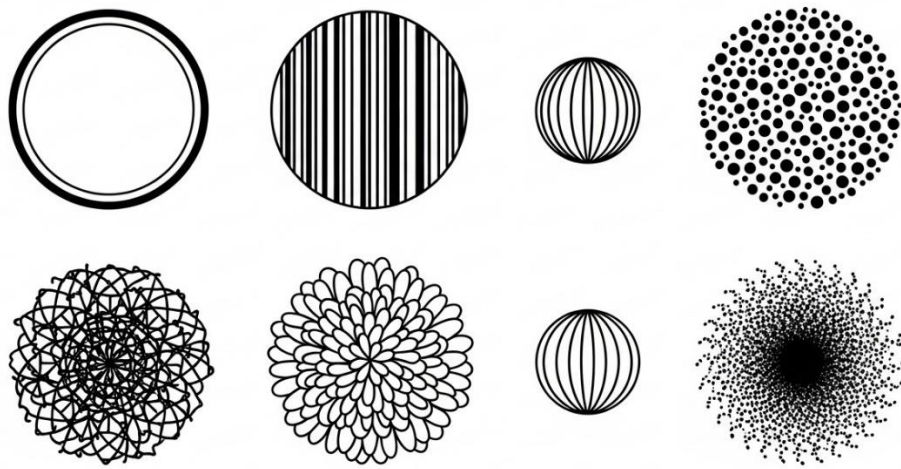
135. Which figure completes the 3×3 grid?



Figurr PQ-21

- A. pentagon with dot at top
- B. pentagon with dot at left
- C. pentagon with dot at bottom
- D. pentagon with no dot

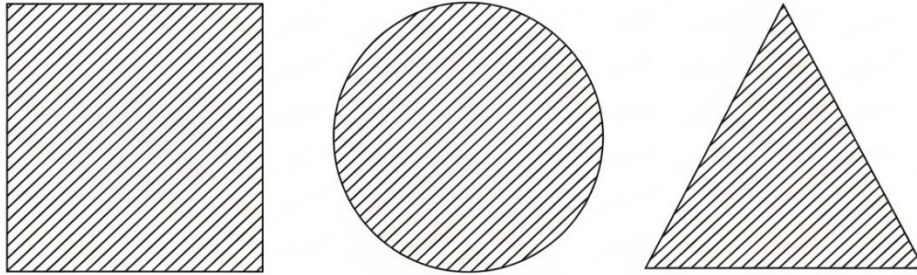
136. Which figure completes the 3×3 grid?



- A. outlined hexagon
- B. dotted hexagon
- C. striped pentagon
- D. solid black hexagon

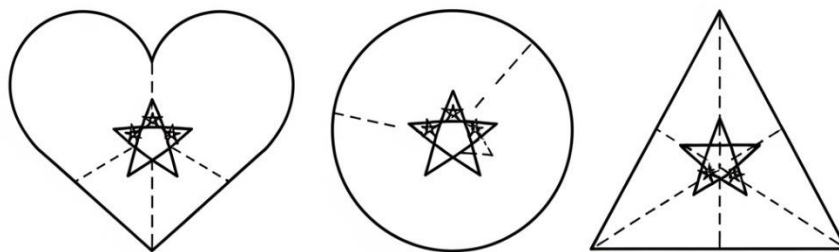
Section H — Figure Classification (Questions 137–158)

137. Which figure belongs with the three given?



- A. pentagon filled with diagonal stripes
- B. plain white circle
- C. dotted square
- D. star with vertical stripes

138. Which figure belongs with the three given?



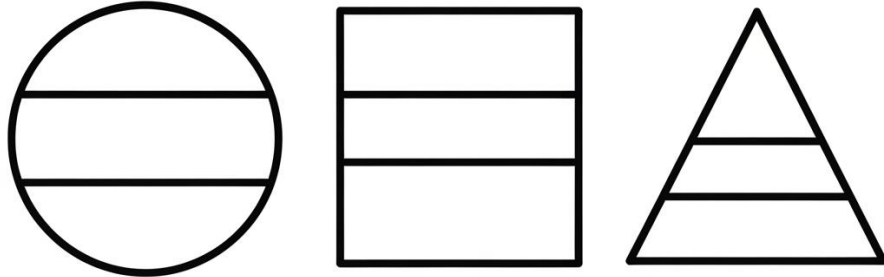
- A. heart with a small dot inside
- B. circle with no markings
- C. star with no inner element
- D. square with a small star inside

139. Which figure belongs with the three given?



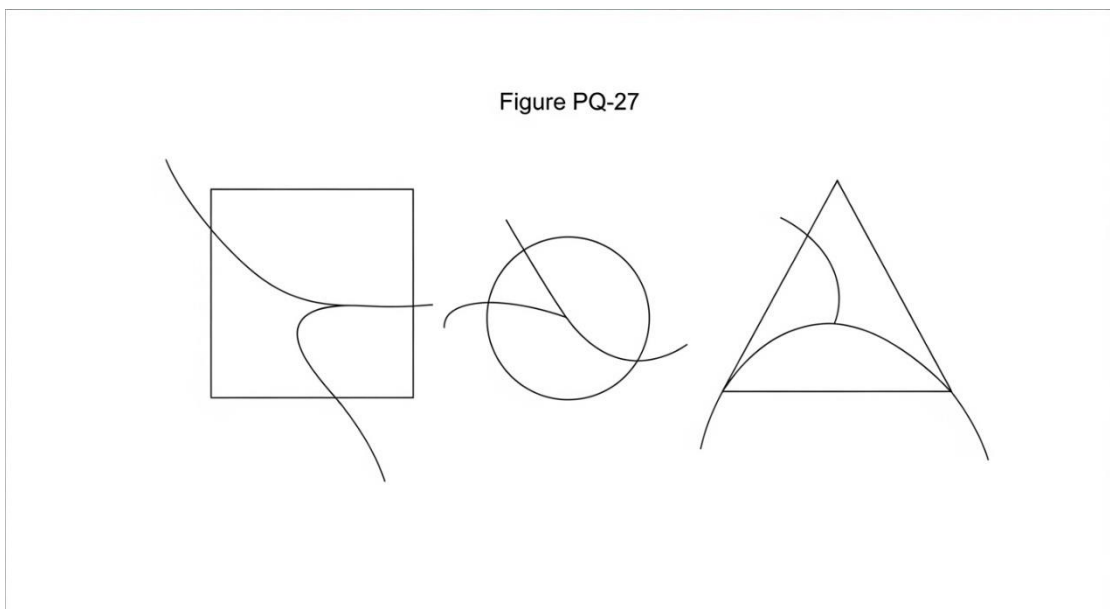
- A. solid black circle
- B. outlined 7-point star
- C. filled 4-point star
- D. 5-point star with hole in centre

140. Which figure belongs with the three given?



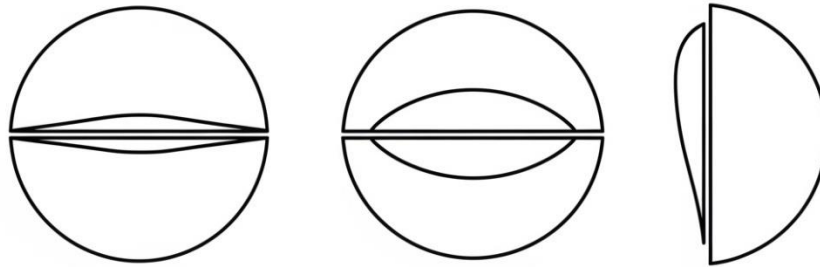
- A. circle with no stripe
- B. square with a vertical stripe
- C. hexagon with a single horizontal stripe through the middle
- D. star with a diagonal stripe

