

PRACTICE EXAM 6: CCAT SIMULATION

— 170 QUESTIONS

VERBAL BATTERY (Questions 1–57)

Verbal Analogies (Questions 1–19)

1. Author is to book as composer is to ____

- A. note
- B. piano
- C. orchestra
- D. symphony

2. Fire is to ash as wood is to ____

- A. log
- B. sawdust
- C. tree
- D. building

3. Acorn is to oak as tadpole is to ____

- A. pond
- B. tail
- C. frog
- D. egg

4. Spider is to web as bird is to ____

- A. nest
- B. egg
- C. wing
- D. branch

5. Hot is to scorching as cold is to ____

- A. cool
- B. freezing
- C. ice
- D. winter

6. Doctor is to stethoscope as carpenter is to ____

- A. wood
- B. nail
- C. house
- D. hammer

7. Petal is to flower as feather is to ____

- A. bird
- B. wing
- C. sky
- D. light

8. Whisper is to shout as crawl is to ____

- A. baby
- B. walk
- C. run
- D. tired

9. Captain is to ship as pilot is to ____

- A. sky
- B. airplane
- C. passenger
- D. uniform

10. Telescope is to stars as microscope is to ____

- A. lens
- B. scientist
- C. small
- D. germs

11. Salt is to sea as sand is to ____

- A. shovel
- B. beach
- C. castle
- D. tiny

12. Bee is to hive as ant is to ____

- A. small
- B. picnic
- C. anthill
- D. queen

13. Lion is to pride as wolf is to ____

- A. pack
- B. forest
- C. howl
- D. fang

14. Cup is to handle as door is to ____

- A. wood
- B. knob
- C. window
- D. open

15. Pen is to paper as chalk is to ____

- A. teacher
- B. writing
- C. white
- D. blackboard

16. Hen is to chick as cow is to ____

- A. milk
- B. calf
- C. barn
- D. moo

17. Hat is to head as ring is to ____

- A. gold
- B. wedding
- C. shiny
- D. finger

18. Bicycle is to pedals as car is to ____

- A. wheels
- B. engine
- C. driver
- D. roads

19. Photographer is to camera as writer is to ____

- A. book
- B. story
- C. pen
- D. paper

Sentence Completion (Questions 20–38)

20. After the heavy rains stopped at last, the river began to ___ slowly back to its normal level, leaving wet mud and small puddles along the banks.

- A. drop
- B. flood
- C. rise
- D. freeze

21. Even though the actors had practised the play for many weeks, the leading actress still felt ___ as the curtain began to rise on opening night.

- A. brave
- B. nervous
- C. bored
- D. tired

22. The mountain climbers moved very carefully along the narrow rocky ledge, ___ to look down at the deep valley far below them.

- A. afraid
- B. excited
- C. eager
- D. happy

23. Because the chef had forgotten to add salt and pepper to the soup, every single bite tasted strangely ___ to the dinner guests.

- A. spicy

- B. bland
- C. sweet
- D. burnt

24. The newborn lamb tried to stand for the very first time, wobbled twice on the straw, and finally ___ on its thin legs to find its mother.

- A. fell
- B. ran
- C. balanced
- D. slept

25. Although the magician had performed the trick a hundred times before, the audience still ___ in surprise when the white rabbit appeared from inside the hat.

- A. cried
- B. gasped
- C. left
- D. yawned

26. After spending the whole afternoon picking ripe berries under the hot summer sun, the children were ___ when their grandmother brought out a cold pitcher of lemonade.

- A. angry
- B. confused
- C. cold
- D. grateful

27. Because the puzzle had over five hundred tiny pieces of clouds and sky that all looked alike, finding the correct match for each one required ___ and patience.

- A. speed
- B. focus
- C. luck
- D. noise

28. The thick fog that had settled over the harbour that morning was so ____ that the lighthouse keeper could barely see his own hand held out in front of him.

- A. thin
- B. soft
- C. light
- D. dense

29. Even though the storm had knocked out all the power on the whole street, the family found their old candles and made the dark living room feel ____ again.

- A. scary
- B. silent
- C. cozy
- D. cold

30. The young chess player studied the board very carefully and then made her next move with quiet ____, knowing that she had planned three full steps ahead.

- A. confidence
- B. fear
- C. doubt
- D. surprise

31. Although the puppy had been told many times not to dig in the vegetable garden, the soft fresh earth turned out to be simply too ___ to resist.

- A. dry
- B. hard
- C. cold
- D. tempting

32. After walking through the dark forest for over an hour without seeing a single trail marker, the hikers were ___ to spot the bright opening of the meadow up ahead.

- A. sad
- B. relieved
- C. angry
- D. surprised

33. The librarian spoke in such a gentle voice that even the noisiest children would ___ down to listen whenever she began to read from a new storybook.

- A. stand
- B. wake
- C. settle
- D. shout

34. Because the winding road through the mountains had so many sharp turns and hairpin bends, the bus driver had to ___ the wheel constantly without resting his hands.

- A. steer
- B. push
- C. release

D. break

35. The old wooden bridge creaked loudly and ___ slightly under their weight, but it held firm as the whole family crossed safely to the other side of the stream.

A. shouted

B. swayed

C. froze

D. sang

36. Even after the museum officially closed its doors at five o'clock, one ___ visitor remained inside, lost in quiet thought before a single painting on the back wall.

A. lone

B. noisy

C. quick

D. tired

37. The chess match had been going for nearly three full hours and neither player had ___ a single piece from the other, making it the longest game of the entire tournament.

A. cleaned

B. captured

C. dropped

D. counted

38. Although the small leather suitcase looked easy enough to carry up the stairs, it turned out to be so ___ that both children had to lift it together using all four hands.

A. tiny

- B. soft
- C. fragile
- D. heavy

Verbal Classification (Questions 39–57)

39. mountain, hill, valley

- A. river
- B. cliff
- C. lake
- D. cloud

40. lamp, candle, lantern

- A. switch
- B. shadow
- C. bulb
- D. torch

41. boil, fry, bake

- A. wash
- B. cut
- C. roast
- D. peel

42. telescope, binoculars, magnifying glass

- A. mirror
- B. camera
- C. window
- D. microscope

43. stamp, postcard, letter

- A. mailbox
- B. envelope
- C. address
- D. street

44. coat, scarf, mittens

- A. hat
- B. swimsuit
- C. shorts
- D. sandals

45. Tuesday, Thursday, Saturday

- A. month
- B. April
- C. weekend
- D. Sunday

46. horse, cow, pig

- A. lion
- B. sheep
- C. tiger
- D. eagle

47. marble, granite, slate

- A. wood
- B. metal
- C. limestone
- D. plastic

48. tongue, teeth, lips

- A. nose
- B. ear
- C. eyebrow
- D. gums

49. violin, viola, cello

- A. piano
- B. double bass
- C. drums
- D. flute

50. Toronto, Vancouver, Montreal

- A. London
- B. Paris
- C. Tokyo
- D. Calgary

51. Venus, Earth, Mars

- A. Saturn
- B. moon
- C. star
- D. comet

52. Egypt, Italy, Japan

- A. continent
- B. city
- C. Brazil
- D. ocean

53. needle, thread, scissors

- A. pin
- B. hammer
- C. fork
- D. brush

54. January, March, May

- A. winter
- B. week
- C. day
- D. July

55. guitar, ukulele, banjo

- A. mandolin
- B. drum
- C. flute
- D. trumpet

56. rake, hoe, shovel

- A. saw
- B. pencil
- C. trowel
- D. spoon

57. north, south, east

- A. up
- B. left
- C. middle
- D. west

QUANTITATIVE BATTERY (Questions 58–114)

Number Analogies (Questions 58–76)

58. $[2 \rightarrow 18] [3 \rightarrow 27] [6 \rightarrow ?]$

- A. 48
- B. 50
- C. 54
- D. 60

59. $[1 \rightarrow 9] [2 \rightarrow 16] [3 \rightarrow ?]$

- A. 20
- B. 21
- C. 22
- D. 23

60. $[22 \rightarrow 2] [33 \rightarrow 3] [55 \rightarrow ?]$

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

61. $[2 \rightarrow 5] [3 \rightarrow 8] [4 \rightarrow ?]$

- A. 11

- B. 10
- C. 12
- D. 13

62. $[1 \rightarrow 11] [2 \rightarrow 13] [3 \rightarrow ?]$

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

63. $[1 \rightarrow 7] [2 \rightarrow 11] [3 \rightarrow ?]$

- A. 15
- B. 14
- C. 16
- D. 17

64. $[1 \rightarrow 1] [2 \rightarrow 8] [3 \rightarrow ?]$

- A. 21
- B. 24
- C. 27
- D. 30

65. $[3 \rightarrow 33] [4 \rightarrow 44] [5 \rightarrow ?]$

- A. 45

B. 50

C. 52

D. 55

66. $[1 \rightarrow 10] [2 \rightarrow 19] [3 \rightarrow ?]$

A. 28

B. 27

C. 26

D. 29

67. $[1 \rightarrow 8] [2 \rightarrow 13] [3 \rightarrow ?]$

A. 15

B. 16

C. 17

D. 18

68. $[1 \rightarrow 8] [2 \rightarrow 14] [3 \rightarrow ?]$

A. 18

B. 20

C. 22

D. 24

69. $[2 \rightarrow 13] [3 \rightarrow 20] [4 \rightarrow ?]$

A. 25

B. 26

C. 27

D. 28

70. $[1 \rightarrow 10] [2 \rightarrow 14] [3 \rightarrow ?]$

A. 18

B. 17

C. 19

D. 20

71. $[2 \rightarrow 15] [3 \rightarrow 23] [4 \rightarrow ?]$

A. 28

B. 29

C. 30

D. 31

72. $[2 \rightarrow 6] [3 \rightarrow 12] [4 \rightarrow ?]$

A. 18

B. 20

C. 22

D. 24

73. $[2 \rightarrow 17] [3 \rightarrow 26] [4 \rightarrow ?]$

A. 32

- B. 33
- C. 34
- D. 35

74. $[2 \rightarrow 24] [3 \rightarrow 36] [4 \rightarrow ?]$

- A. 48
- B. 46
- C. 44
- D. 50

75. $[1 \rightarrow 9] [2 \rightarrow 15] [3 \rightarrow ?]$

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

76. $[1 \rightarrow 10] [2 \rightarrow 18] [3 \rightarrow ?]$

- A. 26
- B. 24
- C. 25
- D. 27

Number Puzzles (Questions 77–95)

77. $? - 19 = 24$

- A. 41
- B. 42
- C. 43
- D. 44

78. $9 \times ? = 72$

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

79. $? + 35 = 80$

- A. 40
- B. 45
- C. 50
- D. 55

80. $84 \div ? = 12$

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

81. $7 \times ? = 63$

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

82. $? - 37 = 15$

- A. 52
- B. 53
- C. 54
- D. 55

83. $144 \div ? = 12$

- A. 10
- B. 11
- C. 12
- D. 13

84. $? + 58 = 100$

- A. 42
- B. 44
- C. 46
- D. 48

85. $8 \times ? = 72$

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

86. $11 \times ? + 2 = 46$

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

87. $? - 44 = 29$

- A. 71
- B. 72
- C. 73
- D. 74

88. $100 - ? = 37$

- A. 63
- B. 65
- C. 67
- D. 69

89. $? + 8 + 12 = 50$

- A. 28
- B. 29
- C. 30
- D. 32

90. $132 \div ? = 11$

- A. 10
- B. 11
- C. 13
- D. 12

91. $12 \times ? = 84$

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

92. $? - 29 = 33$

- A. 60
- B. 61
- C. 62
- D. 63

93. $8 \times ? - 5 = 43$

- A. 5
- B. 6
- C. 7
- D. 8

94. $? + 47 = 92$

- A. 41
- B. 43
- C. 47
- D. 45

95. $110 - ? = 58$

- A. 48
- B. 50
- C. 52
- D. 54

Number Series (Questions 96–114)

96. 7, 21, 35, 49, ____

- A. 63
- B. 62
- C. 65
- D. 70

97. 84, 71, 58, 45, ____

A. 30

B. 33

C. 35

D. 32

98. 1, 5, 13, 29, ____

A. 55

B. 61

C. 63

D. 67

99. 1, 3, 6, 10, 15, 21, ____

A. 24

B. 25

C. 26

D. 28

100. 2, 5, 10, 17, 26, ____

A. 35

B. 37

C. 39

D. 42

101. 100, 82, 64, 46, ____

A. 28

B. 30

C. 26

D. 24

102. 1, 3, 9, 27, 81, ____

A. 162

B. 200

C. 216

D. 243

103. 2, 20, 4, 18, 6, 16, ____

A. 7

B. 8

C. 14

D. 10

104. 2, 4, 8, 14, 22, 32, ____

A. 40

B. 42

C. 44

D. 46

105. 8, 25, 42, 59, ____

- A. 74
- B. 76
- C. 78
- D. 80

106. 2, 4, 10, 28, ____

- A. 70
- B. 78
- C. 80
- D. 82

107. 98, 82, 66, 50, ____

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

108. 3, 5, 9, 17, 33, ____

- A. 60
- B. 63
- C. 65
- D. 70

109. 2, 5, 7, 12, 19, 31, ____

A. 50

B. 48

C. 52

D. 55

110. 729, 243, 81, 27, ____

A. 8

B. 9

C. 10

D. 12

111. 1, 4, 9, 16, 25, 36, ____

A. 42

B. 45

C. 48

D. 49

112. 11, 30, 49, 68, ____

A. 87

B. 85

C. 89

D. 90

113. 2, 6, 12, 20, 30, ____

- A. 36
- B. 40
- C. 42
- D. 45

114. 1, 25, 4, 22, 9, 19, ____

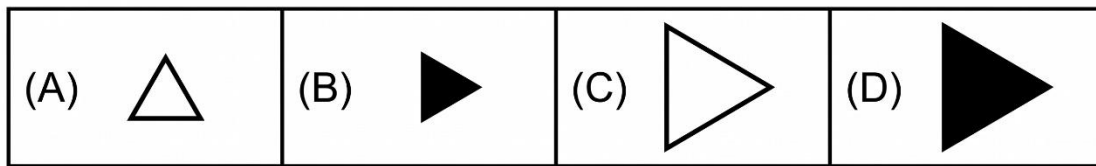
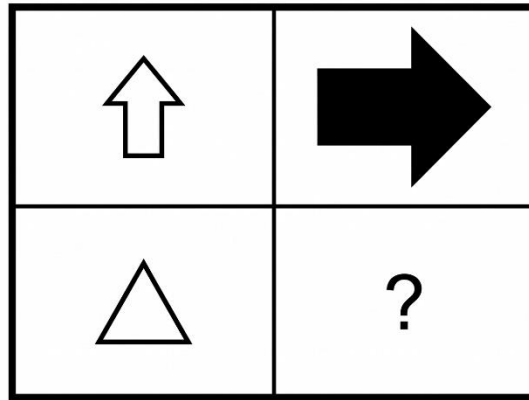
- A. 12
- B. 16
- C. 14
- D. 18

