

PRACTICE EXAM 5: CCAT SIMULATION

— 170 QUESTIONS

VERBAL BATTERY (Questions 1–57)

Verbal Analogies (Questions 1–19)

1. Bee is to honey as cow is to ____

- A. grass
- B. tail
- C. milk
- D. calf

2. Hammer is to nail as screwdriver is to ____

- A. wood
- B. turn
- C. handle
- D. screw

3. Library is to book as gallery is to ____

- A. wall
- B. painting
- C. frame

D. visitor

4. Engine is to car as motor is to ____

A. boat

B. wheel

C. road

D. driver

5. Day is to night as light is to ____

A. bright

B. dark

C. sun

D. lamp

6. Apple is to fruit as carrot is to ____

A. orange

B. crunchy

C. salad

D. vegetable

7. Wing is to bird as fin is to ____

A. water

B. swim

C. fish

D. scale

8. Mother is to daughter as father is to ____

A. mother

B. wife

C. sister

D. son

9. Bread is to wheat as cheese is to ____

A. yellow

B. block

C. milk

D. cracker

10. Lazy is to active as quiet is to ____

A. loud

B. soft

C. peaceful

D. still

11. Doctor is to hospital as judge is to ____

A. law

B. courtroom

C. crime

D. lawyer

12. Foot is to sock as hand is to ____

A. finger

B. ring

C. glove

D. wrist

13. Refrigerator is to cold as oven is to ____

A. hot

B. food

C. metal

D. heat

14. Slow is to turtle as fast is to ____

A. car

B. cheetah

C. running

D. quick

15. Page is to chapter as minute is to ____

A. clock

B. second

C. day

D. hour

16. Roar is to lion as howl is to ____

A. bark

B. dog

C. wolf

D. moon

17. Hospital is to nurse as kitchen is to ____

A. chef

B. food

C. stove

D. meal

18. Smile is to mouth as wink is to ____

A. cheek

B. eye

C. face

D. happy

19. Square is to box as circle is to ____

A. ball

B. round

C. wheel

D. ring

Sentence Completion (Questions 20–38)

20. When the strong wind blew through the orchard, the ripe apples ___ to the ground in great numbers.

- A. floated
- B. climbed
- C. tumbled
- D. flew

21. Although the recipe called for fresh herbs from the garden, Anna used the dried ones because the garden was buried under ___.

- A. flowers
- B. rain
- C. weeds
- D. snow

22. After studying the night sky for hours through his small telescope, Felix could finally ___ the constellations his grandfather had taught him.

- A. identify
- B. forget
- C. ignore
- D. count

23. The chef tasted the soup, frowned slightly, and added a ___ of salt to balance the flavours perfectly.

- A. bucket
- B. cup
- C. dash
- D. pound

24. Even though the museum guide spoke in a very low voice, every word she said was perfectly ___ in the empty marble hallway.

- A. clear
- B. quiet
- C. fast
- D. private

25. Because the path through the meadow had not been used in many years, it was nearly ___ by tall grass and colourful wildflowers.

- A. shorter
- B. wider
- C. cleaner
- D. hidden

26. After the long flight from London all the way to Toronto, Grandpa felt ___ and went straight to bed without even eating dinner.

- A. excited
- B. exhausted
- C. hungry
- D. proud

27. The lighthouse keeper made sure the lamp at the top was ___ every single night so that ships could find their way safely past the dangerous rocks.

- A. burning
- B. broken
- C. spinning
- D. closed

28. Because the rabbit knew the fox was nearby in the bushes, it remained perfectly ___ until the danger had passed and the path was safe again.

- A. busy
- B. still
- C. loud
- D. fast

29. The young pianist practised the same difficult passage over and over until every note was ___ as glass.

- A. heavy
- B. broken
- C. dark
- D. smooth

30. Because Mum had set the dinner table for six guests but only four arrived, two seats remained ___ throughout the entire meal.

- A. busy
- B. empty
- C. fancy

D. tilted

31. After running through every puddle on the way home, the children's boots were so ____ that they had to be left on the front porch overnight.

A. dry

B. clean

C. muddy

D. heavy

32. The artist worked in complete silence, knowing that even a single distraction could ____ her concentration on the most delicate brushstroke of the painting.

A. help

B. begin

C. encourage

D. break

33. Even the smallest sound from the wooden floor seemed ____ in the empty cathedral, where every footstep echoed off the high stone ceiling above.