141. Which figure belongs with the three given?



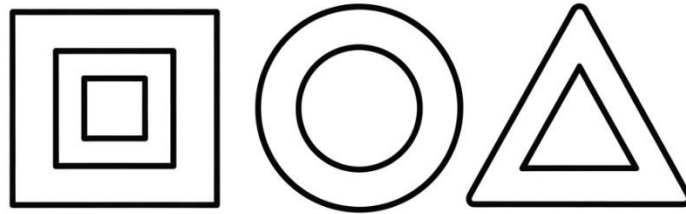
- A. pentagon with a curved line cutting through it
- B. square with no internal line
- C. circle with a straight diagonal line
- D. triangle with multiple lines

142. Which figure belongs with the three given?



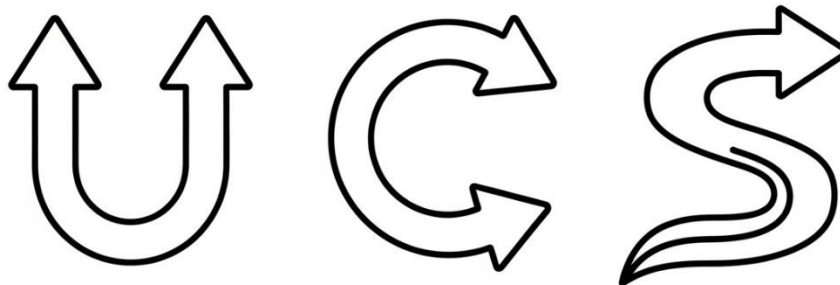
- A. full circle
- B. quarter circle
- C. ellipse
- D. half-circle with flat side on the right (left half visible)

143. Which figure belongs with the three given?



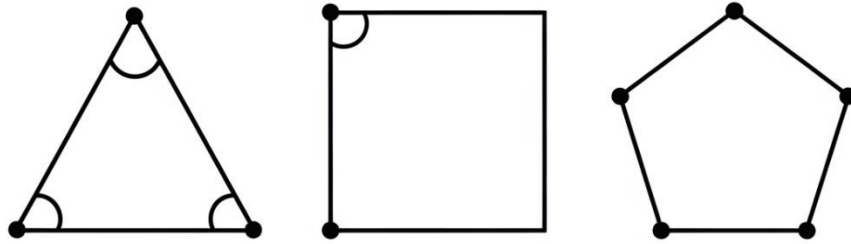
- A. a single square
- B. a circle nested inside a square
- C. a smaller pentagon nested inside a larger pentagon
- D. a small triangle alone

144. Which figure belongs with the three given?



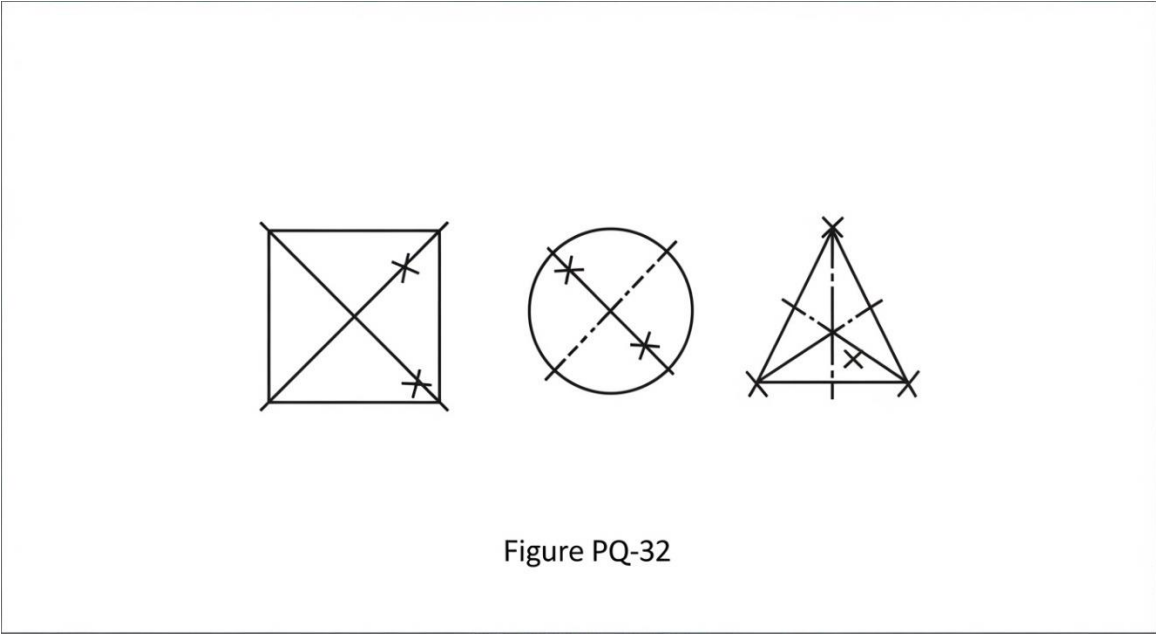
- A. straight arrow
- B. curved arrow bent into a J-shape
- C. solid filled circle
- D. zigzag line

145. Which figure belongs with the three given?



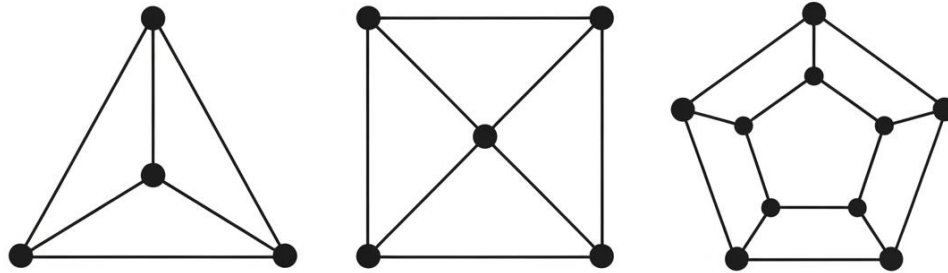
- A. circle with no vertices
- B. triangle with all vertices marked
- C. square with all sides shaded
- D. hexagon with one vertex marked by a small circle

146. Which figure belongs with the three given?



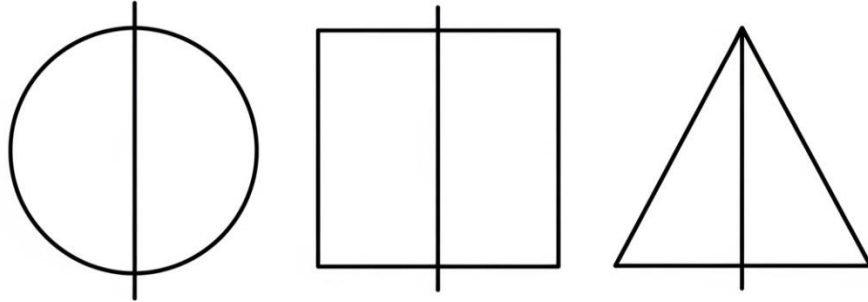
- A. pentagon with an X drawn inside
- B. circle with a cross (+) inside
- C. square with no markings
- D. triangle with a small dot