NONVERBAL BATTERY (Questions 115–170)

Figure Matrices (Questions 115–133)

115. Which figure completes the matrix?

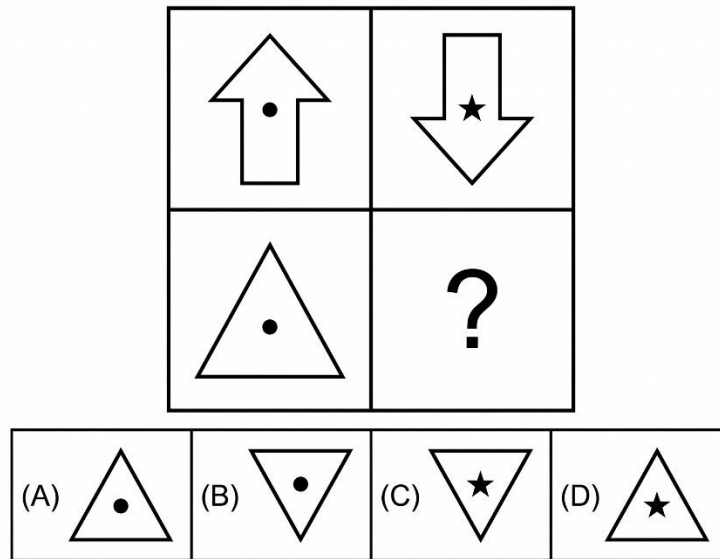
Figure PQ-1



- A. a small outlined triangle pointing upward
- B. a small solid black triangle pointing rightward
- C. a large outlined triangle pointing rightward
- D. a large solid black triangle pointing rightward

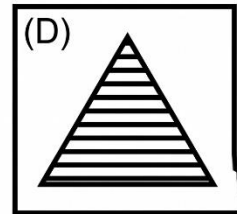
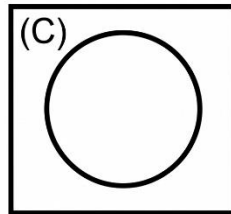
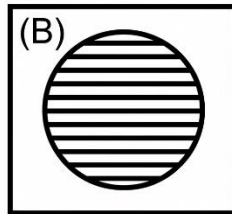
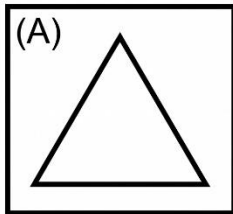
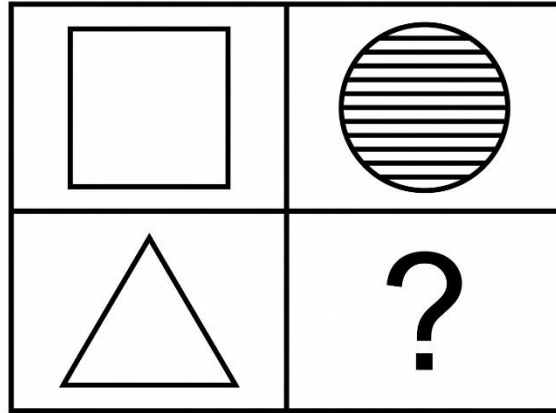
116. Which figure completes the matrix?

[Figure PQ-2]



- A. an upward triangle with a dot inside
- B. a downward triangle with a dot inside
- C. a downward triangle with a star inside
- D. an upward triangle with a star inside

117. Which figure completes the matrix?



- A. a plain triangle
- B. a striped circle
- C. a plain circle
- D. a striped triangle

118. Which figure completes the matrix?

Figure PQ-4

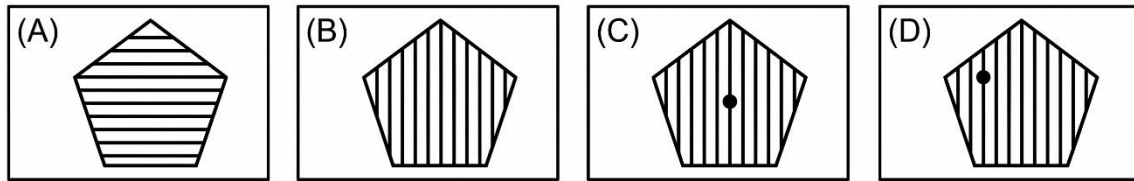
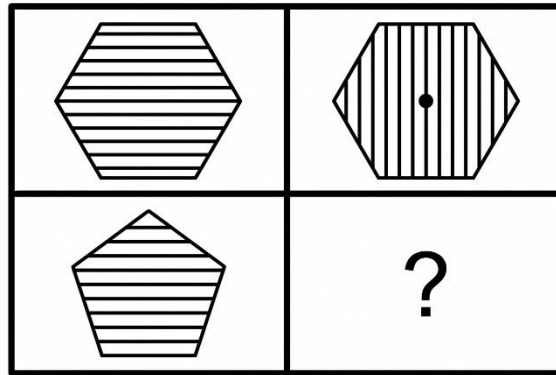
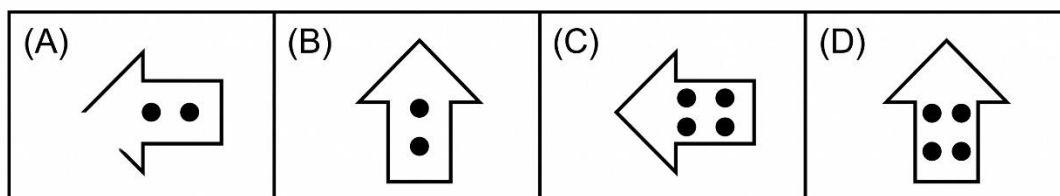
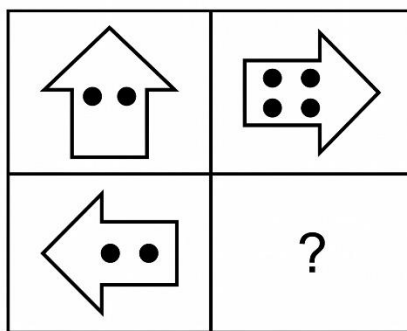


Figure PQ-4

- A. a pentagon with horizontal stripes
- B. a pentagon with vertical stripes only
- C. a pentagon with vertical stripes and a centre dot
- D. a pentagon with vertical stripes and a corner dot

119. Which figure completes the matrix?

[Figure PQ-5]



- A. a leftward arrow with 2 dots
- B. an upward arrow with 2 dots
- C. a leftward arrow with 4 dots
- D. an upward arrow with 4 dots

120. Which figure completes the matrix?

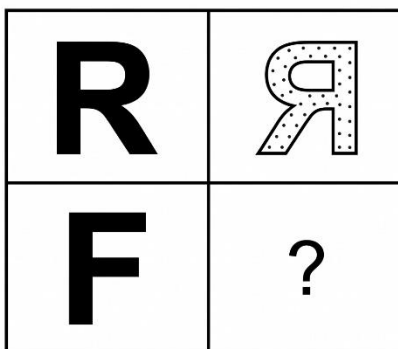
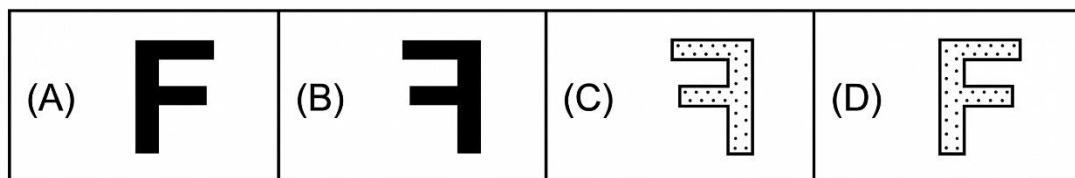


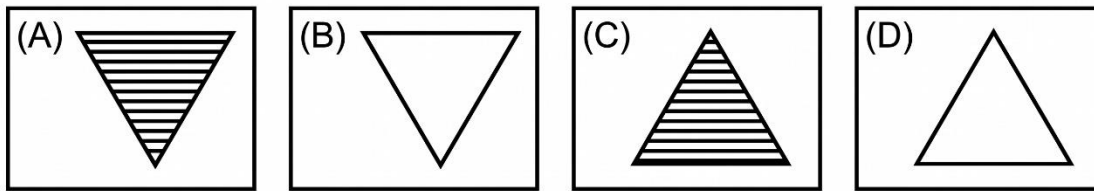
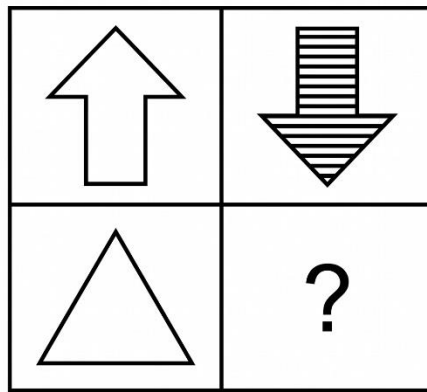
Figure PQ-6



- A. an upright solid letter F
- B. a mirror-image solid letter F
- C. a mirror-image dotted letter F
- D. an upright dotted letter F

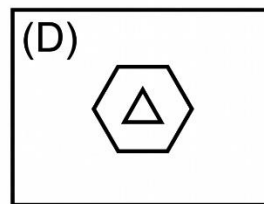
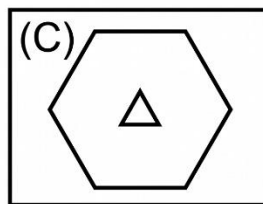
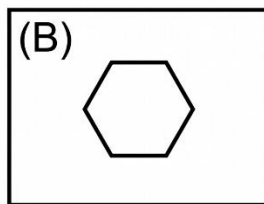
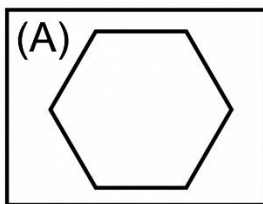
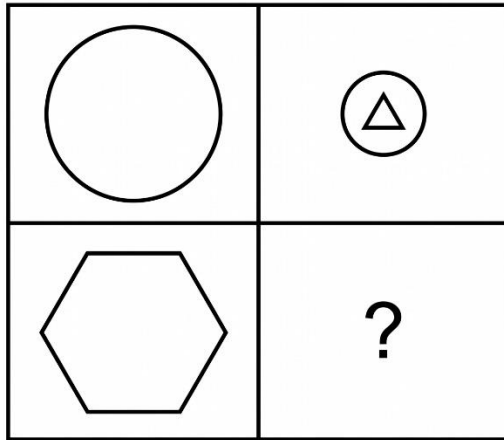
121. Which figure completes the matrix?

Figure PQ-7



- A. a striped triangle pointing downward
- B. an outlined triangle pointing downward
- C. a striped triangle pointing upward
- D. an outlined triangle pointing upward

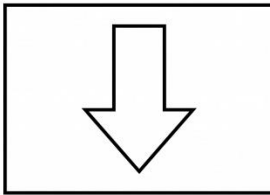
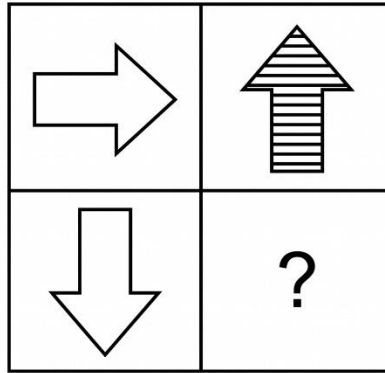
122. Which figure completes the matrix?



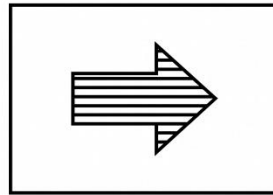
- A. a large plain hexagon
- B. a small plain hexagon
- C. a large hexagon with a triangle
- D. a small hexagon with a triangle

123. Which figure completes the matrix?

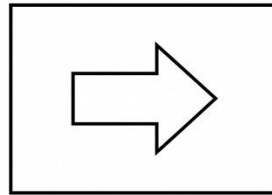
Figure PQ-9:



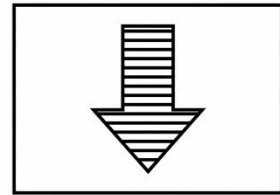
(A)



(B)



(C)



(D)

- A. a plain arrow pointing downward
- B. a striped arrow pointing rightward
- C. a plain arrow pointing rightward
- D. a striped arrow pointing downward

124. Which figure completes the matrix?

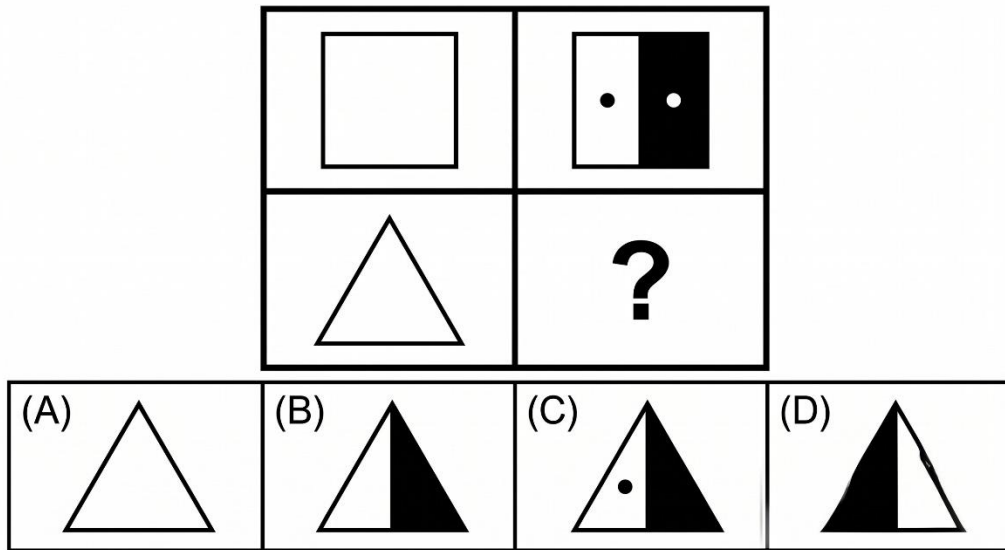


Figure PQ-10

- A. a plain triangle
- B. a triangle with right half black only
- C. a triangle with right half black and a left-side dot
- D. a triangle with left half black