A. silent

B. tiny

C. amplified

D. ignored

34. Although the puzzling riddle seemed impossible at first, Carlos finally ____ the answer when he stopped trying so hard and let his mind relax.

A. guessed

- B. ignored
- C. forgot
- D. lost

35. Because the puppy refused to drop the rubber ball even at bedtime, Sarah had to ____ it gently from his mouth before tucking him in.

- A. push
- B. pry
- C. throw
- D. catch

36. After working all afternoon in the back garden, Theo washed his hands carefully and ____ his muddy boots by the back door before going inside.

- A. wore
- B. polished
- C. cleaned
- D. removed

37. The kayak slid silently across the smooth lake water, leaving only a small ____ behind it on the otherwise perfectly still surface.

- A. ripple
- B. wave
- C. splash
- D. stone

38. Even the most experienced sailor on the ship had to admit that the storm raging that night was the ____ he had ever witnessed at sea.

- A. quietest
- B. simplest
- C. cleanest
- D. fiercest

Verbal Classification (Questions 39–57)

39. thunder, lightning, rain

- A. wind
- B. hail
- C. sunshine
- D. rainbow

40. above, below, beside

- A. but
- B. and
- C. or
- D. between

41. saw, hammer, drill

- A. shovel
- B. spoon
- C. wrench
- D. pen

42. soccer, basketball, tennis

- A. running
- B. baseball
- C. swimming
- D. chess

43. ant, fly, mosquito

- A. spider
- B. lizard
- C. worm
- D. gnat

44. red, orange, yellow

- A. pink
- B. blue
- C. green
- D. purple

45. spring, summer, autumn

- A. month
- B. year
- C. winter
- D. holiday

46. happy, sad, angry

- A. tall
- B. excited
- C. white
- D. quickly

47. trumpet, flute, saxophone

- A. drum
- B. guitar
- C. violin
- D. clarinet

48. Pacific, Atlantic, Indian

- A. sea
- B. lake
- C. Arctic
- D. river

49. circle, square, triangle

- A. cube
- B. sphere
- C. cylinder
- D. rectangle

50. Tuesday, Wednesday, Thursday

- A. month
- B. Monday
- C. afternoon
- D. spring

51. spoon, ladle, scoop

- A. spatula
- B. plate
- C. cup
- D. napkin

52. elephant, hippo, rhino

- A. mouse
- B. bird
- C. giraffe
- D. fish

53. violin, cello, guitar

- A. piano
- B. drum
- C. trumpet
- D. harp

54. Sahara, Gobi, Mojave

- A. ocean
- B. river
- C. Kalahari
- D. mountain

55. morning, evening, noon

- A. clock
- B. midnight
- C. sundial
- D. season

56. kitten, puppy, calf

- A. cat
- B. dog
- C. lamb
- D. cow

57. ear, nose, eye

- A. tongue
- B. arm
- C. hair
- D. tooth

QUANTITATIVE BATTERY (Questions 58–114)

Number Analogies (Questions 58–76)