147. Which figure belongs with the three given?



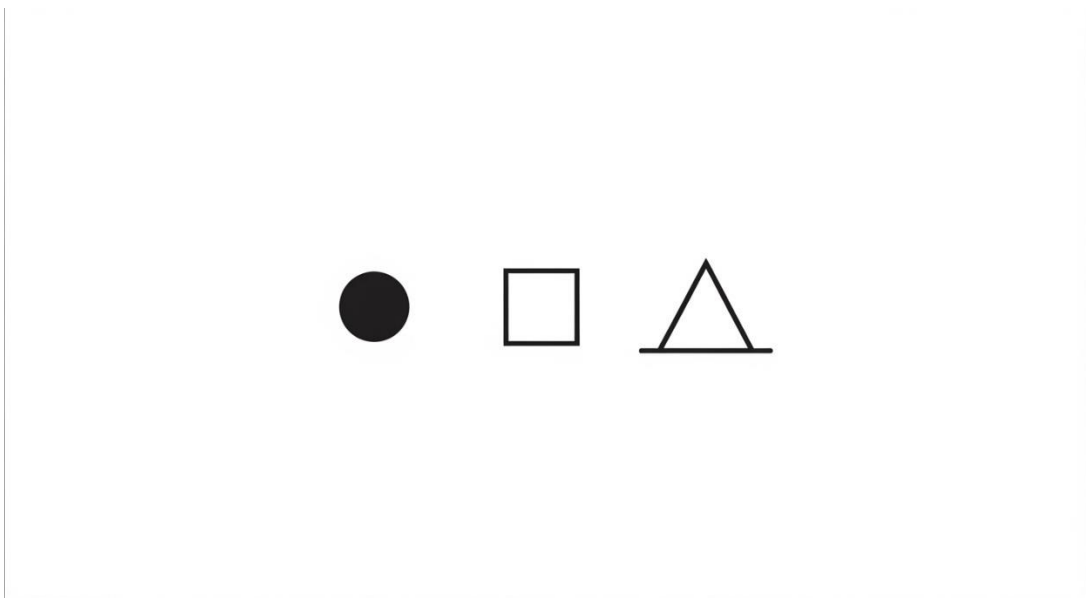
- A. circle with multiple dots inside
- B. hexagon with six small dots at each vertex
- C. star with dots in the middle
- D. square with dots inside

148. Which figure belongs with the three given?



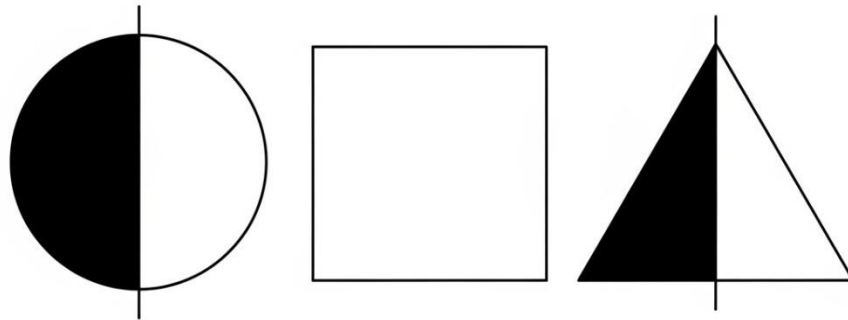
- A. circle bisected by a horizontal line
- B. square bisected by a diagonal line
- C. pentagon bisected by a vertical line through its centre
- D. triangle with two diagonal lines

149. Which figure belongs with the three given?



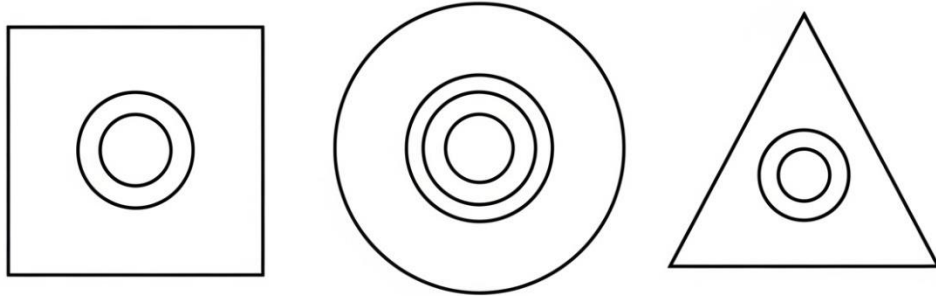
- A. large white pentagon
- B. medium grey star
- C. small white star
- D. small solid black hexagon on white background

150. Which figure belongs with the three given?



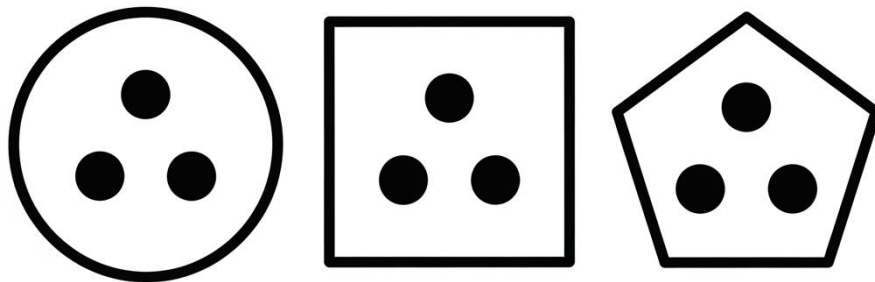
- A. fully shaded black circle
- B. pentagon with left half shaded black and right half white
- C. circle with top half shaded
- D. plain white pentagon

151. Which figure belongs with the three given?



- A. pentagon with a smaller circle removed from the centre
- B. solid pentagon
- C. circle with a square hole
- D. triangle with no hole

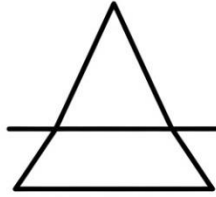
152. Which figure belongs with the three given?



- A. circle with two dots
- B. square with four dots
- C. hexagon with three black dots arranged in a triangular pattern inside
- D. triangle with no dots

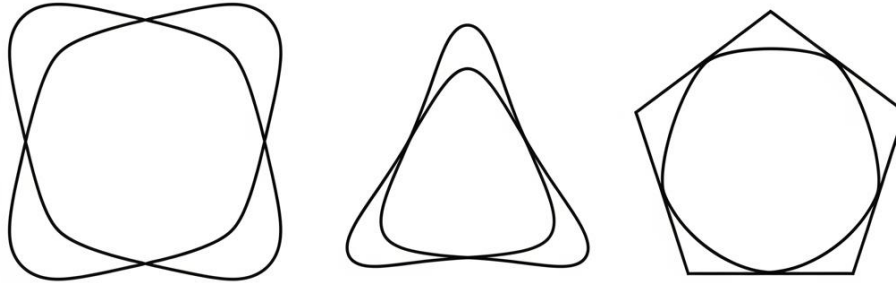
153. Which figure belongs with the three given?

GIVEN FIGURES



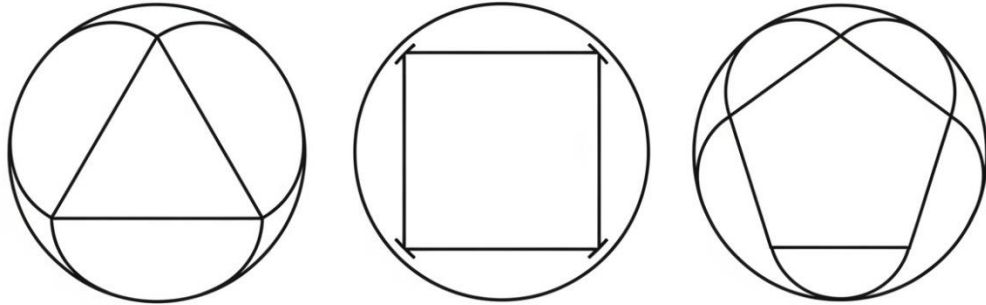
- A. arrow pointing right
- B. parallelogram (not symmetrical vertically)
- C. spiral
- D. cone shape pointing straight up

154. Which figure belongs with the three given?



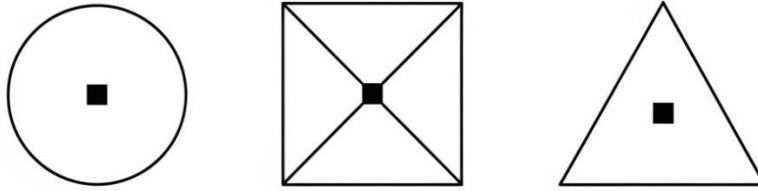
- A. circle (already a curve)
- B. hexagon with all corners rounded into curves
- C. square with sharp corners
- D. triangle with sharp corners