125. Which figure completes the matrix?

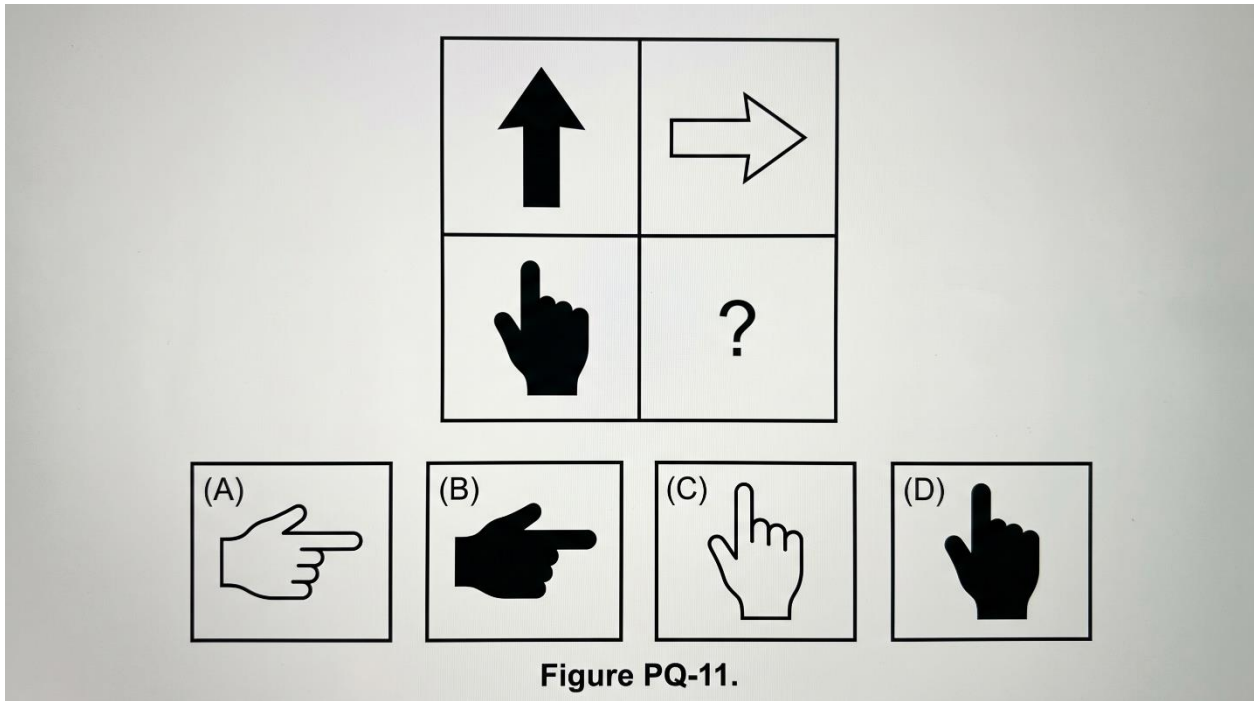
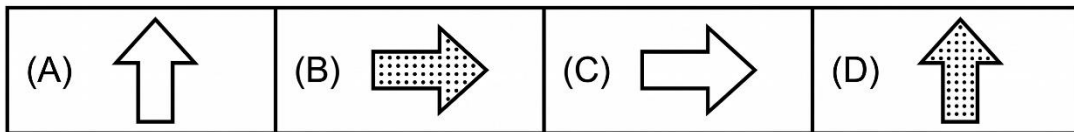
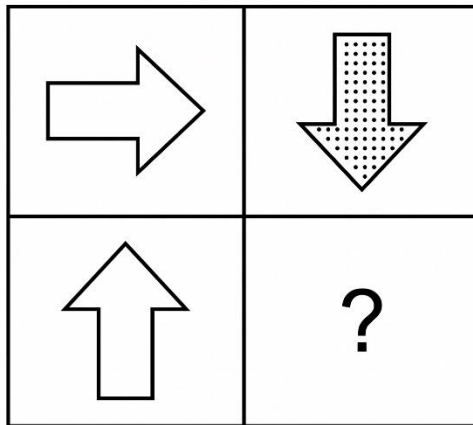


Figure PQ-11.

- A. an outlined hand pointing rightward
- B. a solid hand pointing rightward
- C. an outlined hand pointing upward
- D. a solid hand pointing upward

126. Which figure completes the matrix?

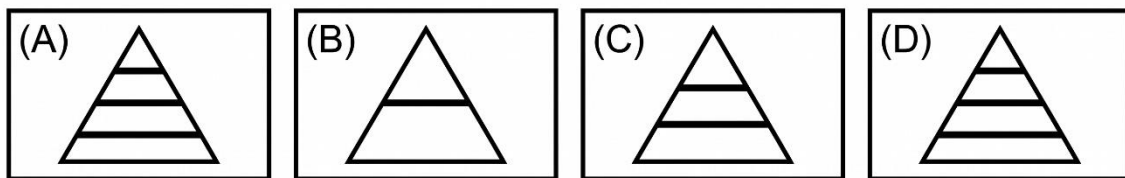
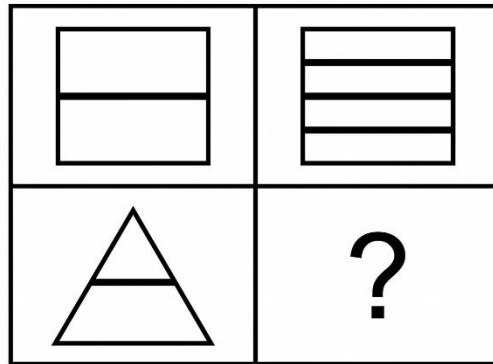
Figure PQ-12



- A. a plain upward arrow
- B. a dotted rightward arrow
- C. an outlined rightward arrow
- D. a dotted upward arrow

127. Which figure completes the matrix?

Figure PQ-13



- A. a triangle with 3 stripes
- B. a triangle with 1 stripe
- C. a triangle with 2 stripes
- D. a triangle with 4 stripes

128. Which figure completes the matrix?

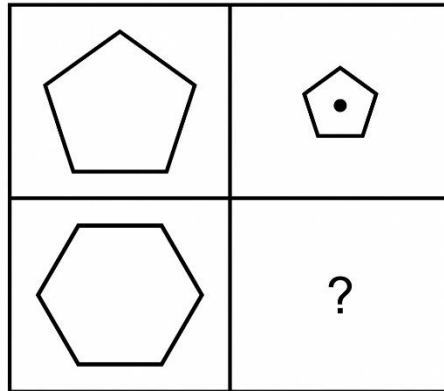
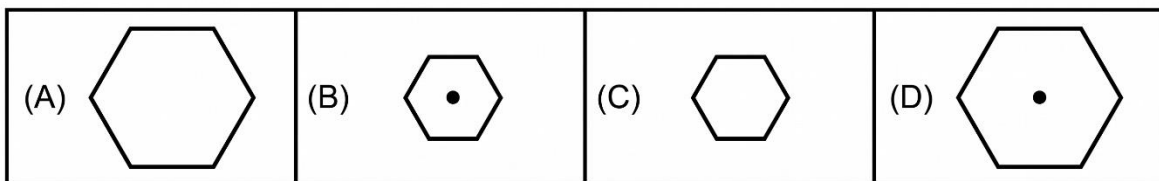


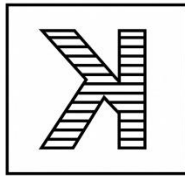
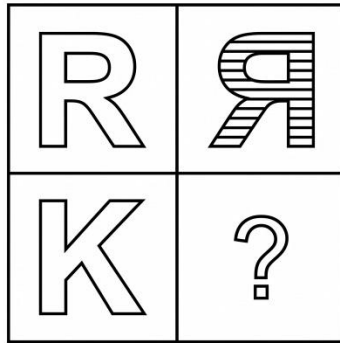
Figure PQ-14



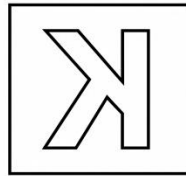
- A. a large plain hexagon
- B. a small hexagon with a centre dot
- C. a small plain hexagon
- D. a large hexagon with a centre dot

129. Which figure completes the matrix?

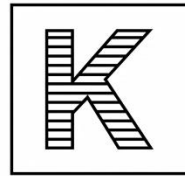
[Figure PQ-15: Clean black-line technical diagram on white background.]



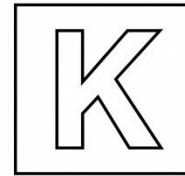
(A)



(B)



(C)

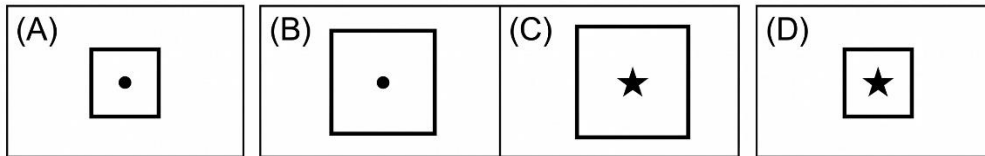
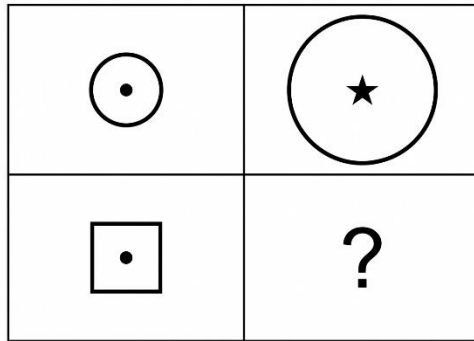


(D)

- A. a striped mirror-image letter K
- B. an outlined mirror-image letter K only
- C. a striped upright letter K
- D. an upright letter K

130. Which figure completes the matrix?

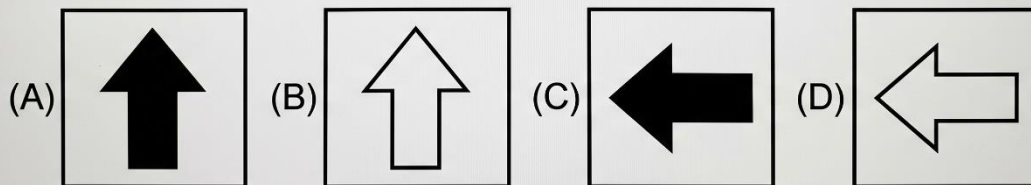
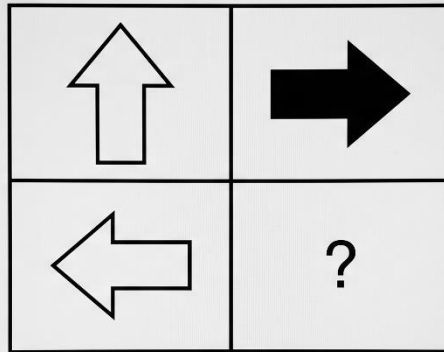
[Figure PQ-16]



- A. a small square with a dot
- B. a large square with a dot
- C. a large square with a star
- D. a small square with a star

131. Which figure completes the matrix?

Figure PQ-17



- A. a solid arrow pointing upward
- B. an outlined arrow pointing upward
- C. a solid arrow pointing leftward
- D. an outlined arrow pointing leftward

132. Which figure completes the matrix?

Figure PQ-18

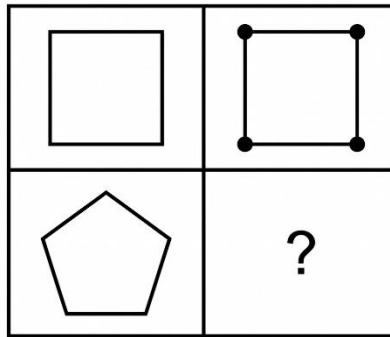
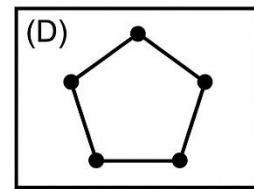
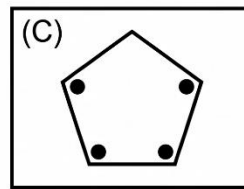
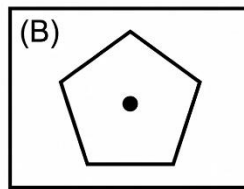
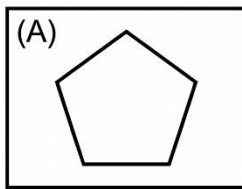


Figure PQ-18



- A. a plain pentagon
- B. a pentagon with a centre dot only
- C. a pentagon with 2 dots
- D. a pentagon with dots at all 5 corners

133. Which figure completes the matrix?

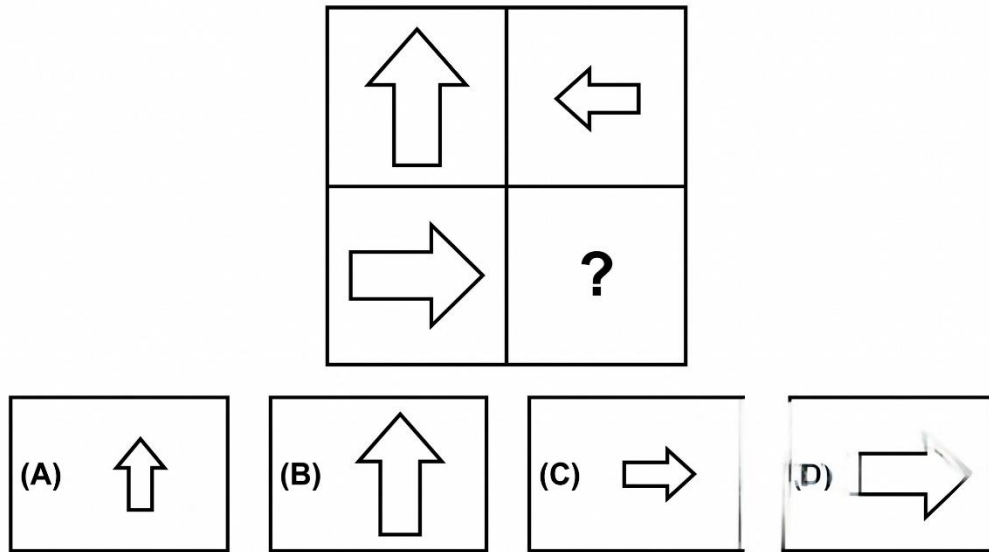


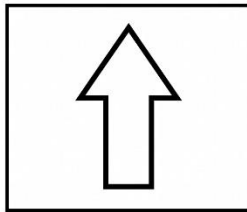
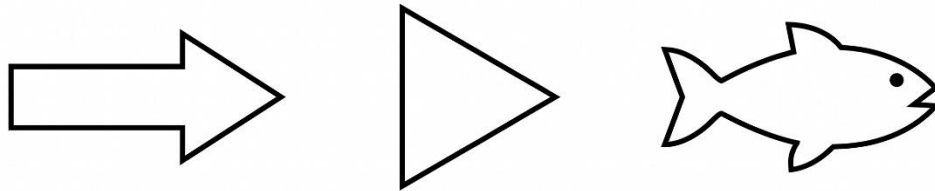
Figure PQ-19

- A. a small upward arrow
- B. a large upward arrow
- C. a small rightward arrow
- D. a large rightward arrow

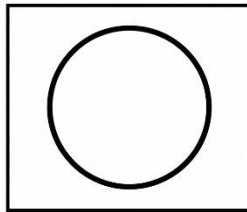
Figure Classification (Questions 134–152)

134. Which figure belongs with the three given figures?

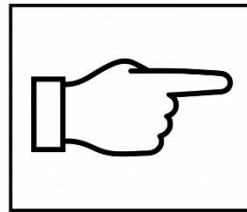
Figure PQ-20



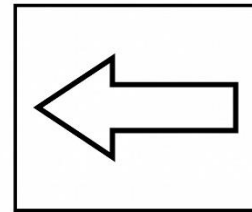
(A)



(B)



(C)



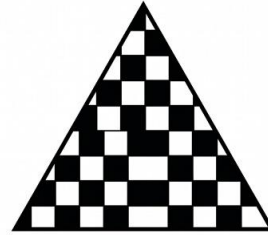
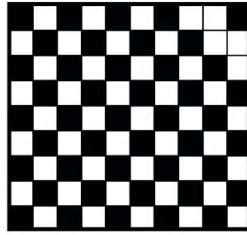
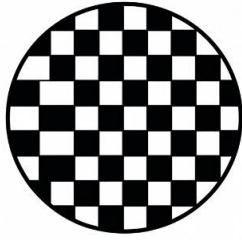
(D)

- A. an arrow pointing upward
- B. a plain circle
- C. a hand pointing rightward
- D. an arrow pointing leftward

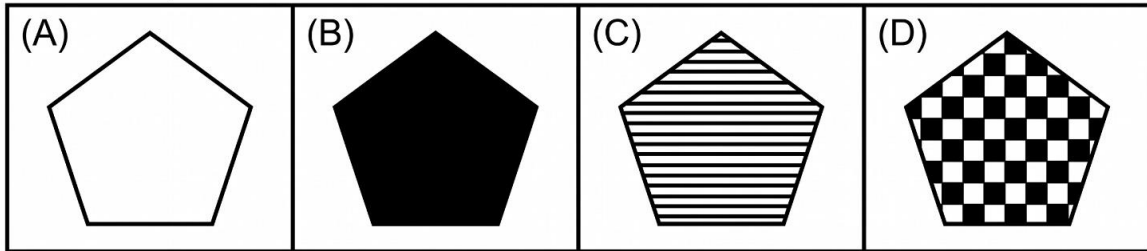
135. Which figure belongs with the three given figures?