58. $[2 \rightarrow 14] [3 \rightarrow 21] [4 \rightarrow ?]$

- A. 24
- B. 26
- C. 28
- D. 30

59. $[16 \rightarrow 2] [24 \rightarrow 3] [40 \rightarrow ?]$

- A. 5
- B. 4
- C. 6
- D. 8

60. $[2 \rightarrow 16] [3 \rightarrow 24] [5 \rightarrow ?]$

- A. 32
- B. 36
- C. 45
- D. 40

61. $[1 \rightarrow 8] [2 \rightarrow 10] [3 \rightarrow ?]$

- A. 10

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

62. $[1 \rightarrow 9] [2 \rightarrow 12] [3 \rightarrow ?]$

- A. 15
- B. 14
- C. 16
- D. 18

63. $[2 \rightarrow 6] [3 \rightarrow 10] [4 \rightarrow ?]$

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

64. $[2 \rightarrow 8] [3 \rightarrow 13] [4 \rightarrow ?]$

- A. 16
- B. 18
- C. 20
- D. 22

65. $[1 \rightarrow 1] [2 \rightarrow 8] [3 \rightarrow ?]$

- A. 24

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

66. $[1 \rightarrow 7] [2 \rightarrow 13] [3 \rightarrow ?]$

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

67. $[2 \rightarrow 11] [3 \rightarrow 17] [4 \rightarrow ?]$

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

68. $[1 \rightarrow 9] [2 \rightarrow 13] [3 \rightarrow ?]$

- A. 15
- B. 17
- C. 19
- D. 21

69. $[12 \rightarrow 2] [18 \rightarrow 3] [30 \rightarrow ?]$

- A. 5

B. 4

C. 6

D. 7

70. $[1 \rightarrow 10] [2 \rightarrow 13] [3 \rightarrow ?]$

A. 14

B. 15

C. 16

D. 18

71. $[2 \rightarrow 18] [3 \rightarrow 27] [5 \rightarrow ?]$

A. 40

B. 45

C. 50

D. 55

72. $[1 \rightarrow 8] [2 \rightarrow 15] [3 \rightarrow ?]$

A. 18

B. 20

C. 22

D. 24

73. $[16 \rightarrow 4] [20 \rightarrow 5] [32 \rightarrow ?]$

A. 7

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

74. $[1 \rightarrow 9] [2 \rightarrow 11] [4 \rightarrow ?]$

- A. 12
- B. 13
- C. 14
- D. 15

75. $[1 \rightarrow 9] [2 \rightarrow 17] [3 \rightarrow ?]$

- A. 23
- B. 25
- C. 27
- D. 29

76. $[1 \rightarrow 1] [2 \rightarrow 8] [4 \rightarrow ?]$

- A. 48
- B. 60
- C. 64
- D. 80

Number Puzzles (Questions 77–95)

77. $? + 22 = 40$

- A. 18
- B. 19
- C. 17
- D. 20

78. $8 \times ? = 56$

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

79. $? - 15 = 20$

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

80. $72 \div ? = 8$

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

D. 8

$$81. 6 \times ? = 48$$

A. 7

B. 8

C. 6

D. 9

$$82. ? + 27 = 60$$

A. 30

B. 31

C. 32

D. 33

$$83. 100 - ? = 58$$

A. 38

B. 40

C. 42

D. 44

$$84. ? \times 9 = 72$$

A. 6

B. 7

C. 9

D. 8

85. $18 + ? + 6 = 40$

A. 14

B. 16

C. 18

D. 12

86. $? \div 7 = 8$

A. 49

B. 64

C. 56

D. 48

87. $10 \times ? + 4 = 54$

A. 5

B. 4

C. 6

D. 7

88. $? + 31 = 70$

A. 35

B. 37

C. 39

D. 41

89. $96 \div ? = 8$

A. 8

B. 10

C. 11

D. 12

90. $? - 25 = 15$

A. 35

B. 40

C. 45

D. 30

91. $11 \times ? = 77$

A. 7

B. 6

C. 8

D. 9

92. $? + 42 = 80$

A. 32

B. 34

C. 38

D. 40

93. $99 \div ? = 9$

A. 9

B. 11

C. 10

D. 12

94. $12 \times ? + 3 = 51$

A. 4

B. 5

C. 3

D. 6

95. $? - 28 = 22$

A. 45

B. 48

C. 50

D. 52

Number Series (Questions 96–114)