155. Which figure belongs with the three given?



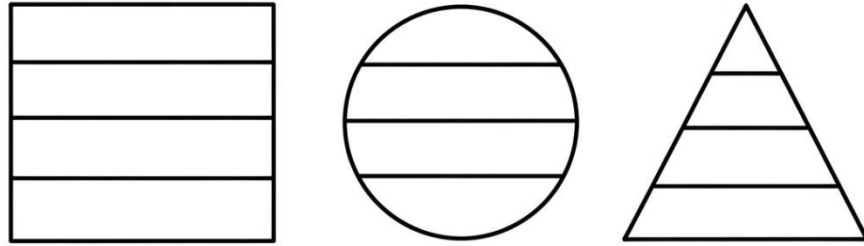
- A. hexagon inscribed in a circle (touching the circle at each vertex)
- B. circle inscribed in a square
- C. triangle drawn outside a circle
- D. two circles overlapping

156. Which figure belongs with the three given?



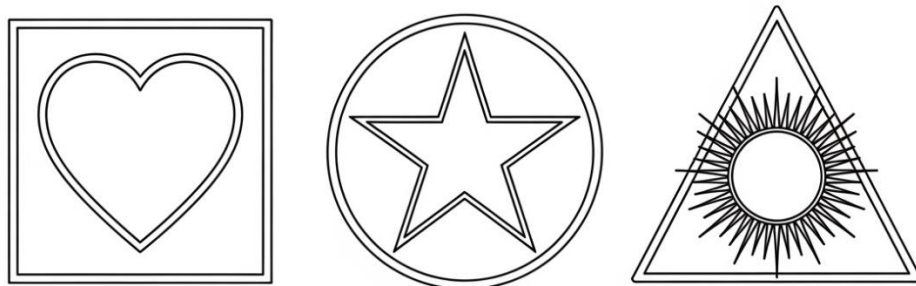
- A. pentagon with a tiny circle at its centre
- B. circle with no centre mark
- C. solid black square
- D. pentagon with a tiny solid black square at its centre

157. Which figure belongs with the three given?



- A. circle with vertical stripes
- B. square split into vertical stripes
- C. pentagon divided horizontally into three equal stripes
- D. triangle with no internal division

158. Which figure belongs with the three given?



- A. plain pentagon with no inner symbol
- B. crescent moon inside a hexagonal frame
- C. a single heart with no surrounding frame
- D. two stars side by side

Section I — Paper Folding (Questions 159–176)

159. A square paper is folded in half along a vertical centre line — the right half folds over onto the left half. A hole is then punched through both layers, in the upper-left corner of the folded rectangle. When the paper is unfolded back to a flat square, what does it look like?

[Figure PQ-45: Clean black-line technical diagram on white background. Sequence of three panels arranged left to right. Panel 1: flat unfolded square paper outlined in black. Panel 2: right half of square folding leftward onto left half, shown mid-fold with a curved arrow indicating the fold direction. Panel 3: resulting folded vertical rectangle with a single round hole punched in its upper-left corner, hole visible as a small black circle.]

- A. Two holes — one in the upper-left and one in the upper-right of the unfolded square
- B. One hole in upper-left only

- C. Four holes in all corners
- D. Two holes stacked vertically

160. A square paper is folded in half along a horizontal centre line, then folded in half along a vertical centre line. A hole is punched through all layers in the lower-right corner of the resulting small square. When the paper is unfolded, what does it look like?

- A. One hole in the lower-right
- B. Two holes in the lower corners
- C. Three holes
- D. Four holes — one in each corner of the unfolded square

161. A square paper is folded diagonally from the top-left corner to the bottom-right corner. A hole is punched through both layers near the bottom edge of the resulting triangle. When the paper is unfolded, what does it look like?

- A. One hole near the bottom
- B. Four holes
- C. Two holes mirrored across the diagonal fold line
- D. Three holes

162. A square paper is folded in half along a vertical centre line. A hole is punched through both layers along the top edge of the folded rectangle, slightly off-centre to the left. When the paper is unfolded, what does it look like?

- A. One hole at the top-centre only
- B. Two holes along the top edge, symmetrically placed left and right of the vertical centre
- C. Four holes at corners
- D. Two holes at left and right edges

163. A square paper is folded in half along a horizontal centre line. A hole is punched directly on the fold line, at the horizontal centre. When the paper is unfolded, what does it look like?

- A. Two holes — one above and one below the centre
- B. Four holes
- C. One hole at the centre of the unfolded square
- D. No visible hole

164. A square paper is folded in half along a vertical centre line. A hole is punched directly on the fold line, at the vertical centre. When the paper is unfolded, what does it look like?

- A. One hole at the centre of the unfolded square
- B. Two holes
- C. Four holes
- D. Three holes

165. A square paper is folded in half along a vertical centre line, then in half along a horizontal centre line. A hole is punched through all four layers in the upper-left corner of the small folded square. When the paper is unfolded, what does it look like?

- A. One hole
- B. Two holes
- C. Three holes
- D. Four holes — one in each corner

166. A square paper is folded diagonally from the top-right corner to the bottom-left corner. A hole is punched through both layers near the centre of the resulting triangle. When the paper is unfolded, what does it look like?

- A. One hole at centre

- B. Two holes mirrored across the diagonal fold line
- C. Four holes
- D. Three holes

167. A square paper is folded in half along a horizontal centre line. A hole is punched through both layers along the left edge of the folded rectangle, vertically centred. When the paper is unfolded, what does it look like?

- A. Two holes on the left edge, symmetrically placed above and below the centre
- B. One hole on the left edge
- C. Four holes
- D. Three holes

168. A square paper is folded diagonally from the bottom-left corner to the top-right corner. A hole is punched directly on the diagonal fold line, at the centre of the diagonal. When the paper is unfolded, what does it look like?

- A. Two holes
- B. Four holes
- C. One hole at the centre of the unfolded square
- D. No visible hole

169. A square paper is folded in half along a vertical centre line. Three holes are punched through both layers — one in the upper-left, one in the centre, and one in the lower-left of the folded rectangle. When the paper is unfolded, what does it look like?

- A. Three holes
- B. Four holes
- C. Five holes
- D. Six holes

170. A square paper is folded in half along a horizontal centre line. A hole is punched through both layers in the lower-right corner of the folded rectangle. When the paper is unfolded, what does it look like?

- A. One hole in lower-right only
- B. Two holes — one in upper-right and one in lower-right
- C. Four holes
- D. Two holes on the bottom edge

171. A square paper is folded in half along a vertical centre line. A hole is punched through both layers at the exact centre of the folded rectangle (not on the fold line). When the paper is unfolded, what does it look like?

- A. Two holes side by side at the horizontal middle of the unfolded square
- B. One hole at the centre
- C. Four holes
- D. Two holes stacked vertically

172. A square paper is folded in half along a vertical centre line, then in half along a horizontal centre line. A hole is punched through all four layers along the bottom edge of the small folded square, away from any corner and not on a fold line. When the paper is unfolded, what does it look like?

- A. Two holes
- B. Three holes
- C. Four holes — two on the top edge and two on the bottom edge, symmetrically placed
- D. Five holes

173. A square paper is folded in half along a vertical centre line. The resulting rectangle is then folded in half again along a vertical line parallel to the first fold. A hole is punched through all layers in the upper corner of the resulting narrow strip. When the paper is unfolded, what does it look like?

- A. One hole
- B. Two holes
- C. Three holes
- D. Four holes spaced evenly along the top edge

174. A square paper is folded in half along a horizontal centre line. A hole is punched through both layers exactly on the fold line, at the horizontal centre. When the paper is unfolded, what does it look like?

- A. One hole at the centre of the unfolded square
- B. Two holes
- C. Four holes
- D. Three holes

175. A square paper is folded in half along a horizontal centre line, then in half along a vertical centre line. A hole is punched through all four layers along the left edge of the small folded square, vertically centred. When the paper is unfolded, what does it look like?

- A. One hole on the left edge
- B. Four holes — two on the left edge and two on the right edge, symmetrically placed
- C. Two holes on the left edge only
- D. Six holes

176. A square paper is folded diagonally from the bottom-right corner to the top-left corner. A hole is punched through both layers near the top of the resulting triangle. When the paper is unfolded, what does it look like?