[Figure PQ-21]

Given:



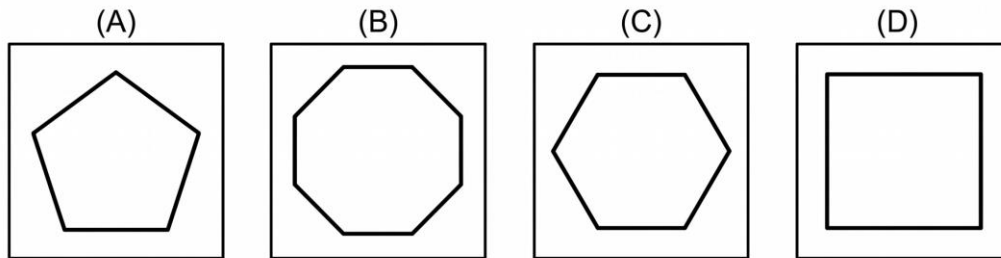
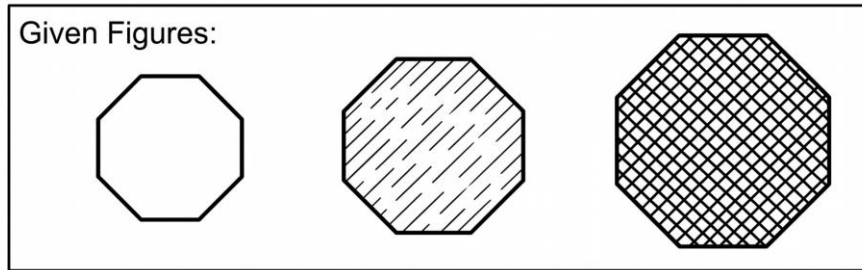
Answer-option:



- A. a plain pentagon
- B. a solid black pentagon
- C. a striped pentagon
- D. a checkered pentagon

136. Which figure belongs with the three given figures?

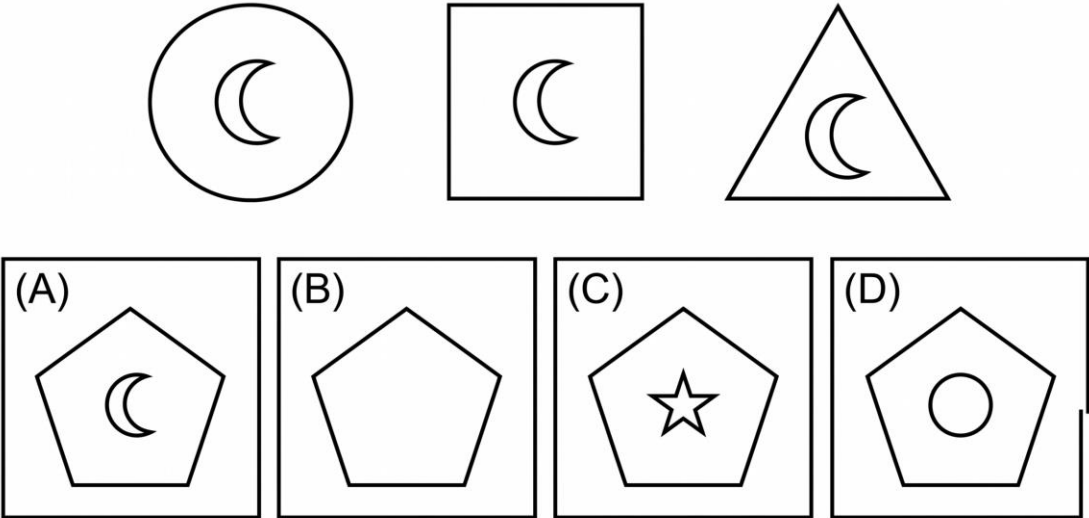
Figure PQ-22



- A. a pentagon
- B. an octagon at an angle
- C. a hexagon
- D. a square

137. Which figure belongs with the three given figures?

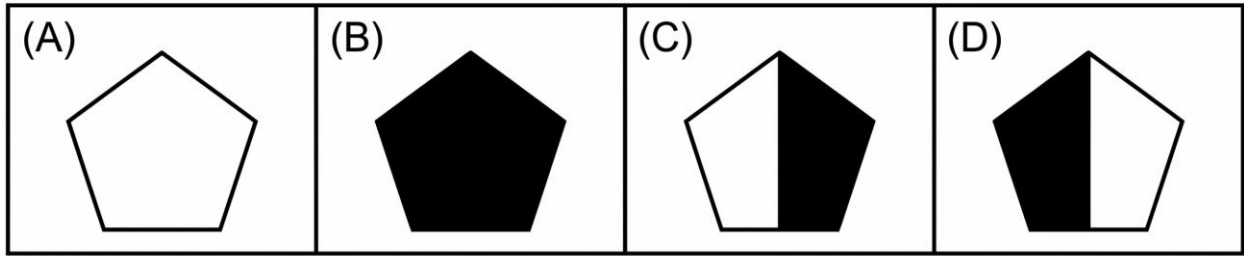
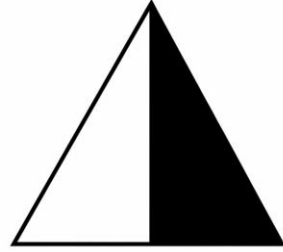
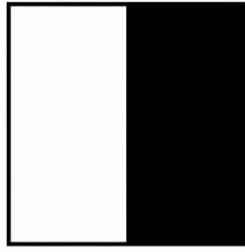
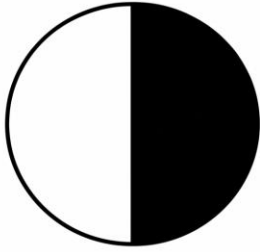
Figure PQ-23



- A. a pentagon with a crescent inside
- B. a plain pentagon
- C. a pentagon with a star inside
- D. a pentagon with a circle inside

138. Which figure belongs with the three given figures?

Figure PQ-24

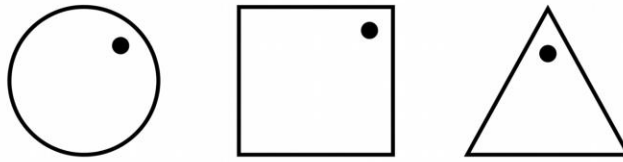


- A. a plain pentagon
- B. a solid black pentagon
- C. a pentagon with right half black
- D. a pentagon with left half black

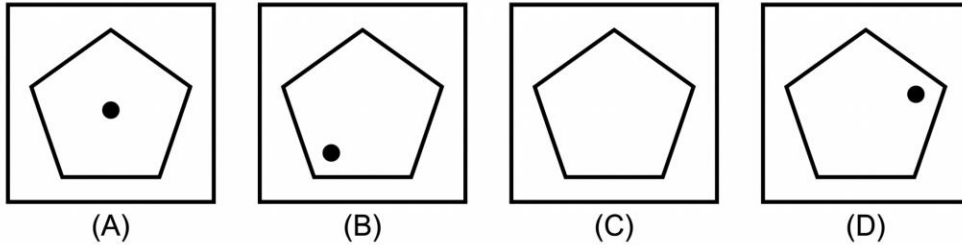
139. Which figure belongs with the three given figures?

[Figure PQ-25: Technical Diagram]

Given Figures (3)



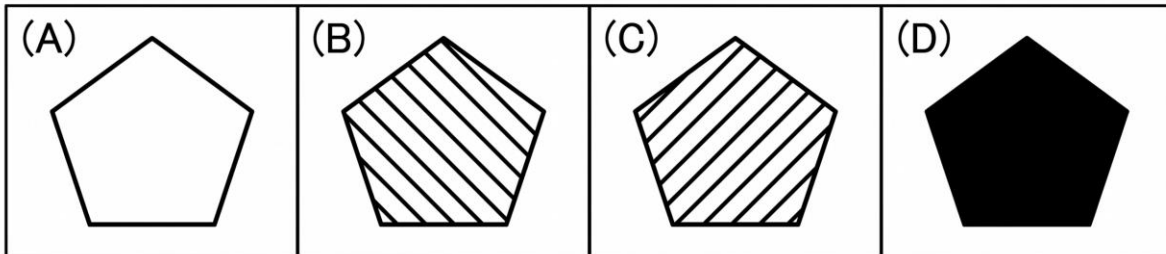
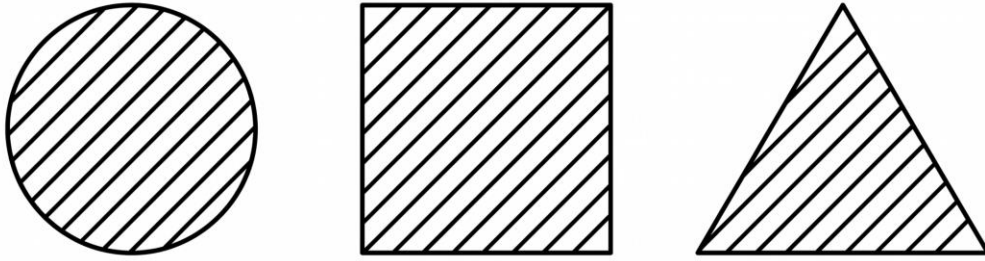
Answer-Option Boxes (4)



- A. a pentagon with dot at centre
- B. a pentagon with dot in lower-left
- C. a plain pentagon
- D. a pentagon with dot in upper-right

140. Which figure belongs with the three given figures?

[Figure PQ-26]

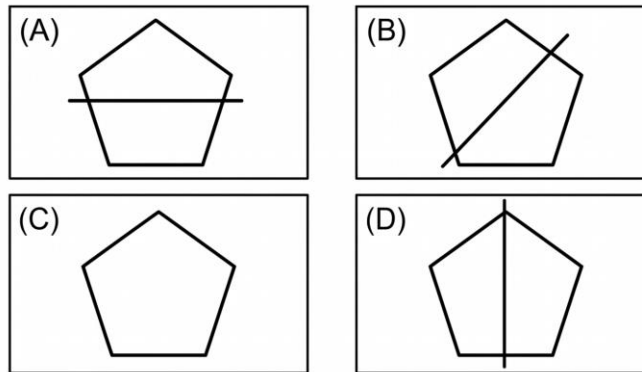
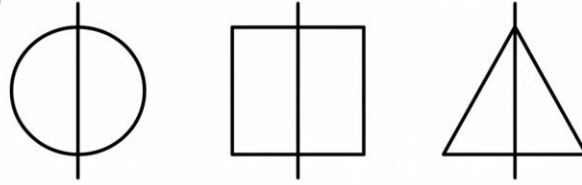


- A. a plain pentagon
- B. a pentagon with opposite diagonals
- C. a pentagon with matching diagonal stripes
- D. a solid black pentagon

141. Which figure belongs with the three given figures?

Figure PQ-27: Pattern Analogy Problem

Examples:



- A. a pentagon with horizontal line
- B. a pentagon with diagonal line
- C. a plain pentagon
- D. a pentagon with vertical line

142. Which figure belongs with the three given figures?

FIGURE PQ-28

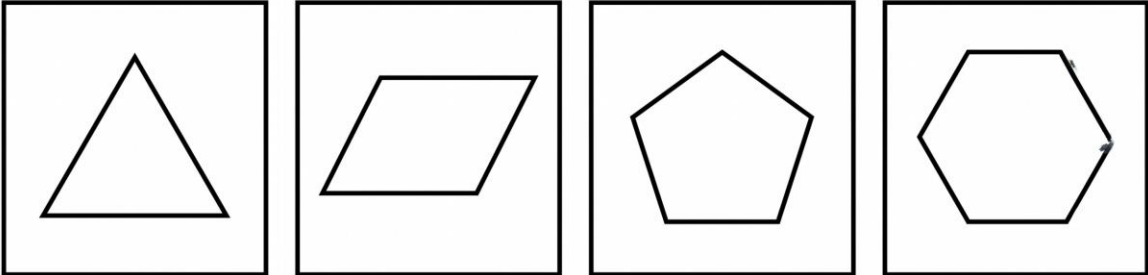


(A)

(B)

(C)