96. 9, 20, 31, 42, ____

A. 48

B. 50

C. 51

D. 53

97. 80, 72, 64, 56, ____

A. 44

B. 48

C. 46

D. 50

98. 1, 3, 9, 27, ____

A. 81

B. 64

C. 72

D. 90

99. 5, 18, 31, 44, ____

A. 55

B. 53

C. 57

D. 60

100. 2, 8, 32, 128, ____

A. 256

B. 384

C. 400

D. 512

101. 95, 80, 65, 50, ____

A. 35

B. 30

C. 40

D. 45

102. 1, 2, 4, 8, 16, ____

A. 24

B. 28

C. 32

D. 64

103. 1, 12, 3, 10, 5, 8, ____

A. 5

B. 6

C. 8

D. 7

104. 1, 2, 4, 7, 11, 16, ____

A. 20

B. 21

C. 22

D. 24

105. 8, 20, 32, 44, ____

A. 56

B. 54

C. 58

D. 60

106. 2, 5, 11, 23, 47, ____

A. 80

B. 85

C. 90

D. 95

107. 90, 81, 72, 63, ____

A. 58

B. 54

C. 56

D. 52

108. 0, 3, 8, 15, 24, ____

A. 30

- B. 32
- C. 35
- D. 36

109. 3, 5, 8, 13, 21, ____

- A. 34
- B. 30
- C. 32
- D. 36

110. 256, 128, 64, 32, 16, ____

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

111. 10, 26, 42, 58, ____

- A. 74
- B. 72
- C. 78
- D. 80

112. 1, 5, 25, 125, ____

- A. 500

- B. 625
- C. 750
- D. 1000

113. 100, 89, 78, 67, ____

- A. 50
- B. 58
- C. 60
- D. 56

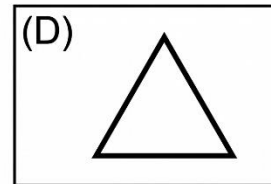
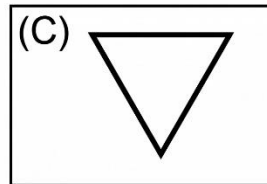
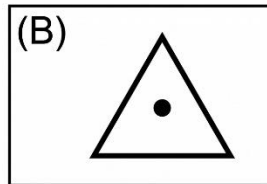
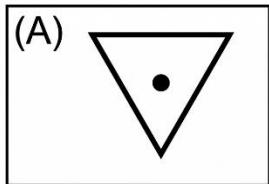
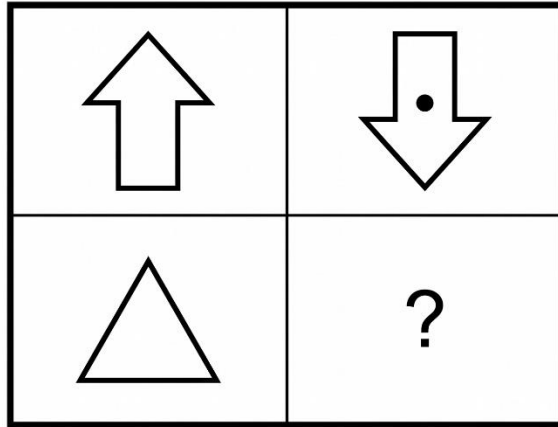
114. 10, 100, 20, 90, 30, 80, ____

- A. 35
- B. 40
- C. 50
- D. 70

NONVERBAL BATTERY (Questions 115–170)

Figure Matrices (Questions 115–133)

115. Which figure completes the matrix?



- A. a downward triangle with a dot inside
- B. an upward triangle with a dot inside
- C. a downward triangle with no dot
- D. an upward triangle with no dot

116. Which figure completes the matrix?

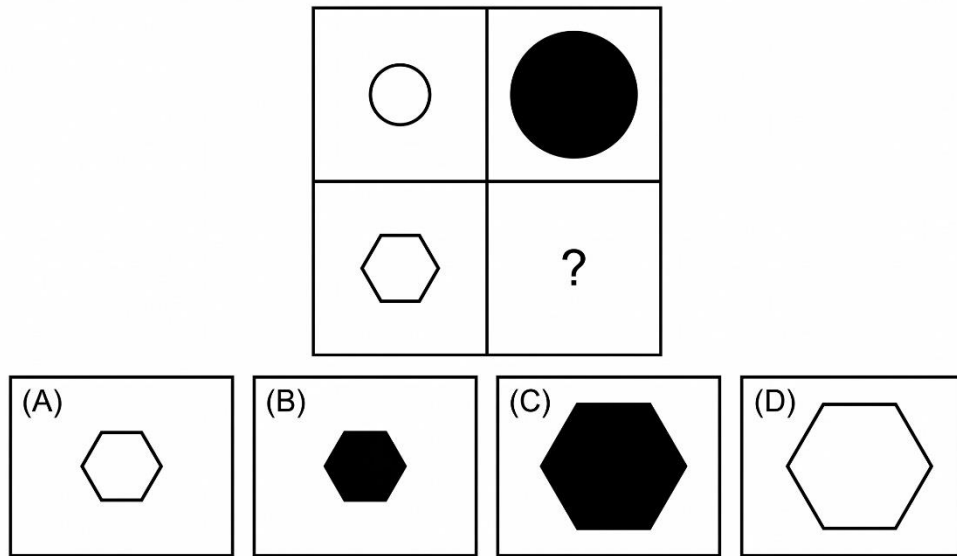


Figure PQ-2

- A. a small outlined hexagon
- B. a small solid black hexagon
- C. a large solid black hexagon
- D. a large outlined hexagon