- A. One hole near the top
- B. Four holes
- C. Two holes mirrored across the diagonal fold line
- D. Three holes

Practice Exam 3: Answer Key and Full Explanations

Section A — Verbal Analogies (Q1–24)

- 1. D.** Explorer-to-environment — A diver explores the ocean, just as an astronaut explores space. The pair links a person to the vast environment they navigate. Boat and fish exist in the ocean but are not the explorer; captain commands a vessel but doesn't dive into the ocean.
- 2. A.** Antonym pair — Empty is the opposite of crowded, just as calm is the opposite of frantic. The relationship is direct opposition. Noisy, busy, and full do not contrast with crowded in the same way.
- 3. C.** Instrument-to-target — A microscope is used to see germs (tiny living things), just as a telescope is used to see stars (distant objects). The pair connects an optical instrument with what it reveals. Eyes, lab, and light are microscope-related but not the target.
- 4. B.** Collective-to-member — A herd is a group of cattle, just as a bouquet is a group of flowers. The relationship pairs a collective noun with the items it contains. Grass, farmer, and field are farm-related but not the members of the herd.
- 5. D.** Secure room-to-institution — A cell is a secure room in a prison, just as a vault is a secure room in a bank. The pair links a fortified space to its institution. Body, small, and lock are cell-associated but not the institutional setting.
- 6. B.** Involuntary response-to-cause — Shivering is caused by cold, just as yawning is caused by tiredness. The pair links an automatic body reaction to its trigger. Fever, afraid, and wet can also cause shivering but cold is the most direct match for the yawn-tired parallel.
- 7. A.** Reference-to-content — An atlas contains maps, just as a dictionary contains words. The pair connects a reference book to its primary content. Countries, world, and travel are atlas-related themes but not what the atlas literally holds.
- 8. C.** Place-to-crop — A vineyard grows grapes, just as an orchard grows apples. The pair links an agricultural location to its primary crop. Wine is made from grapes (product), fruit is too general, and farm is a different location category.
- 9. B.** Instrument-to-measurement — A thermometer measures temperature, just as a compass measures direction. The pair links a measuring tool to its quantity. Weather, heat, and mercury are thermometer-associated but not the measurement itself.
- 10. D.** Performer-to-venue — An athlete performs on a field, just as an actor performs on a stage. The pair connects a performer with the location of their performance. Coach, uniform, and medal are athlete-related but not the venue.

- 11. A.** Material-to-location — Sand makes up a beach, just as granite makes up a mountain. The pair links a geological material to the place dominated by it. Small describes sand; stone is a category; sea is adjacent to the beach but not made of sand.
- 12. C.** Profession-to-action — A judge's primary action is to decide cases, just as a surgeon's primary action is to operate. The pair connects a profession to its defining act. Court, lawyer, and trial are courtroom-related but not the judge's action.
- 13. B.** Product-to-producer — Honey is produced by bees, just as a pearl is produced by an oyster. The pair links a natural product to the organism that creates it. Flower, sweet, and hive are honey-associated but not the producer itself.
- 14. A.** Part-to-whole — A verse is a section of a poem, just as a chapter is a section of a novel. The pair links a structural component to its complete work. Word and line are smaller poetic units; song uses verses too but poem is the classical match.
- 15. D.** Biome-to-climate — A jungle is characterised by humidity, just as a tundra is characterised by cold. The pair links a biome to its defining climate. Tree and dense describe jungle features; wet is partial; humidity captures the dominant climatic trait.
- 16. C.** Caretaker-to-animal — A beekeeper cares for bees, just as a shepherd cares for sheep. The pair links a person to the animals they tend. Honey is what bees produce, flower is what they visit, and hive is their home — none are the animals themselves.
- 17. A.** Symptom-to-cause — A cough is a symptom of illness, just as a sneeze is a symptom of an allergy. The pair links a bodily reaction to its underlying cause. Throat, flu, and germ are cough-related but not the general category that mirrors "allergy."
- 18. B.** Animal-to-distinguishing trait — A bat is nocturnal (active at night), just as a penguin is flightless. The pair links an animal to its key biological characteristic. Fast, small, and dark describe bats only partially; nocturnal is the defining trait.
- 19. D.** Extreme-to-action — To explore depth, one dives, just as to reach the summit one climbs. The pair links an extreme point to the action that approaches it. Ocean is where depth exists, deep is a synonym, and lower is too general.
- 20. C.** Object-to-visibility — A billboard is public (visible to everyone), just as a diary is private (visible to one person). The pair contrasts visibility. Street is where billboards appear, advertise is the purpose, and large describes the size.
- 21. A.** Building-to-location — A garage is a building at a home, just as a barn is a building on a farm. The pair links a structure to its setting. Car is what's stored in a garage, driveway is adjacent, and tool is just one item kept inside.

22. D. Flow-to-medium — A breeze flows through the air, just as a current flows through a river. The pair links a moving phenomenon to its medium. Wind, weather, and cool describe breeze qualities but air is the medium itself.

23. B. Young-to-mature — A seedling is a young plant, just as a toddler is a young child. The pair links an early life stage to the mature form. Flower is a part of the plant, soil is the growing medium, and seed is an even earlier stage.

24. C. Tool-to-professional — A stethoscope is a doctor's tool, just as a compass is a navigator's tool. The pair links a professional with their primary instrument. Patient, heart, and hospital are doctor-related but not the user of the tool.

Section B — Sentence Completion (Q25–44)

25. A. Performance accuracy — Precision describes the careful accuracy of an orchestra after intense rehearsal. Mistakes, silence, and delay contradict the result of dedicated practice that impresses an audience.

26. D. Major significance — Groundbreaking describes a discovery so important it permanently changes scientific understanding. Predictable, ordinary, and simple contradict the world-changing impact described.

27. B. Going forward — Proceeded means they continued with the action despite warnings. Refused, forgot, and decided not all describe halting; only proceeded matches the action of setting up tents.

28. C. Sharp observation — Keen means sharp and perceptive, fitting the detective who noticed a tiny detail. Careless, quick, and brief don't describe the discerning observation required to spot a small fingerprint.

29. B. Continuous effort — Tirelessly describes working all night without stopping. Lazily, occasionally, and silently contradict the dedicated effort needed to clear earthquake rubble.

30. A. Crowd-drawing quality — Spectacular describes an exhibit so impressive it draws long queues. Boring, dim, and usual contradict the appeal that brings visitors in droves.

31. D. Physical skill — Agility means physical grace and quick movement, matching unexpectedly good skiing for a beginner. Fear, clumsiness, and exhaustion contradict skilled movement on the slopes.

32. C. Careful preparation — Measured means carefully weighed or quantified, matching a chef ensuring exact ingredient amounts. Ignored, discarded, and forgot describe the opposite of careful preparation.

33. D. Hidden details — Subtle means slight and not immediately obvious, fitting clues that must be pieced together to solve a mystery. Obvious, large, and coloured would not require careful detective work.

34. A. Visual change — Transformed describes a complete change of appearance, matching the dramatic visual shift from snowfall. Unchanged, dirty, and small contradict the universal coating of white snow.

- 35. C.** Steady resolve — Unwavering means firm and never weakening, matching determination that survives physical exhaustion. Weak, small, and slight contradict the resolve needed to finish a marathon.
- 36. B.** Perfect execution — Flawless means without any errors, matching dancers who clearly rehearsed every step perfectly. Clumsy, ordinary, and boring contradict performance that earns judges' acclaim.
- 37. D.** Complex structure — Intricate means complex and detailed, matching a puzzle that takes hours to solve. Simple, small, and brief contradict a puzzle that occupies an entire afternoon.
- 38. A.** Comet motion — Streak describes the fast, bright movement of a comet across the sky. Fall, land, and stop contradict the predicted celestial path of a comet through space.
- 39. B.** Emotional support — Comforted means provided comfort and reassurance, matching loyalty that helps a family through a difficult move. Confused, annoyed, and ignored contradict the supportive role of loyalty.
- 40. C.** Tradition transmission — Passed describes a recipe handed down through generations. Forgotten, lost, and ignored contradict the continuity needed for a recipe to survive two centuries.
- 41. A.** Detailed planning — Meticulous means extremely careful and precise, matching the planning needed for a dangerous climb. Quick, brief, and casual contradict the thorough preparation required for mountain safety.
- 42. D.** Creative design — Innovative means new and inventive, fitting a bold architectural design that critics praise. Plain, boring, and simple contradict the originality that draws international acclaim.
- 43. C.** Stunning view — Breathtaking describes a landscape so beautiful it leaves observers awestruck. Ordinary, small, and plain contradict a view that stretches to the horizon and inspires gazing.
- 44. B.** Outstanding performance — Brilliant describes an exceptional performance that earns a standing ovation. Weak, brief, and quiet contradict a performance that prompts the audience to rise.