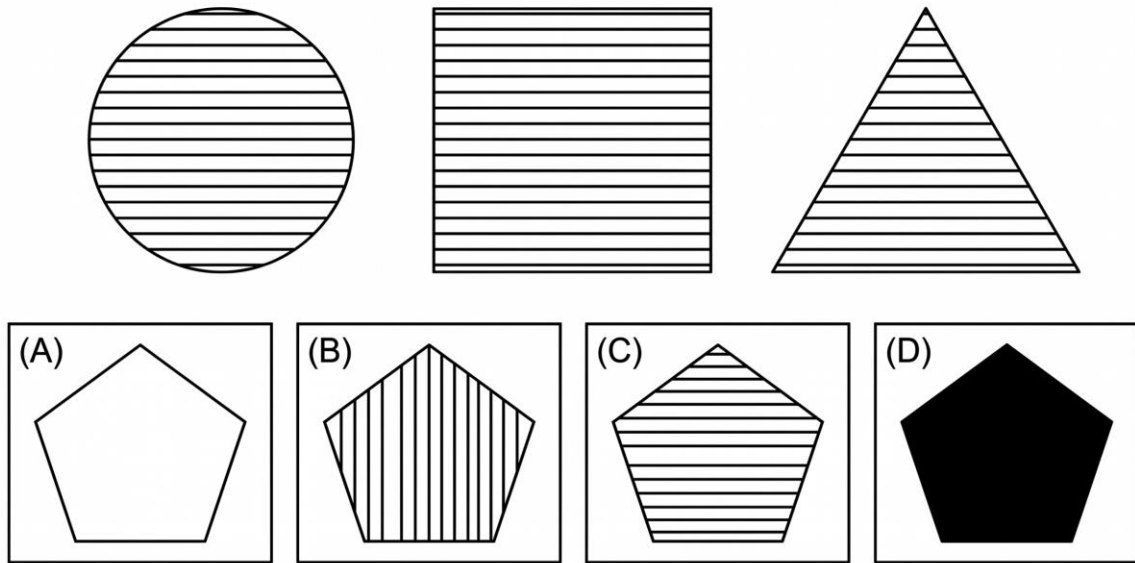
(D)



- A. a triangle
- B. a parallelogram
- C. a pentagon
- D. a hexagon

143. Which figure belongs with the three given figures?

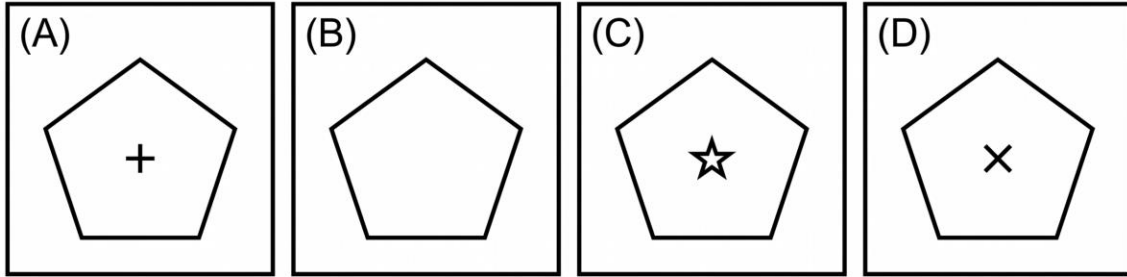
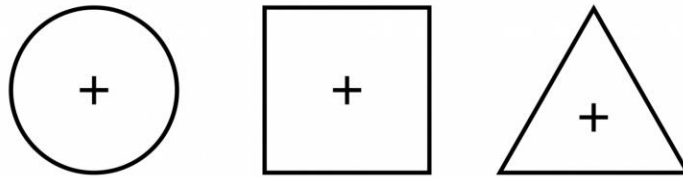
[Figure PQ-29: Clean black-line technical diagram on white background]



- A. a plain pentagon
- B. a pentagon with vertical stripes
- C. a pentagon with horizontal stripes
- D. a solid black pentagon

144. Which figure belongs with the three given figures?

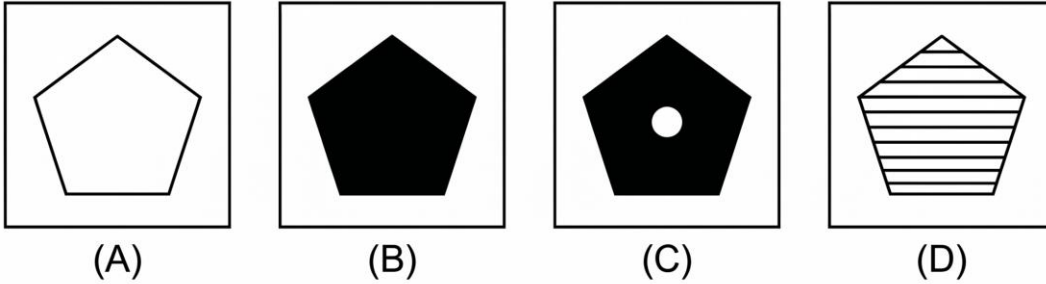
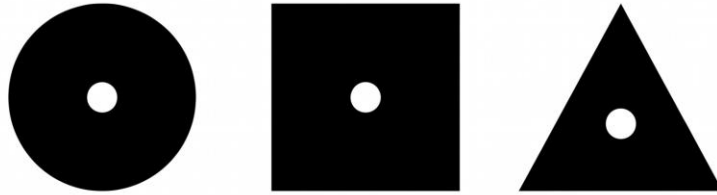
Figure PQ-30



- A. a pentagon with a plus sign
- B. a plain pentagon
- C. a pentagon with a star
- D. a pentagon with an X mark

145. Which figure belongs with the three given figures?

Figure PQ-31

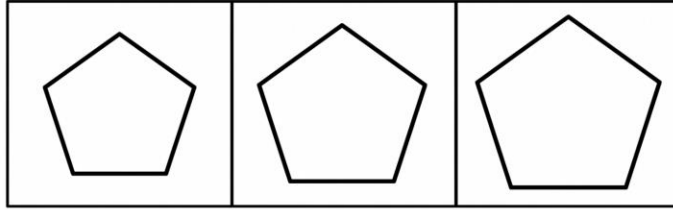


- A. a plain pentagon
- B. a fully solid pentagon
- C. a solid pentagon with a white circle
- D. a striped pentagon

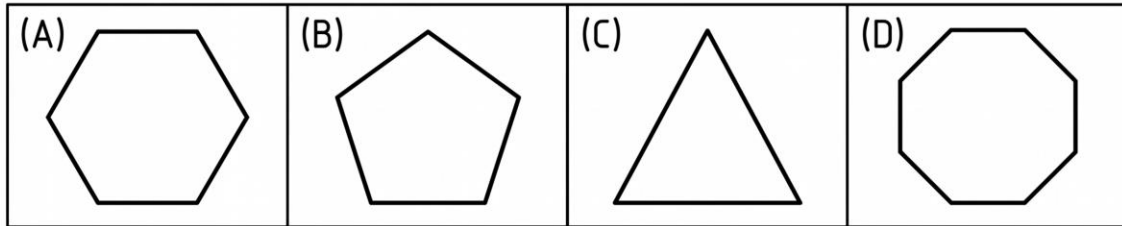
146. Which figure belongs with the three given figures?

Figure PQ-32

Given Figures:



Answer-Option Boxes:

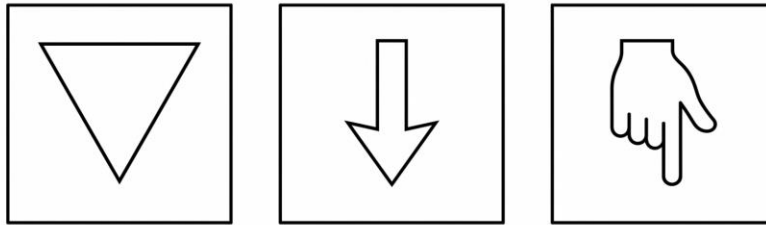


+

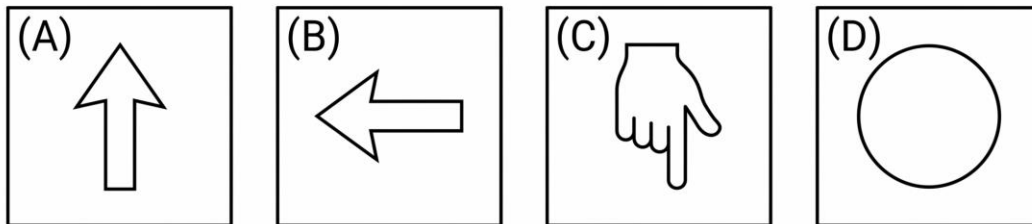
- A. a hexagon
- B. a pentagon at an angle
- C. a triangle
- D. an octagon

147. Which figure belongs with the three given figures?

Figure PQ-33



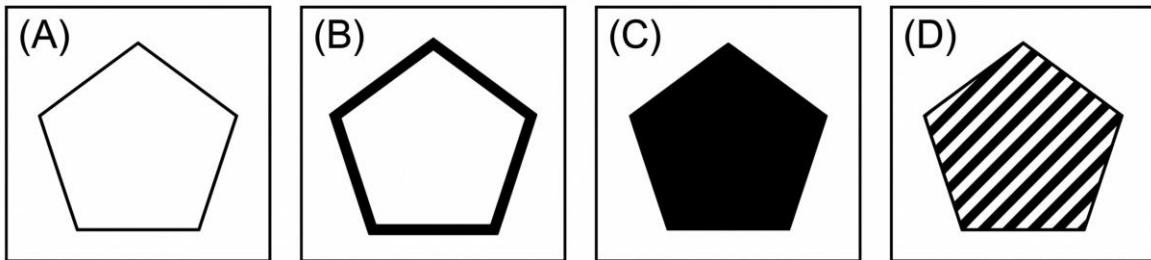
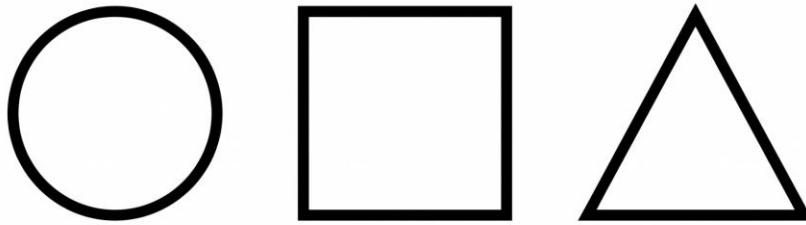
??



- A. an arrow pointing upward
- B. an arrow pointing leftward
- C. a hand pointing downward
- D. a plain circle

148. Which figure belongs with the three given figures?

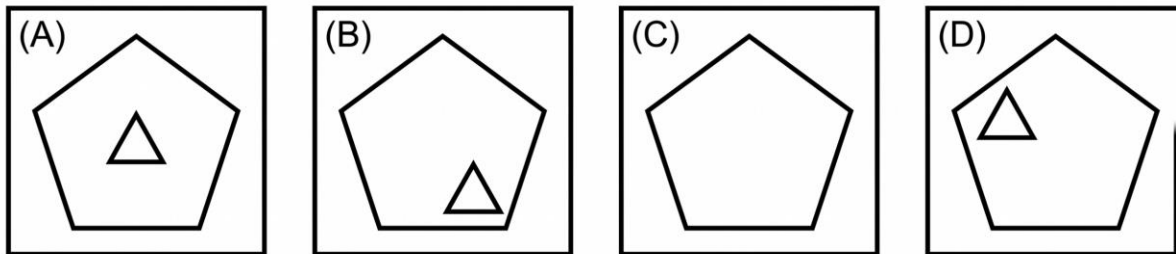
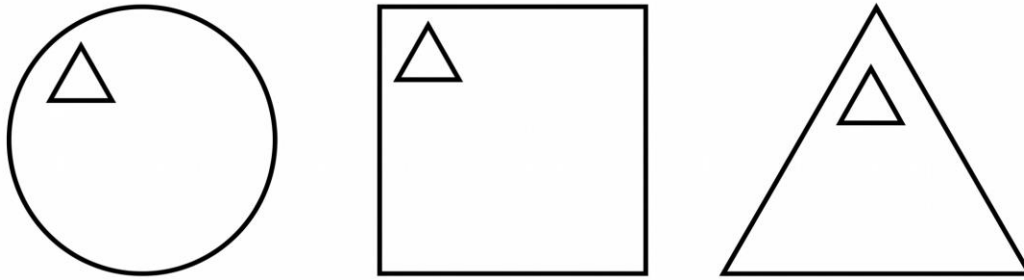
Figure PQ-34



- A. a thin-bordered pentagon
- B. a thick-bordered pentagon
- C. a solid black pentagon
- D. a striped pentagon

149. Which figure belongs with the three given figures?

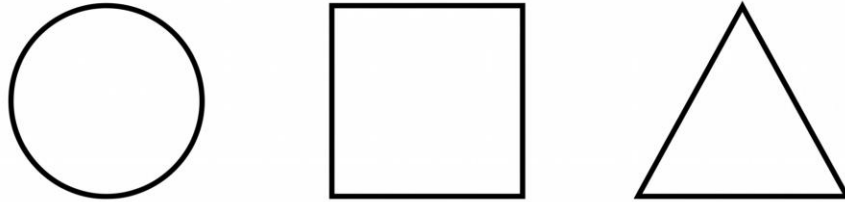
Figure PQ-35

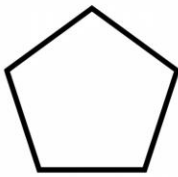

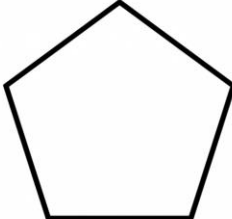



- A. a pentagon with triangle at centre
- B. a pentagon with triangle in lower-right
- C. a plain pentagon
- D. a pentagon with triangle in upper-left

150. Which figure belongs with the three given figures?

[Figure PQ-36]

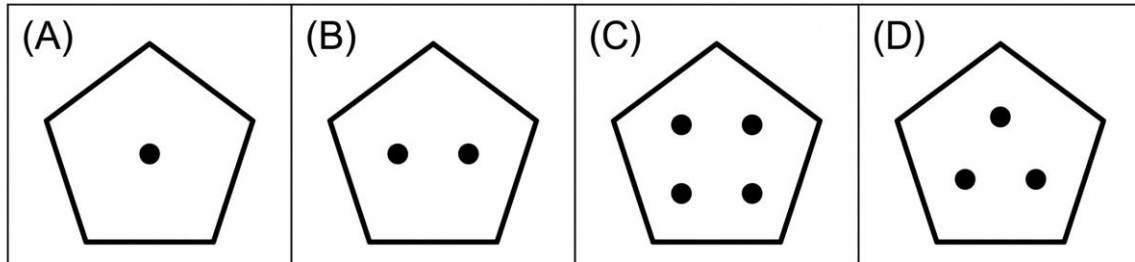
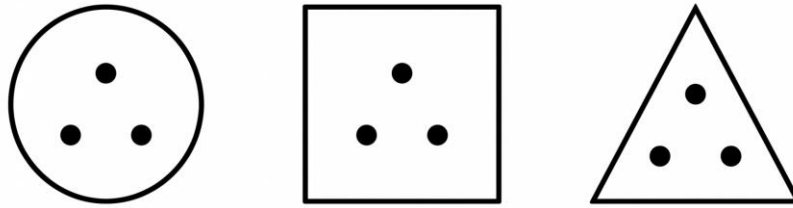


(A)	(B)	(C)	(D)
			

- A. a medium pentagon
- B. a small pentagon
- C. a large pentagon
- D. a very small pentagon

151. Which figure belongs with the three given figures?

[Figure PQ-37]



[Figure PQ-37]

- A. a pentagon with 1 dot
- B. a pentagon with 2 dots
- C. a pentagon with 4 dots
- D. a pentagon with 3 dots