117. Which figure completes the matrix?

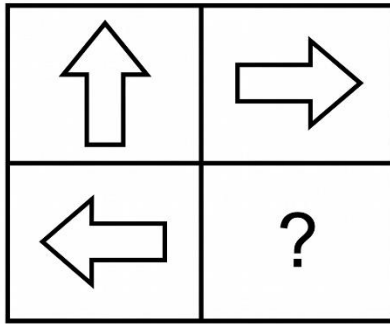
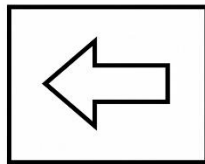
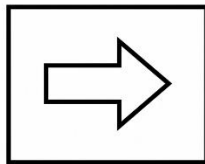


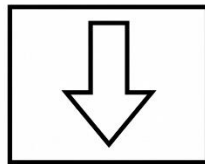
Figure PQ-3



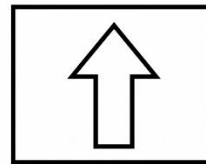
(A)



(B)



(C)

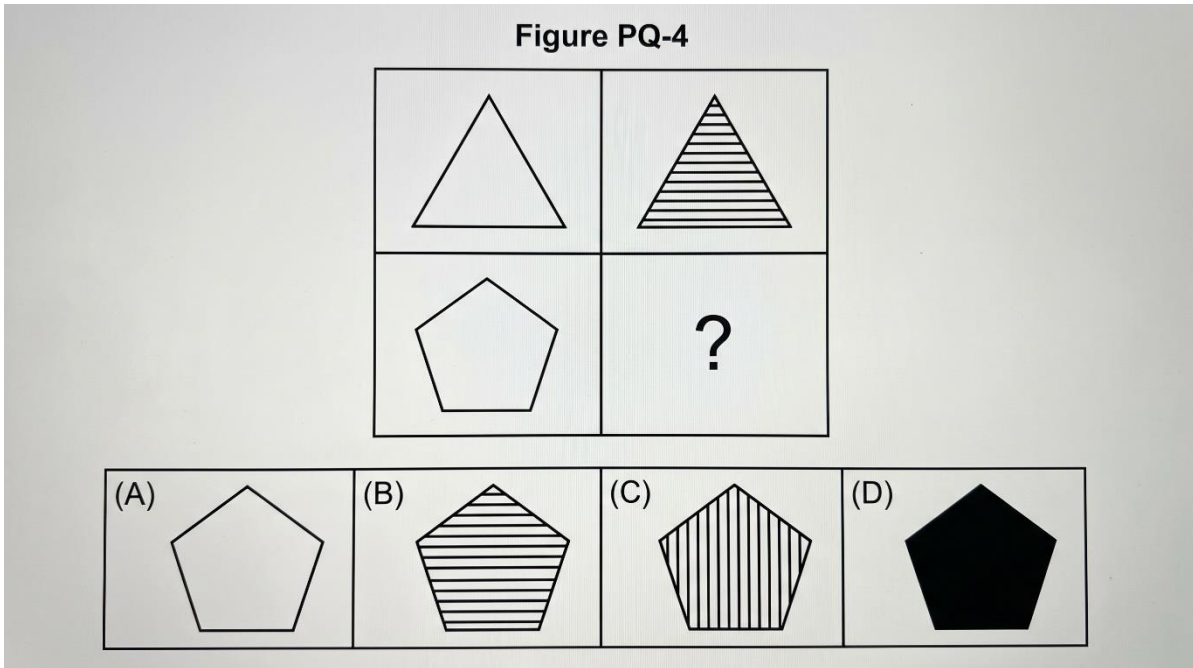


(D)

- A. an arrow pointing leftward
- B. an arrow pointing rightward
- C. an arrow pointing downward
- D. an arrow pointing upward

118. Which figure completes the matrix?

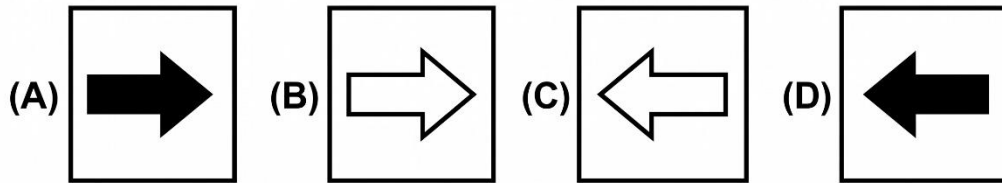
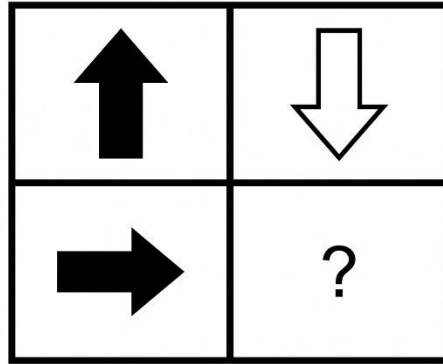
Figure PQ-4