Section C — Verbal Classification (Q45–60)

- 45. D.** Medical instruments — Stethoscope belongs with scalpel, forceps, and syringe as tools used by medical professionals. Nurse, doctor, and patient are people in healthcare, not instruments.
- 46. A.** Snake species — Cobra belongs with anaconda, viper, and python as types of snakes. Lizard, tortoise, and crocodile are different reptile categories, not snakes.
- 47. C.** Asian countries — Cambodia belongs with Mongolia, Vietnam, and Thailand as Asian countries. France is European, Brazil is South American, and Egypt is African.
- 48. B.** Fragrant flowers — Lilac belongs with lavender, rose, and jasmine as fragrant flowering plants. Grass, tree, and cactus are different plant categories without the same scent classification.

- 49. A.** Watercraft — Dinghy belongs with kayak, canoe, and raft as small water-borne vessels. Car and truck are land vehicles; surfboard is a riding board, not a craft you sit inside.
- 50. D.** Semi-precious stones — Opal belongs with amethyst, topaz, and jade as semi-precious gemstones. Metal, necklace, and ring are jewellery-related categories but not gemstones themselves.
- 51. B.** Famous scientists — Galileo belongs with Pythagoras, Einstein, and Newton as historic scientists and mathematicians. Shakespeare was a playwright, Mozart a composer, and Picasso a painter.
- 52. C.** Body joints — Knee belongs with ankle, wrist, and elbow as joints in the body. Finger, bone, and toe are body parts but not joints.
- 53. D.** Sciences — Physics belongs with geology, biology, and chemistry as scientific disciplines. History, math, and art are academic fields but not natural sciences.
- 54. A.** Vertical movement — Staircase belongs with ladder, escalator, and elevator as means of moving between vertical levels. Door, window, and roof are house features without the vertical-transport function.
- 55. B.** Temperatures — Boiling belongs with lukewarm, scorching, and freezing as words describing temperature. Wet, windy, and sunny are weather conditions, not temperatures.
- 56. C.** Calculation devices — Computer belongs with abacus, calculator, and slide rule as tools used for mathematical computation. Ruler, compass (drafting), and paper are mathematics-adjacent but not calculation devices.
- 57. D.** Low landforms — Ravine belongs with valley, canyon, and gorge as deep, narrow low-elevation landforms. Mountain, plateau, and hill are higher-elevation features.
- 58. C.** Optical instruments — Magnifying glass belongs with telescope, binoculars, and microscope as optical instruments used to view things more closely or clearly. Mirror reflects, spectacles correct vision, and camera captures images for later viewing.
- 59. A.** Major world cities — Moscow belongs with Tokyo, Cairo, and Sydney as major global cities. Continent, country, and river are geographical categories, not specific cities.
- 60. B.** Aquatic mammals — Seal belongs with dolphin, whale, and manatee as aquatic mammals. Shark is a fish, octopus is a mollusc, and crab is a crustacean — none are mammals.

Section D — Number Analogies (Q61–78)

- 61. A.** Rule: square the first number — $4^2=16$, $5^2=25$, so $6^2=36$. Each second number is the first number multiplied by itself.
- 62. C.** Rule: divide by 3 — $15\div 3=5$, $24\div 3=8$, so $33\div 3=11$. Each second number is one-third the first.
- 63. B.** Rule: multiply by 3, add 2 — $3\times 3+2=11$, $5\times 3+2=17$, so $7\times 3+2=23$. The same two-step operation applies to all pairs.
- 64. D.** Rule: divide by 2 — $50\div 2=25$, $40\div 2=20$, so $60\div 2=30$. Each second number is half the first.
- 65. A.** Rule: square the first number — $8^2=64$, $5^2=25$, so $9^2=81$. Each second number is the first number squared.
- 66. C.** Rule: divide by 3 — $12\div 3=4$, $18\div 3=6$, so $24\div 3=8$. Each second number is one-third the first.
- 67. D.** Rule: multiply by 2 — $11\times 2=22$, $15\times 2=30$, so $19\times 2=38$. Each second number is double the first.
- 68. B.** Rule: divide by 4 — $28\div 4=7$, $32\div 4=8$, so $40\div 4=10$. Each second number is one-quarter the first.
- 69. A.** Rule: cube the first number — $3^3=27$, $4^3=64$, so $5^3=125$. Each second number is the first number multiplied by itself three times.
- 70. D.** Rule: divide by 5 — $45\div 5=9$, $35\div 5=7$, so $25\div 5=5$. Each second number is one-fifth the first.
- 71. B.** Rule: multiply by 2, add 3 — $2\times 2+3=7$, $4\times 2+3=11$, so $6\times 2+3=15$. The same two-step operation applies to all pairs.
- 72. C.** Rule: square root — $\sqrt{16}=4$, $\sqrt{25}=5$, so $\sqrt{36}=6$. Each second number is the square root of the first.
- 73. A.** Rule: multiply by 2, add 3 — $5\times 2+3=13$, $7\times 2+3=17$, so $9\times 2+3=21$. The same two-step operation applies to all pairs.
- 74. D.** Rule: divide by 12 — $60\div 12=5$, $48\div 12=4$, so $84\div 12=7$. Each second number is one-twelfth the first.
- 75. C.** Rule: multiply by 3 — $4\times 3=12$, $6\times 3=18$, so $10\times 3=30$. Each second number is triple the first.
- 76. B.** Rule: square root — $\sqrt{100}=10$, $\sqrt{81}=9$, so $\sqrt{64}=8$. Each second number is the square root of the first.
- 77. D.** Rule: multiply by 2, add 1 — $2\times 2+1=5$, $3\times 2+1=7$, so $8\times 2+1=17$. The same two-step operation applies to all pairs.
- 78. A.** Rule: divide by 5 — $15\div 5=3$, $25\div 5=5$, so $45\div 5=9$. Each second number is one-fifth the first.

Section E — Number Series (Q79–96)