152. Which figure belongs with the three given figures?

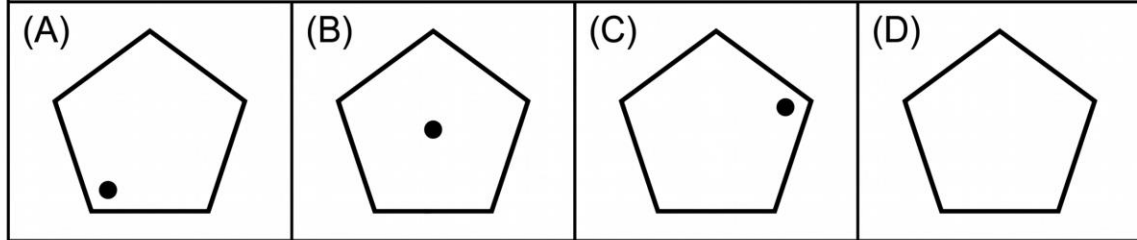
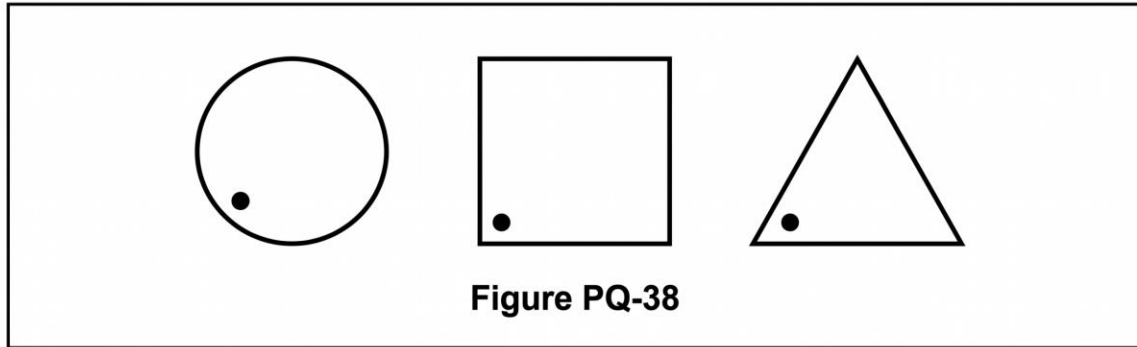


Figure PQ-38

- A. a pentagon with dot in lower-left
- B. a pentagon with dot at centre
- C. a pentagon with dot in upper-right
- D. a plain pentagon

Paper Folding (Questions 153–170)

153. A square sheet of paper is folded in half along a vertical line, with the right half folded over the left half. One hole is then punched through both layers at the centre of the folded shape — midway between top and bottom, and midway between the fold line and the left edge of the folded shape (not on the fold line itself). When the paper is fully unfolded, where will the holes appear?

- A. One hole at the centre of the paper only
- B. Two holes on the vertical centerline
- C. Two holes on the horizontal centerline of the paper, mirrored across the vertical middle
- D. Four holes around the centre

154. A square sheet of paper is folded along the diagonal that runs from the top-left corner to the bottom-right corner. The triangular half above the diagonal is folded down over the triangular half below the diagonal. One hole is then punched exactly on the diagonal fold edge itself, at the very midpoint of the diagonal. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the very centre of the paper
- B. Two holes mirrored across the diagonal
- C. Four holes spread around the centre
- D. Two holes at the diagonal endpoints

155. A square sheet of paper is folded in half along a horizontal line, with the bottom half folded up over the top half. One hole is then punched through both layers at the centre of the folded shape — midway between left and right, and midway between the top edge and the fold line of the folded shape (not on the fold). When the paper is fully unfolded, where will the holes appear?

- A. One hole at the centre of the paper only
- B. Two holes on the vertical centerline of the paper, mirrored across the horizontal middle
- C. Two holes on the horizontal centerline
- D. Four holes spread around the centre

156. A square sheet of paper is folded in half vertically (right half over left half), then folded in half horizontally (top half down over bottom half). The folded shape is a small square in the lower-left quadrant. One hole is then punched through all four layers near the lower-left corner of the folded shape, at the original paper's lower-left corner, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the lower-left corner only
- B. Two holes on the bottom edge
- C. Two holes on the left edge
- D. Four holes — one near each of the four corners of the paper

157. A square sheet of paper is folded in half along a vertical line, with the left half folded over the right half. One hole is then punched through both layers at the centre of the folded shape — midway between top and bottom, and midway between the fold line and the right edge of the folded shape (not on the fold). When the paper is fully unfolded, where will the holes appear?

- A. Two holes on the horizontal centerline of the paper, mirrored across the vertical middle
- B. One hole at the centre of the paper only
- C. Two holes on the vertical centerline
- D. Four holes around the centre

158. A square sheet of paper is folded along the diagonal that runs from the top-left corner to the bottom-right corner. The triangular half above the diagonal is folded down over the triangular half below the diagonal. One hole is then punched approximately in the middle of the folded triangle, well away from the diagonal fold edge. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the centre of the paper
- B. Two holes symmetric across the diagonal — one in the upper-right interior and one in the lower-left interior of the paper
- C. Two holes at the diagonal endpoints
- D. Four holes spread around the centre

159. A square sheet of paper is folded in half vertically (left half over right half), then folded in half horizontally (top half down over bottom half). The folded shape is a small square in the lower-right quadrant. One hole is then punched exactly at the upper-left corner of the folded shape — the point where both fold lines cross, which is the centre of the original paper. When the paper is fully unfolded, where will the holes appear?

- A. One hole exactly at the very centre of the paper
- B. Two holes on the vertical centerline
- C. Four holes spread around the centre
- D. Two holes on the horizontal centerline

160. A square sheet of paper is folded in half along a vertical line, with the right half folded over the left half. Two holes are then punched through both layers very close to the vertical fold line — one near the top of the folded shape and one near the bottom of the folded shape. When the paper is fully unfolded, where will the holes appear?

- A. Two holes near the top edge only
- B. Two holes near the bottom edge only
- C. Four holes near the vertical centerline of the paper — two near the top edge and two near the bottom edge, mirrored across the vertical middle
- D. One hole at the very centre

161. A square sheet of paper is folded in half vertically (left half over right half), then folded in half horizontally (bottom half up over top half). The folded shape is a small square in the upper-right quadrant. One hole is then punched through all four layers near the upper-right corner of the folded shape, at the original paper's upper-right corner, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the upper-right corner only
- B. Two holes on the right edge
- C. Two holes on the top edge
- D. Four holes — one near each of the four corners of the paper

162. A square sheet of paper is folded in half along a horizontal line, with the bottom half folded up over the top half. One hole is then punched through both layers on the right edge of the folded shape, midway between the top edge and the fold line (not at any corner). When the paper is fully unfolded, where will the holes appear?

- A. One hole at the right-edge middle only
- B. Two holes on the right edge of the paper, both equidistant from the horizontal middle, mirrored across the horizontal fold
- C. Four holes along the right edge
- D. Two holes near the right corners

163. A square sheet of paper is folded in half vertically (right half over left half), then folded in half horizontally (bottom half up over top half). The folded shape is a small square in the upper-left quadrant. One hole is then punched through all four layers near the upper-left corner of the folded shape, at the original paper's upper-left corner, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the upper-left corner only
- B. Two holes on the top edge
- C. Two holes on the left edge
- D. Four holes — one near each of the four corners of the paper

164. A square sheet of paper is folded in half along a horizontal line, with the top half folded down over the bottom half. Two holes are then punched through both layers very close to the horizontal fold line — one near the left edge of the folded shape and one near the right edge of the folded shape. When the paper is fully unfolded, where will the holes appear?

- A. Two holes near the left edge only
- B. Two holes near the right edge only
- C. Four holes near the horizontal centerline of the paper — two near the left edge and two near the right edge, mirrored across the horizontal middle
- D. One hole at the very centre

165. A square sheet of paper is folded in half along a vertical line, with the right half folded over the left half. One hole is then punched exactly on the vertical fold line at the very bottom edge of the folded shape. When the paper is fully unfolded, where will the holes appear?

- A. One hole on the bottom edge of the paper, at the horizontal middle
- B. Two holes near the bottom edge
- C. Four holes near the bottom corners
- D. Two holes on the vertical centerline

166. A square sheet of paper is folded in half vertically (left half over right half), then folded in half horizontally (top half down over bottom half). The folded shape is a small square in the lower-right quadrant. One hole is then punched through all four layers near the centre of the folded shape, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the very centre of the paper
- B. Two holes on the horizontal centerline
- C. Four holes — one near the centre of each of the four quadrants of the paper
- D. Two holes on the vertical centerline

167. A square sheet of paper is folded in half along a vertical line, with the left half folded over the right half. One hole is then punched through both layers near the upper-right corner of the folded shape, at the original paper's upper-right corner area. When the paper is fully unfolded, where will the holes appear?

- A. One hole near the upper-right corner only
- B. Four holes at the four corners
- C. Two holes on the right edge
- D. Two holes on the top edge of the paper — one at the upper-left corner and one at the upper-right corner, mirrored across the vertical fold

168. A square sheet of paper is folded in half vertically (right half over left half), then folded in half horizontally (bottom half up over top half). The folded shape is a small square in the upper-left quadrant. One hole is then punched through all four layers exactly at the upper-left corner of the folded shape — the original paper's upper-left corner, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the upper-left corner only
- B. Two holes on the top edge
- C. Four holes — one near each of the four corners of the paper
- D. Two holes on the left edge

169. A square sheet of paper is folded in half vertically (right half over left half), then folded in half horizontally (top half down over bottom half). The folded shape is a small square in the lower-left quadrant. One hole is then punched exactly at the upper-right corner of the folded shape — the point where both fold lines cross, which is the centre of the original paper. When the paper is fully unfolded, where will the holes appear?

- A. One hole exactly at the very centre of the paper
- B. Two holes on the vertical centerline
- C. Four holes spread around the centre
- D. Two holes on the horizontal centerline

170. A square sheet of paper is folded in half vertically (right half over left half), then folded in half horizontally (top half down over bottom half). The folded shape is a small square in the lower-left quadrant. One hole is then punched through all four layers near the centre of the folded shape, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole at the very centre of the paper
- B. Two holes on the horizontal centerline
- C. Four holes — one near the centre of each of the four quadrants of the paper
- D. Two holes on the vertical centerline

PRACTICE EXAM 6 – ANSWER KEY AND EXPLANATIONS

Verbal Analogies

1. D — An author creates a book; a composer creates a symphony. The relationship is "creator and the finished large-scale work they produce." Note is a small unit, piano is an instrument, and orchestra is who performs it.

2. B — Fire produces ash as its byproduct; a saw cutting wood produces sawdust as its byproduct. The relationship is "process and the small leftover material it creates." Log is whole wood, tree is the source, and building is what wood becomes when used.

3. C — An acorn grows into an oak tree; a tadpole grows into a frog. The relationship is "young form and the adult creature it becomes." Pond is the habitat, tail is a body part, and egg is the stage before tadpole.

- 4. A** — A spider builds and lives in a web; a bird builds and lives in a nest. The relationship is "animal and the home structure it builds." Egg is what is laid in the nest, wing is a body part, and branch is where nests are placed.
- 5. B** — Hot and scorching are the mild and intense forms of heat; cold and freezing are the mild and intense forms of cold. The relationship is "ordinary temperature word and its stronger version." Cool is milder than cold, ice is the solid form, and winter is the season.
- 6. D** — A doctor's signature tool is a stethoscope; a carpenter's signature tool is a hammer. The relationship is "professional and the primary tool they use most often." Wood is the material, nail is what is hammered, and house is the finished project.
- 7. A** — A petal is a small part of a flower; a feather is a small part of a bird. The relationship is "small visible part and the larger whole it belongs to." Wing is a larger part of a bird, sky is where birds fly, and light is unrelated.
- 8. C** — Whisper and shout are the quiet and loud ends of speaking; crawl and run are the slow and fast ends of moving. The relationship is "low-intensity action and its high-intensity counterpart." Baby is who crawls, walk is between crawl and run, and tired is a state.
- 9. B** — A captain commands a ship; a pilot commands an airplane. The relationship is "leader and the vehicle they control." Sky is where airplanes fly, passenger is the rider, and uniform is what pilots wear.
- 10. D** — A telescope is used to view distant stars; a microscope is used to view tiny germs. The relationship is "instrument and what it allows people to see." Lens is part of both, scientist uses the microscope, and small describes what microscopes view.
- 11. B** — Salt is found in the sea; sand is found at the beach. The relationship is "substance and where it is naturally and abundantly found." Shovel is used at the beach, castle is built from sand, and tiny describes grain size.
- 12. C** — A bee lives in a hive; an ant lives in an anthill. The relationship is "insect and the home it builds." Small describes size, picnic is where ants appear, and queen is the leader inside the home.
- 13. A** — A group of lions is called a pride; a group of wolves is called a pack. The relationship is "animal and the name for its social group." Forest is the habitat, howl is a sound, and fang is a body part.
- 14. B** — A cup is gripped by its handle; a door is opened by its knob. The relationship is "object and the part used to grasp it." Wood is the material, window is a different opening, and open is the action.
- 15. D** — A pen writes on paper; chalk writes on a blackboard. The relationship is "writing tool and the surface it is used on." Teacher uses chalk, writing is the action, and white describes chalk colour.
- 16. B** — A hen's young is called a chick; a cow's young is called a calf. The relationship is "adult female animal and her offspring." Milk is what cows produce, barn is the home, and moo is the sound.

17. D — A hat is worn on the head; a ring is worn on the finger. The relationship is "accessory and the body part it is worn on." Gold is a material, wedding is the occasion, and shiny is a property.

18. B — A bicycle is powered by pedals; a car is powered by an engine. The relationship is "vehicle and the source that powers its movement." Wheels touch the road, driver controls the car, and roads are where cars travel.

19. C — A photographer's primary tool is a camera; a writer's primary tool is a pen. The relationship is "professional and the tool they use to do their work." Book is the finished product, story is the content, and paper is the surface.

Sentence Completion

20. A — A river returning to normal level after heavy rains has its water level falling — it drops. The signal "back to its normal level" combined with "after the heavy rains stopped" calls for a verb meaning to lower. Flood and rise contradict normal level, and freeze is unrelated.

21. B — Standing in front of an audience on opening night creates feelings of anxiety — the actress feels nervous. The signal "as the curtain began to rise on opening night" calls for a stage-fright emotion. Brave contradicts the moment, and bored and tired do not fit before a performance.

22. A — Climbers on a narrow ledge looking down at a deep valley feel fear of falling — they are afraid to look down. The signal "narrow ledge" combined with "deep valley far below" calls for a fear response. Excited, eager, and happy do not match the danger.

23. B — A soup missing its salt and pepper tastes flavourless — it tastes bland. The signal "forgotten to add salt and pepper" calls for the description of unseasoned food. Spicy, sweet, and burnt all describe definite flavours rather than absent flavours.

24. C — A wobbly lamb that finally stands steady has achieved balance — it balanced on its legs. The signal "wobbled twice" combined with "finally" calls for a verb meaning successful standing. Fell and slept contradict standing up, and ran is too advanced after wobbling.