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

119. Which figure completes the matrix?

[Figure PQ-5]



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

120. Which figure completes the matrix?

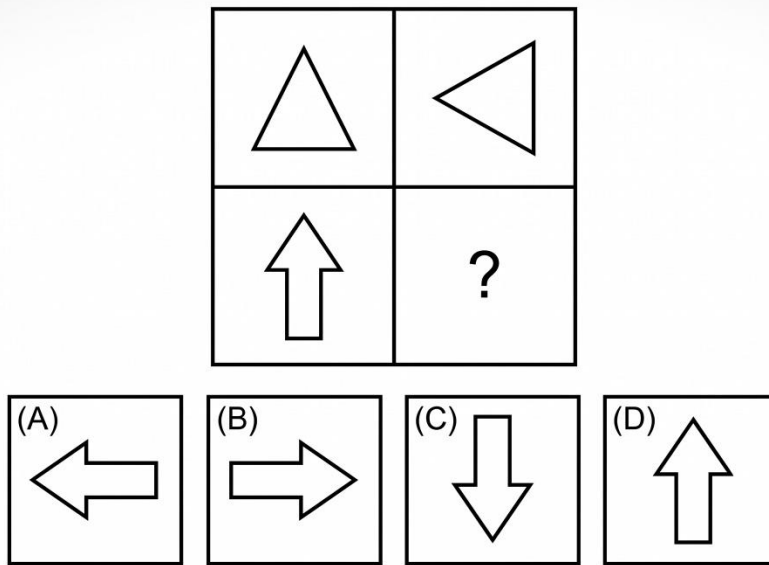
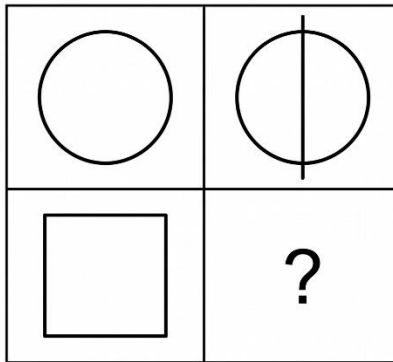


Figure PQ-6

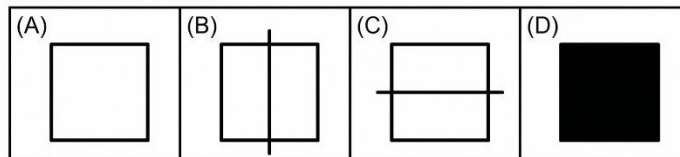
- A. an arrow pointing leftward
- B. an arrow pointing rightward
- C. an arrow pointing downward
- D. an arrow pointing upward

121. Which figure completes the matrix?

[Figure PQ-7]