- 79. B.** Rule: perfect squares — Sequence is $1^2, 2^2, 3^2, 4^2, 5^2$, so the next term is $6^2=36$. Each term is a number multiplied by itself.
- 80. A.** Rule: Fibonacci-like sum — Each term equals the sum of the two previous terms ($8+13=21$). The pattern compounds quickly because each new term grows from the two before it.
- 81. D.** Rule: double each term — Sequence multiplies by 2 ($7, 14, 28, 56$), so the next term is $56 \times 2 = 112$. A geometric progression with constant ratio 2.
- 82. C.** Rule: subtract 25 — Sequence drops by 25 each step ($100, 75, 50, 25$), so the next term is $25 - 25 = 0$. A constant arithmetic decrease.
- 83. B.** Rule: perfect cubes — Sequence is $1^3, 2^3, 3^3, 4^3, 5^3$, so the next term is $6^3=216$. Each term is a number cubed.
- 84. D.** Rule: differences increase by 1 — Add 1, 2, 3, 4, 5, then 6. From 18, add 6 to get 24. The gaps between terms grow by one each step.
- 85. A.** Rule: divide by 2 — Sequence halves ($96, 48, 24, 12$), so the next term is $12 \div 2 = 6$. A geometric decrease.
- 86. C.** Rule: double each term — Sequence multiplies by 2 ($5, 10, 20, 40$), so the next term is $40 \times 2 = 80$. A geometric progression with constant ratio 2.
- 87. B.** Rule: divide by 3 — Sequence shrinks by $\div 3$ ($81, 27, 9, 3$), so the next term is $3 \div 3 = 1$. A geometric decrease.
- 88. D.** Rule: triangular numbers — Differences are +2, +3, +4, +5, +6, then +7. From 21, add 7 to get 28. Each term is the running sum of consecutive integers.
- 89. C.** Rule: add 7 — Sequence rises by 7 each step ($7, 14, 21, 28$), so the next term is $28 + 7 = 35$. The multiples of 7.
- 90. A.** Rule: descending squares — Sequence is $12^2, 11^2, 10^2, 9^2$, so the next term is $8^2=64$. Each term is a smaller integer squared.
- 91. B.** Rule: differences increase by 2 — Add 4, 6, 8, 10, 12, then 14. From 42, add 14 to get 56. The gaps expand consistently.
- 92. C.** Rule: triple each term — Sequence multiplies by 3 ($2, 6, 18, 54, 162$), so the next term is $162 \times 3 = 486$. A geometric progression with ratio 3.
- 93. D.** Rule: multiply by 2, subtract 1 — Each term doubles and subtracts 1. From 65, calculate $65 \times 2 - 1 = 129$. The growth is rapid because of the doubling.

94. A. Rule: subtract 10 — Sequence drops by 10 each step (100, 90, 80, 70), so the next term is $70-10=60$. A constant arithmetic decrease.

95. C. Rule: double each term — Sequence multiplies by 2 (8, 16, 32, 64), so the next term is $64\times 2=128$. A geometric progression.

96. B. Rule: perfect squares — Sequence is $2^2, 3^2, 4^2, 5^2$, so the next term is $6^2=36$. Each term is a small integer multiplied by itself.

Section F — Number Puzzles (Q97–114)

97. C. Solve right side first — $48+24=72$. Then $? \times 8=72$ means $?=72 \div 8=9$. The unknown factor is found by reverse multiplication.

98. A. Two-step substitution — From $\diamond \times 5=35$, $\diamond=7$. Then $\diamond + 9=7+9=16$. Solve for the symbol first, then complete the second operation.

99. D. Order of operations — Multiply before adding: $8 \times 2=16$, then $7+16=23$. Multiplication takes precedence over addition unless parentheses force otherwise.

100. B. Substitute with exponent — Replace \triangle with 6 and \circ with 4. $\triangle^2=36$, then $36-4=32$. Exponents apply before subtraction.

101. A. Two-step — Right side equals $6 \times 2=12$. Then $60 \div ?=12$ means $?=60 \div 12=5$. Reverse the division to find the unknown.

102. C. Two-step substitution — From $\star + 11=20$, $\star=9$. Then $\star \times 6=9 \times 6=54$. Solve for the symbol first, then complete the multiplication.

103. D. Two-step — Right side equals $5 \times 3=15$. Then $90 \div ?=15$ means $?=90 \div 15=6$. Reverse the division to find the unknown divisor.

104. B. Multi-step — From $4 \times ? + 6=38$, subtract 6 to get $4 \times ?=32$. Then $?=32 \div 4=8$. Reverse the operations in order.

105. A. Substitute with operations — Replace $\diamond=9$ and $\circ=4$. $\diamond \times 2 - \circ=18-4=14$. Multiplication precedes subtraction.

106. C. Two-step — Right side equals $5 \times 12=60$. Then $75 - ?=60$ means $?=75-60=15$. Subtract to isolate the missing value.

107. B. Two-step substitution — From $\triangle \times 7=56$, $\triangle=8$. Then $\triangle^2=8 \times 8=64$. Solve for the symbol first, then square it.

108. D. Two-step — Right side equals $18+17=35$. Then $?-25=35$ means $?=35+25=60$. Add the subtracted amount back to balance.

109. A. Reverse multiplication — Right side equals $9 \times 8 = 72$. Then $6 \times ? = 72$ means $? = 72 \div 6 = 12$. The unknown factor is the product divided by the known factor.

110. D. Substitute with operations — Replace $\star = 11$. Then $\star \times 2 + 7 = 22 + 7 = 29$. Multiplication precedes addition.

111. C. Two-step — Right side equals $60 + 5 = 65$. Then $100 - ? = 65$ means $? = 100 - 65 = 35$. Subtract to isolate the missing value.

112. B. Add then subtract — From $8 + 9 + ? = 30$, first $8 + 9 = 17$. Then $17 + ? = 30$ means $? = 30 - 17 = 13$. Combine knowns first, then solve.

113. C. Two-step substitution — From $\diamond \times \circ = 36$ and $\diamond = 4$, $\circ = 36 \div 4 = 9$. Then $\circ + 5 = 9 + 5 = 14$. Solve for the unknown symbol first, then add.

114. A. Multi-factor multiplication — From $3 \times 4 \times ? = 60$, first $3 \times 4 = 12$. Then $12 \times ? = 60$ means $? = 60 \div 12 = 5$. Combine known factors first, then solve.

Section G — Figure Matrices (Q115–136)

115. D. Rule: size and colour both progress — Each row goes small/white \rightarrow medium/grey \rightarrow large/black. Bottom row of triangles must end with a large black triangle to complete both progressions.

116. B. Rule: 90° clockwise rotation per cell — Bottom row's R goes upright $\rightarrow 90^\circ$ clockwise $\rightarrow ?$. Continuing the rotation gives R rotated 180° .

117. C. Rule: 90° clockwise dot movement — Each row's dot moves 90° around the circle. Bottom row goes 6 o'clock \rightarrow 9 o'clock $\rightarrow ?$. Continuing clockwise from 9 gives 12 o'clock.

118. A. Rule: mirror combination — Each row pairs a shape with its mirror image, then combines them. Two half-circles facing opposite directions combine to form a full circle.

119. B. Rule: +1 per cell — Each row increases dot count by 1 across cells. Bottom row goes 3 \rightarrow 4 \rightarrow 5 dots.

120. D. Rule: 90° counterclockwise rotation per cell — Bottom row goes down \rightarrow right $\rightarrow ?$. Right rotated counterclockwise gives up.

121. A. Rule: shapes and counts cycle — Each row cycles through circle/square/triangle while count goes 1, 2, 3. Bottom row goes 1 triangle, 2 circles, then 3 squares.

122. C. Rule: shading progresses $1/4 \rightarrow 1/2 \rightarrow 3/4$ — Bottom row's triangles go $1/4$ shaded $\rightarrow 1/2$ shaded $\rightarrow 3/4$ shaded. The progression matches the rows above.

123. B. Rule: alternating original-inverted-original — Each row goes black-on-white \rightarrow white-on-black \rightarrow black-on-white. The bottom row's pattern returns to a black triangle on white.

124. A. Rule: sides increase by row, stripes increase by column — Bottom row's third cell is the pentagon column (5 sides) with 3 stripes (row 3 count). The pentagon with 3 stripes satisfies both constraints.

125. D. Rule: count matches arrangement shape — Each row's third cell uses the count to form a corresponding polygon shape. 5 dots arranged in a pentagon shape continues the pattern (3 in triangle, 4 in square, 5 in pentagon).

126. C. Rule: mirror then rotate 90° clockwise — Each row goes upright letter → mirrored letter → mirrored letter rotated 90° clockwise. Bottom row's T follows the same two-step transformation.

127. B. Rule: size up, count down — Each row goes 3 small → 2 medium → 1 large. Bottom row ends with 1 large triangle.

128. D. Rule: combined thickness and symbol — Row 3 uses thick outlines; column 3 uses stars. The intersection is a thick circle with a star.

129. A. Rule: outlined → dotted → striped — Bottom row's hexagons go outlined → dotted → striped, completing the fill progression matching the rows above.

130. C. Rule: 45° clockwise rotation per cell — Reading left-to-right, top-to-bottom, the arrow rotates 45° clockwise each cell. After 8 cells of 45° steps (360°), cell 9 returns to up.