25. B — A surprised audience makes a sudden intake of breath — they gasped. The signal "rabbit appeared from inside the hat" calls for an astonished reaction. Cried is from sadness, left contradicts an active audience, and yawned shows boredom.

26. D — Children offered cold lemonade after a hot afternoon of work feel thankfulness — they are grateful. The signal "their grandmother brought out a cold pitcher of lemonade" after "hot summer sun" calls for an appreciative emotion. Angry, confused, and cold do not match the welcome relief.

27. B — A 500-piece puzzle of clouds and sky requires careful attention to small differences — finding matches requires focus and patience. The signal "tiny pieces" combined with "patience" calls for the partner of patience. Speed and luck contradict careful matching, and noise distracts.

28. D — Fog so thick the lighthouse keeper cannot see his own hand is described as very heavy and packed — dense. The signal "could barely see his own hand" calls for an adjective meaning thick. Thin, soft, and light all contradict heavy fog.

29. C — Candlelight in a power outage makes a room feel warm and welcoming — cozy. The signal "found their old candles" combined with "feel ___ again" calls for a positive feeling. Scary contradicts the comforting candles, silent describes sound, and cold contradicts the warm glow.

30. A — A chess player who has planned three moves ahead acts with self-assurance — quiet confidence. The signal "had planned three steps ahead" calls for a self-assured emotion. Fear and doubt contradict planning ahead, and surprise contradicts deliberate strategy.

31. D — Soft fresh earth in a garden is irresistible for a digging puppy — too tempting to resist. The signal "puppy" combined with "simply too ___ to resist" calls for an attractive quality. Dry, hard, and cold do not make digging more appealing.

32. B — Spotting the meadow opening after a long forest walk brings a sense of safety — the hikers are relieved. The signal "for over an hour without seeing a single trail marker" combined with "to spot the bright opening" calls for a relief response. Sad and angry do not fit emerging from worry, and surprised is weaker than relieved.

33. C — Children quieting down to listen to a gentle voice settle into stillness — they settle down. The signal "even the noisiest children" combined with "to listen" calls for a calming verb. Stand, wake, and shout all contradict listening quietly.

34. A — A bus driver navigating sharp mountain turns must constantly direct the wheel — steer it. The signal "sharp turns and hairpin bends" calls for the verb for controlling a vehicle's direction. Push and break are forceful, and release would lose control.

35. B — A creaking bridge that bends slightly under weight sways back and forth. The signal "creaked loudly" combined with "held firm" but bent under weight calls for a verb meaning to move side to side. Shouted and sang are sounds, and froze means stopped moving.

36. A — One visitor remaining alone after closing time is a solo individual — a lone visitor. The signal "one ___ visitor remained" combined with "lost in quiet thought" calls for an aloneness adjective. Noisy contradicts the quiet museum, quick contradicts staying late, and tired does not explain staying.

37. B — A chess game where neither player has taken any opposing piece for three hours has not seen a single capture. The signal "neither player had ___ a single piece" calls for the chess term for taking a piece. Cleaned, dropped, and counted are not chess actions.

38. D — A small suitcase that requires both children to carry must weigh a lot — it is heavy. The signal "both children had to lift it together" calls for an adjective meaning weighty. Tiny, soft, and fragile do not require two people to carry.

Verbal Classification

- 39. B** — Mountain, hill, and valley are all landforms (features of the Earth's surface); cliff is also a landform. River and lake are water bodies, and cloud is in the sky. The category is "landforms."
- 40. D** — Lamp, candle, and lantern are all sources that produce light; torch is also a light source. Switch turns lights on, shadow is the absence of light, and bulb is part of a lamp but not itself a source. The category is "light sources."
- 41. C** — Boil, fry, and bake are all cooking methods using heat; roast is also a heat-based cooking method. Wash, cut, and peel are food preparation steps but not heat-cooking methods. The category is "cooking methods."
- 42. D** — Telescope, binoculars, and magnifying glass are all optical instruments that make distant or small things appear larger; microscope is also an optical magnifying instrument. Mirror reflects, camera captures images, and window is for viewing without magnification. The category is "magnifying optical instruments."
- 43. B** — Stamp, postcard, and letter are all items used in mailing; envelope is also a mailing item that holds the letter. Mailbox is where mail is placed, address tells where to deliver, and street is the location. The category is "mailing items."
- 44. A** — Coat, scarf, and mittens are all winter or cold-weather clothing; a warm hat is also winter clothing. Swimsuit, shorts, and sandals are summer or warm-weather clothing. The category is "winter clothing."
- 45. D** — Tuesday, Thursday, and Saturday are all days of the week; Sunday is also a day of the week. Month, April, and weekend are different time units or concepts. The category is "days of the week."
- 46. B** — Horse, cow, and pig are all farm animals kept by farmers; sheep is also a farm animal. Lion and tiger are wild jungle animals, and eagle is a wild bird. The category is "farm animals."
- 47. C** — Marble, granite, and slate are all types of natural stone used in building; limestone is also a building stone. Wood, metal, and plastic are different building materials, not stone. The category is "natural stones."
- 48. D** — Tongue, teeth, and lips are all parts of the mouth; gums are also part of the mouth (holding the teeth in place). Nose, ear, and eyebrow are facial parts but not mouth parts. The category is "parts of the mouth."
- 49. B** — Violin, viola, and cello are all string instruments of the orchestra played with a bow; double bass is also a bowed string instrument of the orchestra. Piano is a keyboard, drums are percussion, and flute is wind. The category is "bowed string instruments."
- 50. D** — Toronto, Vancouver, and Montreal are all Canadian cities; Calgary is also a Canadian city. London is in England, Paris is in France, and Tokyo is in Japan. The category is "Canadian cities."
- 51. A** — Venus, Earth, and Mars are all planets in our solar system; Saturn is also a planet. Moon is a satellite, star is a glowing body, and comet is icy debris. The category is "planets."

52. C — Egypt, Italy, and Japan are all countries; Brazil is also a country. Continent and ocean are larger geographic features, and city is smaller than a country. The category is "countries."

53. A — Needle, thread, and scissors are all items used in sewing; a pin is also a sewing item used to hold fabric. Hammer is for carpentry, fork is for eating, and brush is for cleaning or painting. The category is "sewing items."

54. D — January, March, and May are all months of the year; July is also a month. Winter is a season, week is a smaller time unit, and day is much smaller. The category is "months of the year."

55. A — Guitar, ukulele, and banjo are all string instruments played by plucking with fingers or a pick; mandolin is also a plucked string instrument. Drum is percussion, flute and trumpet are wind. The category is "plucked string instruments."

56. C — Rake, hoe, and shovel are all garden tools; trowel is also a garden tool (a small hand-held shovel for planting). Saw is a workshop tool, pencil is for writing, and spoon is for eating. The category is "garden tools."

57. D — North, south, and east are three of the four cardinal directions; west is the fourth cardinal direction. Up is vertical, left is relative, and middle is a position rather than a direction. The category is "cardinal directions."

Number Analogies

58. C — The rule is "multiply by 9." First pair ($2 \times 9 = 18$), second pair ($3 \times 9 = 27$), so $6 \times 9 = 54$. The consistent $\times 9$ multiplier confirms multiplication.

59. D — The rule is a combined operation: "multiply by 7, then add 2." First pair ($1 \times 7 + 2 = 9$), second pair ($2 \times 7 + 2 = 16$), so $3 \times 7 + 2 = 23$.

60. C — The rule is "divide by 11." First pair ($22 \div 11 = 2$), second pair ($33 \div 11 = 3$), so $55 \div 11 = 5$. The consistent ratio of one-eleventh confirms division.

61. A — The rule is a combined operation: "multiply by 3, then subtract 1." First pair ($2 \times 3 - 1 = 5$), second pair ($3 \times 3 - 1 = 8$), so $4 \times 3 - 1 = 11$.

62. B — The rule is a combined operation: "multiply by 2, then add 9." First pair ($1 \times 2 + 9 = 11$), second pair ($2 \times 2 + 9 = 13$), so $3 \times 2 + 9 = 15$.

63. A — The rule is a combined operation: "multiply by 4, then add 3." First pair ($1 \times 4 + 3 = 7$), second pair ($2 \times 4 + 3 = 11$), so $3 \times 4 + 3 = 15$.

64. C — The rule is "cube the input" (raise to the third power). First pair ($1^3 = 1$), second pair ($2^3 = 8$), so $3^3 = 27$. Each output is the input multiplied by itself three times.

65. D — The rule is "multiply by 11." First pair ($3 \times 11 = 33$), second pair ($4 \times 11 = 44$), so $5 \times 11 = 55$.

66. A — The rule is a combined operation: "multiply by 9, then add 1." First pair ($1 \times 9 + 1 = 10$), second pair ($2 \times 9 + 1 = 19$), so $3 \times 9 + 1 = 28$.

67. D — The rule is a combined operation: "multiply by 5, then add 3." First pair ($1 \times 5 + 3 = 8$), second pair ($2 \times 5 + 3 = 13$), so $3 \times 5 + 3 = 18$.

68. B — The rule is a combined operation: "multiply by 6, then add 2." First pair ($1 \times 6 + 2 = 8$), second pair ($2 \times 6 + 2 = 14$), so $3 \times 6 + 2 = 20$.

69. C — The rule is a combined operation: "multiply by 7, then subtract 1." First pair ($2 \times 7 - 1 = 13$), second pair ($3 \times 7 - 1 = 20$), so $4 \times 7 - 1 = 27$.

70. A — The rule is a combined operation: "multiply by 4, then add 6." First pair ($1 \times 4 + 6 = 10$), second pair ($2 \times 4 + 6 = 14$), so $3 \times 4 + 6 = 18$.

71. D — The rule is a combined operation: "multiply by 8, then subtract 1." First pair ($2 \times 8 - 1 = 15$), second pair ($3 \times 8 - 1 = 23$), so $4 \times 8 - 1 = 31$.

72. B — The rule is "multiply the input by the next number up" ($n \times (n+1)$). First pair ($2 \times 3 = 6$), second pair ($3 \times 4 = 12$), so $4 \times 5 = 20$. Each output is the input times the next consecutive number.

73. D — The rule is a combined operation: "multiply by 9, then subtract 1." First pair ($2 \times 9 - 1 = 17$), second pair ($3 \times 9 - 1 = 26$), so $4 \times 9 - 1 = 35$.

74. A — The rule is "multiply by 12." First pair ($2 \times 12 = 24$), second pair ($3 \times 12 = 36$), so $4 \times 12 = 48$.

75. D — The rule is a combined operation: "multiply by 6, then add 3." First pair ($1 \times 6 + 3 = 9$), second pair ($2 \times 6 + 3 = 15$), so $3 \times 6 + 3 = 21$.

76. A — The rule is a combined operation: "multiply by 8, then add 2." First pair ($1 \times 8 + 2 = 10$), second pair ($2 \times 8 + 2 = 18$), so $3 \times 8 + 2 = 26$.

Number Puzzles

77. C — Add 19 to both sides: $? = 24 + 19 = 43$. Substituting confirms $43 - 19 = 24$.

78. A — Divide both sides by 9: $? = 72 \div 9 = 8$. Substituting confirms $9 \times 8 = 72$.

79. B — Subtract 35 from both sides: $? = 80 - 35 = 45$. Substituting confirms $45 + 35 = 80$.

80. D — Rearrange: if $84 \div ? = 12$, then $? = 84 \div 12 = 7$. Substituting confirms $84 \div 7 = 12$.

81. C — Divide both sides by 7: $? = 63 \div 7 = 9$. Substituting confirms $7 \times 9 = 63$.

82. A — Add 37 to both sides: $? = 15 + 37 = 52$. Substituting confirms $52 - 37 = 15$.

- 83. C** — Rearrange: if $144 \div ? = 12$, then $? = 144 \div 12 = 12$. Substituting confirms $144 \div 12 = 12$.
- 84. A** — Subtract 58 from both sides: $? = 100 - 58 = 42$. Substituting confirms $42 + 58 = 100$.
- 85. C** — Divide both sides by 8: $? = 72 \div 8 = 9$. Substituting confirms $8 \times 9 = 72$.
- 86. B** — Subtract 2 from both sides first: $11 \times ? = 44$. Then divide by 11: $? = 44 \div 11 = 4$. Substituting confirms $11 \times 4 + 2 = 46$.
- 87. C** — Add 44 to both sides: $? = 29 + 44 = 73$. Substituting confirms $73 - 44 = 29$.
- 88. A** — Rearrange: if $100 - ? = 37$, then $? = 100 - 37 = 63$. Substituting confirms $100 - 63 = 37$.
- 89. C** — Combine the known numbers first: $8 + 12 = 20$. Then $? + 20 = 50$, so $? = 50 - 20 = 30$.
- 90. D** — Rearrange: if $132 \div ? = 11$, then $? = 132 \div 11 = 12$. Substituting confirms $132 \div 12 = 11$.
- 91. B** — Divide both sides by 12: $? = 84 \div 12 = 7$. Substituting confirms $12 \times 7 = 84$.
- 92. C** — Add 29 to both sides: $? = 33 + 29 = 62$. Substituting confirms $62 - 29 = 33$.
- 93. B** — Add 5 to both sides first: $8 \times ? = 48$. Then divide by 8: $? = 48 \div 8 = 6$. Substituting confirms $8 \times 6 - 5 = 43$.
- 94. D** — Subtract 47 from both sides: $? = 92 - 47 = 45$. Substituting confirms $45 + 47 = 92$.
- 95. C** — Rearrange: if $110 - ? = 58$, then $? = 110 - 58 = 52$. Substituting confirms $110 - 52 = 58$.

Number Series

- 96. A** — The rule is "add 14" each step ($7 \rightarrow 21 \rightarrow 35 \rightarrow 49$). Applying gives $49 + 14 = 63$.
- 97. D** — The rule is "subtract 13" each step ($84 \rightarrow 71 \rightarrow 58 \rightarrow 45$). Applying gives $45 - 13 = 32$.
- 98. B** — The rule is a combined operation: "multiply by 2, then add 3" ($1 \times 2 + 3 = 5$, $5 \times 2 + 3 = 13$, $13 \times 2 + 3 = 29$). Applying gives $29 \times 2 + 3 = 61$.
- 99. D** — The rule is "triangular numbers" — gaps grow by 1 each step (1, 3, 6, 10, 15, 21, with gaps of 2, 3, 4, 5, 6, then 7). The next gap is 7, so $21 + 7 = 28$.
- 100. B** — The rule is "perfect squares plus 1" — each term is $n^2 + 1$ for $n = 1, 2, 3, 4, 5$ (giving 2, 5, 10, 17, 26). The next term is $6^2 + 1 = 37$.
- 101. A** — The rule is "subtract 18" each step ($100 \rightarrow 82 \rightarrow 64 \rightarrow 46$). Applying gives $46 - 18 = 28$.