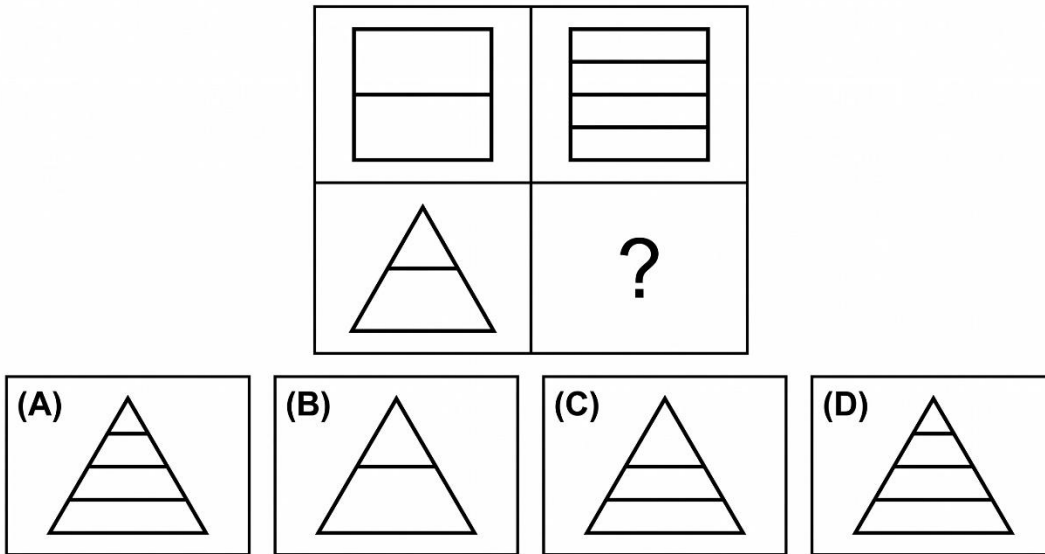
ANSWER OPTIONS



- A. a plain square
- B. a square with a vertical line
- C. a square with a horizontal line
- D. a solid black square

122. Which figure completes the matrix?

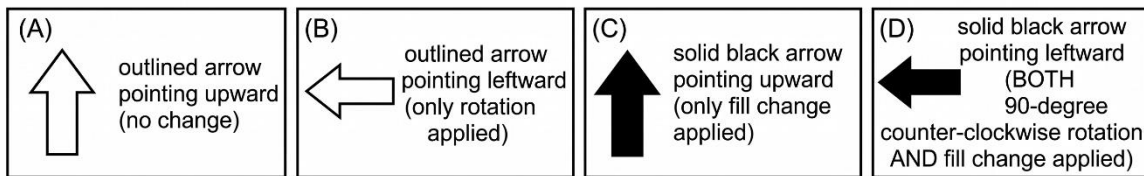
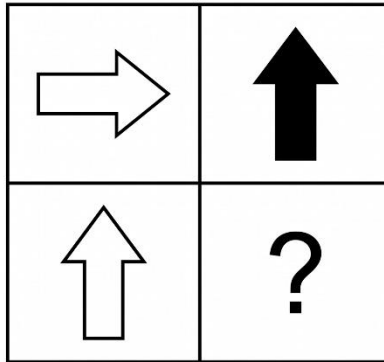
[Figure PQ-8]



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

123. Which figure completes the matrix?

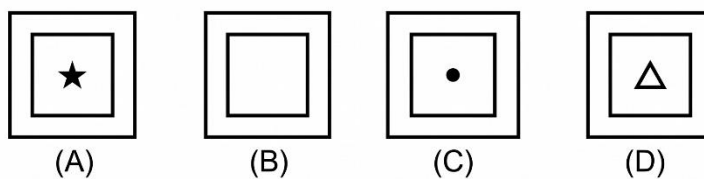
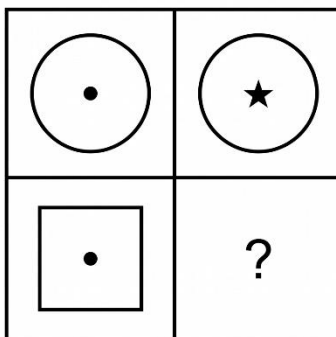
Figure PQ-9



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

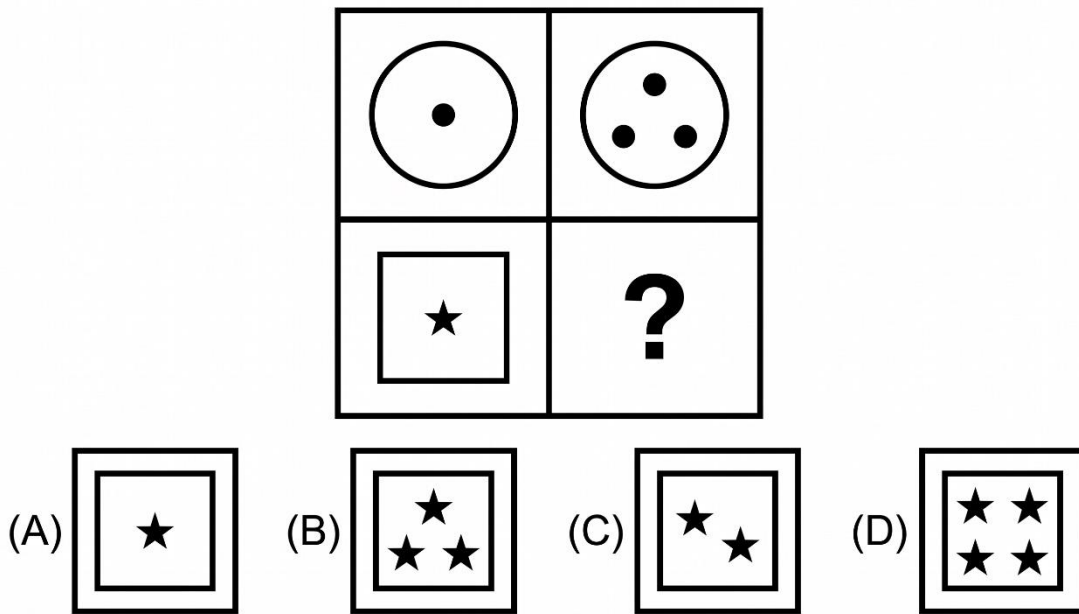
124. Which figure completes the matrix?