131. D. Rule: nested shape pairs cycle — Each row uses different polygon pairs in nesting. Row 3 must include the missing combination (small circle in triangle) to complete the cycle.

132. B. Rule: 1 → 2 → 3 stacked shapes — Bottom row goes 1 triangle → 2 triangles stacked → 3 triangles stacked. Each cell adds one shape to the vertical stack.

133. A. Rule: size, colour, and orientation all change — Each row progresses small/white/upright → medium/grey/tilted → large/black/inverted. Bottom row's heart must follow all three progressions.

134. D. Rule: shapes rotate positions across rows — Row 1: circle-square-triangle. Row 2: square-triangle-circle. Row 3: triangle-circle-square. The missing cell is square.

135. C. Rule: dot moves clockwise around polygon perimeter — Each row's dot moves clockwise to the next position. Pentagon's bottom region follows top → right → bottom in the clockwise direction.

136. B. Rule: rows share shape, columns share fill — Row 3 is hexagons; column 3 is dotted. The intersection is a dotted hexagon.

Section H — Figure Classification (Q137–158)

137. A. Shared attribute: diagonal stripe fill — All three given shapes contain diagonal stripes. The pentagon with diagonal stripes maintains the same fill pattern.

- 138. D.** Shared attribute: shape containing a small star — All three given shapes have a star drawn inside. The square with a small star inside continues that nesting attribute.
- 139. B.** Shared attribute: outlined multi-point star — All three given are outlined stars with increasing point counts (4, 5, 6). The outlined 7-point star continues the multi-point category.
- 140. C.** Shared attribute: single horizontal stripe — All three given have one horizontal stripe through the middle. The hexagon with a horizontal stripe maintains the same striping.
- 141. A.** Shared attribute: curved internal line — All three given have a curved line cutting through them. The pentagon with a curved line inside continues this attribute.
- 142. D.** Shared attribute: half-circles in different orientations — All three given are half-circles with different flat-side orientations. The fourth orientation (flat side right, left half visible) completes the set.
- 143. C.** Shared attribute: shape nested in same shape — All three given show a smaller shape nested inside an identical larger shape. The pentagon nested inside a larger pentagon continues that pairing.
- 144. B.** Shared attribute: curved arrow forming a letter shape — All three given are arrows curved into letter-like forms (U, C, S). The curved arrow forming a J-shape continues the alphabet-shape category.
- 145. D.** Shared attribute: polygon with one vertex marked — All three given polygons have a single vertex highlighted with a small circle. The hexagon with one vertex marked maintains the attribute.
- 146. A.** Shared attribute: shape with X inside — All three given shapes have an X drawn within. The pentagon with X inside continues that internal-mark pattern.
- 147. B.** Shared attribute: dots at each vertex — All three given polygons have a dot at every vertex (3, 4, 5 dots respectively). The hexagon with six dots at vertices continues the vertex-marking pattern.
- 148. C.** Shared attribute: vertical bisection — All three given shapes are divided into two equal halves by a vertical line. The pentagon bisected vertically maintains the bisection attribute.
- 149. D.** Shared attributes: small + solid black + on white — All three given are small fully-black shapes on white. The small solid black hexagon shares all three traits.
- 150. B.** Shared attribute: left half shaded black — All three given shapes have the left half darkened. The pentagon with left half black maintains the shading position.
- 151. A.** Shared attribute: shape with circular hole — All three given have a smaller circle removed from their centres. The pentagon with a circular hole continues the perforation attribute.
- 152. C.** Shared attribute: three dots in triangular pattern inside — All three given contain three dots arranged in a triangle inside the outer shape. The hexagon with three dots in a triangular pattern continues that arrangement.

153. D. Shared attribute: vertical-line symmetry — All three given have left-right mirror symmetry. The cone shape pointing up also has vertical-line symmetry, completing the set.

154. B. Shared attribute: rounded corners — All three given have softened (rounded) vertices. The hexagon with rounded corners shares the same softened-vertex attribute.

155. A. Shared attribute: polygon inscribed in a circle — All three given are polygons inscribed inside a circle, touching it at every vertex. The hexagon inscribed in a circle maintains the inscription relationship.

156. D. Shared attribute: small black square at centre — All three given have a tiny solid black square at the centre. The pentagon with a tiny black square at its centre continues the centre-marking attribute.

157. C. Shared attribute: divided into three horizontal stripes — All three given shapes are split into three equal horizontal stripes. The pentagon divided horizontally into three stripes continues the division.

158. B. Shared attribute: symbol inside a frame — All three given pair a meaningful symbol with a geometric frame. The crescent moon inside a hexagonal frame continues the symbol-in-frame pattern.

Section I — Paper Folding (Q159–176)

159. A. One vertical fold creates 2 layers — A hole in the upper-left corner of the folded rectangle is not on the fold line; it mirrors horizontally to produce 2 holes — one in the upper-left and one in the upper-right of the unfolded square.

160. D. Two perpendicular folds create 4 layers — A corner hole punches through all four layers, producing 4 holes — one in each corner of the unfolded square.

161. C. One diagonal fold creates 2 layers — A hole near the bottom edge of the triangle mirrors across the diagonal fold line, producing 2 holes symmetrically placed about the diagonal.

162. B. One vertical fold, hole off the fold line — A hole along the top edge (away from the fold) mirrors horizontally to give 2 holes along the top edge, symmetrically placed about the vertical centre.

163. C. Hole on fold line stays single — A hole punched directly on the fold line does not duplicate because both layers share the same point. The result is a single hole at the centre of the unfolded square.

164. A. Hole on fold line stays single — A hole punched directly on the vertical fold at the centre does not duplicate. Both layers share the same point, leaving one hole at the centre of the unfolded square.

165. D. Two perpendicular folds create 4 layers — A corner hole punches through all four layers, producing 4 holes — one in each corner of the unfolded square.

166. B. One diagonal fold creates 2 layers — A hole near the centre of the triangle mirrors across the diagonal fold, producing 2 holes symmetrically placed about the diagonal.

167. A. One horizontal fold, hole on left edge — A hole on the left edge of the folded rectangle (vertically centred) is not on the fold. It mirrors vertically to give 2 holes on the left edge of the unfolded square, symmetrically placed above and below the centre.

168. C. Hole on fold line stays single — A hole punched directly on a diagonal fold line does not duplicate. The result is a single hole at the centre of the unfolded square.

169. D. Three holes through 2 layers — Each of three punched holes mirrors across the vertical fold. Upper-left mirrors to upper-right, centre mirrors to a symmetric central pair, and lower-left mirrors to lower-right. Total = 6 holes.

170. B. One horizontal fold creates 2 layers — A hole in the lower-right corner of the folded rectangle is not on the fold; it mirrors vertically to give 2 holes — one in the upper-right and one in the lower-right of the unfolded square.

171. A. One vertical fold, central hole off the fold — The exact centre of the folded rectangle is not on the fold. It mirrors horizontally to produce 2 holes side by side at the horizontal middle of the unfolded square.

172. C. Two perpendicular folds, edge hole — A hole along the bottom edge (away from corners and folds) punches through all 4 layers. When unfolded, it produces 4 holes — 2 on the top edge and 2 on the bottom edge, symmetrically placed about the vertical centre.

173. D. Two parallel vertical folds create 4 layers — A corner hole punches through all four layers spaced across the original width. The result is 4 holes spaced evenly along the top edge of the unfolded square.

174. A. Hole on fold line stays single — A hole punched directly on the horizontal fold at the centre does not duplicate. The result is one hole at the centre of the unfolded square.

175. B. Two folds, edge hole — A hole along the left edge (vertically centred) of the small folded square mirrors across both folds. Across the horizontal fold it mirrors up and down; across the vertical fold it mirrors to the right edge. Total = 4 holes on left and right edges.

176. C. One diagonal fold creates 2 layers — A hole near the top of the triangle mirrors across the diagonal fold line, producing 2 holes symmetrically placed about the diagonal.