- 102. D** — The rule is "multiply by 3" each step ($1 \rightarrow 3 \rightarrow 9 \rightarrow 27 \rightarrow 81$, powers of 3). Applying gives $81 \times 3 = 243$.
- 103. B** — The rule is an alternating pattern: odd-position values (2, 4, 6) increase by 2, and even-position values (20, 18, 16) decrease by 2. The next term is in an odd position, so $6 + 2 = 8$.
- 104. C** — The rule is a growing gap — gaps increase by 2 each step (2, 4, 8, 14, 22, 32, with gaps of 2, 4, 6, 8, 10, then 12). Applying gives $32 + 12 = 44$.
- 105. B** — The rule is "add 17" each step ($8 \rightarrow 25 \rightarrow 42 \rightarrow 59$). Applying gives $59 + 17 = 76$.
- 106. D** — The rule is a combined operation: "multiply by 3, then subtract 2" ($2 \times 3 - 2 = 4$, $4 \times 3 - 2 = 10$, $10 \times 3 - 2 = 28$). Applying gives $28 \times 3 - 2 = 82$.
- 107. A** — The rule is "subtract 16" each step ($98 \rightarrow 82 \rightarrow 66 \rightarrow 50$). Applying gives $50 - 16 = 34$.
- 108. C** — The rule is a combined operation: "multiply by 2, then subtract 1" ($3 \times 2 - 1 = 5$, $5 \times 2 - 1 = 9$, $9 \times 2 - 1 = 17$, $17 \times 2 - 1 = 33$). Applying gives $33 \times 2 - 1 = 65$.
- 109. A** — The rule is the Fibonacci pattern — each term is the sum of the two previous terms ($2+5=7$, $5+7=12$, $7+12=19$, $12+19=31$, so $19+31=50$).
- 110. B** — The rule is "divide by 3" each step ($729 \rightarrow 243 \rightarrow 81 \rightarrow 27$, each one-third of the previous). Applying gives $27 \div 3 = 9$.
- 111. D** — The rule is "perfect squares" — each term is n^2 for $n = 1, 2, 3, 4, 5, 6$ (giving 1, 4, 9, 16, 25, 36). The next term is $7^2 = 49$.
- 112. A** — The rule is "add 19" each step ($11 \rightarrow 30 \rightarrow 49 \rightarrow 68$). Applying gives $68 + 19 = 87$.
- 113. C** — The rule is " $n \times (n+1)$ " — each term is the position number times the next number ($1 \times 2 = 2$, $2 \times 3 = 6$, $3 \times 4 = 12$, $4 \times 5 = 20$, $5 \times 6 = 30$). The next term is $6 \times 7 = 42$.
- 114. B** — The rule is an alternating pattern: odd-position values are perfect squares ($1^2=1$, $2^2=4$, $3^2=9$, so next is 4^2), and even-position values (25, 22, 19) decrease by 3. The next term is in an odd position, so $4^2 = 16$.

Figure Matrices

- 115. D** — The transformation combines three changes: 90-degree clockwise rotation AND outlined-to-solid fill AND size enlargement. The small outlined upward arrow becomes a large solid black rightward arrow, so the small outlined upward triangle must apply all three changes to become a large solid black rightward triangle.
- 116. C** — The transformation combines two changes: 180-degree rotation AND replacing the interior dot with a star. The upward arrow with a dot becomes a downward arrow with a star, so the upward triangle

with a dot must rotate 180 degrees AND have its dot replaced by a star, producing a downward triangle with a star.

117. B — The transformation combines two changes: shape changes to a circle AND horizontal stripes are added. The plain square becomes a striped circle, so the plain triangle must also transform into a striped circle (applying both changes — shape change and stripe addition).

118. C — The transformation combines two changes: stripe direction rotated 90 degrees (horizontal to vertical) AND a centre dot is added. The horizontally striped hexagon becomes a vertically striped hexagon with a centre dot, so the horizontally striped pentagon must apply both changes to become a vertically striped pentagon with a centre dot.

119. D — The transformation combines two changes: 90-degree clockwise rotation AND dot count doubled (from 2 to 4). The upward arrow with 2 dots becomes a rightward arrow with 4 dots, so the leftward arrow with 2 dots must rotate 90 degrees clockwise (becoming upward) AND have its dot count doubled, producing an upward arrow with 4 dots.

120. C — The transformation combines two changes: reflection across a vertical axis (mirror image) AND solid-to-dotted fill. The solid upright R becomes an outlined mirror-image R with dotted fill, so the solid upright F must mirror AND become outlined with dotted fill, producing a mirror-image dotted letter F.

121. A — The transformation combines two changes: 180-degree rotation AND outlined-to-striped fill. The outlined upward arrow becomes a striped downward arrow, so the outlined upward triangle must rotate 180 degrees AND gain horizontal stripes, producing a striped downward triangle.

122. D — The transformation combines two changes: size reduction AND adding a small triangle inside. The large plain circle becomes a small circle with a triangle inside, so the large plain hexagon must shrink AND gain a small triangle inside, producing a small hexagon with a small triangle inside.

123. B — The transformation combines two changes: 90-degree counter-clockwise rotation AND horizontal stripes added. The outlined rightward arrow becomes a striped upward arrow, so the outlined downward arrow must rotate 90 degrees counter-clockwise (becoming rightward) AND gain horizontal stripes, producing a striped rightward arrow.

124. C — The transformation combines two changes: the right half is filled solid black AND a small dot is added in the remaining white half. The plain square becomes a half-shaded square with a left-side dot, so the plain triangle must apply both changes to become a triangle with the right half black and a dot in the white left half.

125. A — The transformation combines two changes: solid-to-outlined fill AND 90-degree clockwise rotation. The solid upward arrow becomes an outlined rightward arrow, so the solid upward hand must become outlined AND rotate 90 degrees clockwise, producing an outlined hand pointing rightward.

126. B — The transformation combines two changes: 90-degree clockwise rotation AND outlined-to-dotted fill. The outlined rightward arrow becomes a dotted downward arrow, so the outlined upward arrow

must rotate 90 degrees clockwise (becoming rightward) AND gain dotted fill, producing a dotted rightward arrow.

127. A — The transformation is "triple the number of horizontal stripes" (1 to 3). The square with 1 stripe becomes a square with 3 stripes, so the triangle with 1 stripe must become a triangle with 3 stripes.

128. B — The transformation combines two changes: size reduction AND a centre dot is added. The large plain pentagon becomes a small pentagon with a centre dot, so the large plain hexagon must shrink AND gain a centre dot, producing a small hexagon with a centre dot.

129. A — The transformation combines two changes: reflection across a vertical axis (mirror image) AND horizontal stripes added. The upright R becomes a mirror-image R with stripes, so the upright K must mirror AND gain horizontal stripes, producing a striped mirror-image K.

130. C — The transformation combines two changes: size enlargement AND replacing the interior dot with a star. The small circle with a dot becomes a large circle with a star, so the small square with a dot must enlarge AND have its dot replaced by a star, producing a large square with a star inside.

131. A — The transformation combines two changes: 90-degree clockwise rotation AND outlined-to-solid fill. The outlined upward arrow becomes a solid rightward arrow, so the outlined leftward arrow must rotate 90 degrees clockwise (becoming upward) AND become solid, producing a solid upward arrow.

132. D — The transformation is "add a small dot at every corner of the shape." The square (4 corners) gains 4 dots, so the pentagon (5 corners) must also gain dots at all of its 5 corners.

133. A — The transformation combines two changes: 90-degree counter-clockwise rotation AND size reduction. The large upward arrow becomes a small leftward arrow, so the large rightward arrow must rotate 90 degrees counter-clockwise (becoming upward) AND shrink, producing a small upward arrow.

Figure Classification

134. C — The category rule is "shapes that point or face rightward." Arrow, triangle, and fish pointing right all match, and the hand pointing rightward also qualifies. Arrow upward, the directionless circle, and arrow leftward all fail.

135. D — The category rule is "shapes filled with a checkered pattern." All three given figures share checkered fills, and the checkered pentagon matches. Plain, solid black, and striped pentagons all fail.

136. B — The category rule is "eight-sided shapes" (octagons). All three given figures are octagons varying in size or shading, and an octagon at a different angle is still eight-sided. Pentagon has 5, hexagon has 6, and square has 4.

137. A — The category rule is "outlined shapes containing a crescent moon inside." All three given figures match, and the pentagon with a crescent inside also fits. Plain, star-inside, and circle-inside all fail.

138. C — The category rule is "shapes with the right half solid black and the left half white." All three given figures share this pattern, and the pentagon with right-half-black matches. Plain, fully solid, and left-half-black versions all fail.

139. D — The category rule is "outlined shapes with a single dot in the upper-right interior corner." All three given figures match this positional rule, and the pentagon with dot in upper-right also fits. Centre dot, lower-left dot, and no dot all fail.

140. C — The category rule is "shapes filled with diagonal stripes running from upper-right to lower-left." All three given figures share this specific stripe direction, and the pentagon with the matching diagonals fits. Plain, opposite-diagonal, and solid black all fail.

141. D — The category rule is "outlined shapes with a single vertical line through the middle." All three given figures match, and the pentagon with a vertical line also fits. Horizontal line, diagonal line, and plain versions all fail.

142. B — The category rule is "quadrilaterals" (four-sided polygons). Square, rectangle, trapezoid, and parallelogram all have four straight sides. Triangle has 3, pentagon has 5, and hexagon has 6.

143. C — The category rule is "shapes filled with horizontal stripes." All three given figures share horizontal-stripe fills, and the pentagon with horizontal stripes matches. Plain, vertical-striped, and solid black all fail.

144. A — The category rule is "outlined shapes containing a small plus sign (+) inside." All three given figures match, and the pentagon with a plus sign also fits. Plain, star-inside, and X-inside all fail.

145. C — The category rule is "solid black shapes with a small white (unfilled) circle in the middle." All three given figures share this distinctive pattern, and the solid pentagon with a white circle matches. Plain outlined, fully solid (no white), and striped all fail.

146. B — The category rule is "five-sided shapes" (pentagons). All three given figures are pentagons varying in size or shading, and a pentagon at a different angle is still five-sided. Hexagon has 6, triangle has 3, and octagon has 8.

147. C — The category rule is "shapes that point or face downward." Triangle, arrow, and hand pointing down all match, and the hand pointing downward also qualifies. Arrow upward, arrow leftward, and the directionless circle all fail.

148. B — The category rule is "shapes with thick (heavy-weight) borders." All three given figures share noticeably thick outlines, and the thick-bordered pentagon matches. Thin-bordered, solid, and striped all fail.

149. D — The category rule is "outlined shapes with a small triangle in the upper-left interior corner." All three given figures match this positional rule, and the pentagon with a triangle in upper-left also fits. Triangle at centre, in lower-right, and plain versions all fail.

150. A — The category rule is "medium-sized shapes." All three given figures are notably medium-sized, and the medium pentagon matches their scale. Small, large, and very small all fail the size requirement.

151. D — The category rule is "outlined shapes containing exactly 3 dots inside." All three given figures match the count, and the pentagon with 3 dots also fits. 1 dot, 2 dots, and 4 dots all fail the count.

152. A — The category rule is "outlined shapes with a single dot in the lower-left interior corner." All three given figures match this positional rule, and the pentagon with dot in lower-left also fits. Centre dot, upper-right dot, and no dot all fail.

Paper Folding

153. C — A single vertical fold creates two layers. A hole at the centre of the folded shape (midway top-to-bottom, in the middle of the left half) sits on the horizontal centerline, and its mirror across the vertical fold lands on the horizontal centerline in the right half. The result is two holes on the horizontal centerline.

154. A — A hole punched exactly on the diagonal fold edge returns the same point when mirrored across the diagonal. Punching at the midpoint of the diagonal places the hole at the very centre of the paper, so only one hole appears.

155. B — A single horizontal fold creates two layers. A hole at the centre of the folded top half (midway left-to-right) sits on the vertical centerline, and its mirror across the horizontal fold sits in the lower half on the same centerline. The result is two holes on the vertical centerline.

156. D — A double fold creates four layers. A hole near the lower-left corner of the folded shape (at the original paper's lower-left corner, far from both fold lines) mirrors across both fold axes, producing one hole at each of the four corners of the paper.

157. A — A single vertical fold creates two layers. A hole at the centre of the folded right half (midway top-to-bottom) sits on the horizontal centerline, and its mirror across the vertical fold lands on the horizontal centerline in the left half. The result is two holes on the horizontal centerline.

158. B — A diagonal fold from top-left to bottom-right mirrors the punch across the diagonal. A hole in the middle of the folded triangle (the lower-left interior, away from the fold) produces a second hole in the upper-right interior, symmetric across the diagonal.

159. A — A hole punched at the intersection of both fold lines sits at the centre of the original paper. The hole is on both fold lines, so all four layers' mirror positions converge to the same single point. Only one hole appears at the very centre.

160. C — A single vertical fold mirrors each punch across the fold line. Two holes close to the fold (one near the top, one near the bottom) each produce a mirror very close on the opposite side. The result is four holes near the vertical centerline — two pairs straddling the middle.

161. D — A double fold creates four layers. A hole near the upper-right corner of the folded shape (at the original paper's upper-right corner, far from both fold lines) mirrors across both fold axes, producing one hole at each of the four corners of the paper.

162. B — A single horizontal fold mirrors each punch across the fold line. A hole on the right edge of the folded shape, midway between the top edge and the fold (off the fold, off the corners), mirrors across the horizontal fold to a matching point on the opposite side. The result is two holes on the right edge, both away from the corners.

163. D — A double fold creates four layers. A hole near the upper-left corner of the folded shape (at the original paper's upper-left corner, far from both fold lines) mirrors across both fold axes, producing one hole at each of the four corners of the paper.

164. C — A single horizontal fold mirrors each punch across the fold line. Two holes close to the fold (one near the left edge, one near the right edge) each produce a mirror very close on the opposite side. The result is four holes near the horizontal centerline — two pairs straddling the middle.

165. A — A hole punched exactly on the vertical fold line returns the same point when mirrored across that fold. Punching at the bottom of the fold places the hole on the bottom edge of the paper at the horizontal middle, so only one hole appears.

166. C — A double fold creates four layers. A hole near the centre of the folded lower-right quadrant mirrors across both fold lines, producing one hole near the centre of each of the four quadrants of the paper.

167. D — A single vertical fold creates two layers. A hole near the upper-right corner of the folded right half sits at the original paper's upper-right corner, and its mirror across the vertical fold sits at the upper-left corner. The result is two holes on the top edge.

168. C — A double fold creates four layers. A hole near the upper-left corner of the folded shape (at the original paper's upper-left corner, far from both fold lines) mirrors across both fold axes, producing one hole at each of the four corners of the paper.

169. A — A hole punched at the intersection of both fold lines sits at the centre of the original paper. The hole is on both fold lines, so all four layers' mirror positions converge to the same single point. Only one hole appears at the very centre.

170. C — A double fold creates four layers. A hole near the centre of the folded lower-left quadrant mirrors across both fold lines, producing one hole near the centre of each of the four quadrants of the paper.