[Figure PQ-10]



- A. a square with a star inside
- B. a plain square
- C. a square with a dot inside
- D. a square with a triangle inside

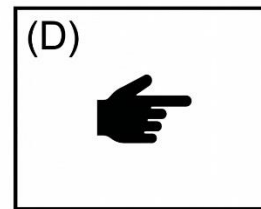
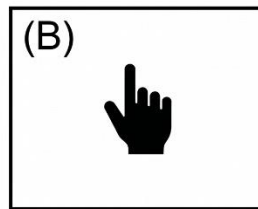
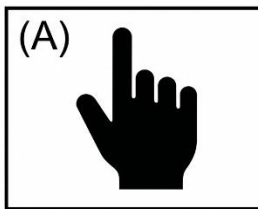
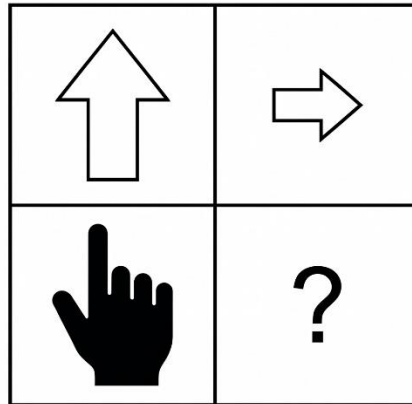
125. Which figure completes the matrix?



- A. a square with 1 star
- B. a square with 3 stars
- C. a square with 2 stars
- D. a square with 4 stars

126. Which figure completes the matrix?

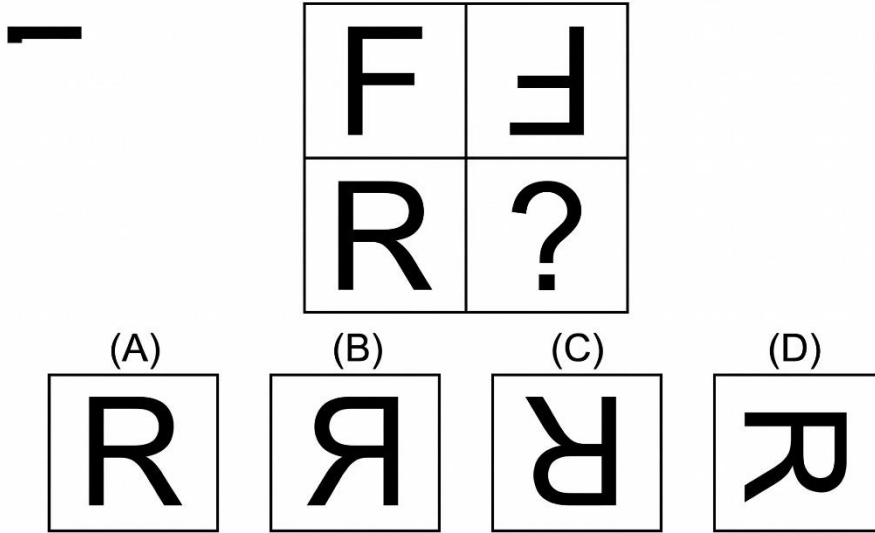
[Figure PQ-12]



- A. a large hand pointing upward
- B. a small hand pointing upward
- C. a large hand pointing rightward
- D. a small hand pointing rightward

127. Which figure completes the matrix?

Figure PQ-13



- A. an upright letter R
- B. a mirror-image letter R
- C. an upside-down letter R
- D. a letter R rotated 90 degrees clockwise

128. Which figure completes the matrix?

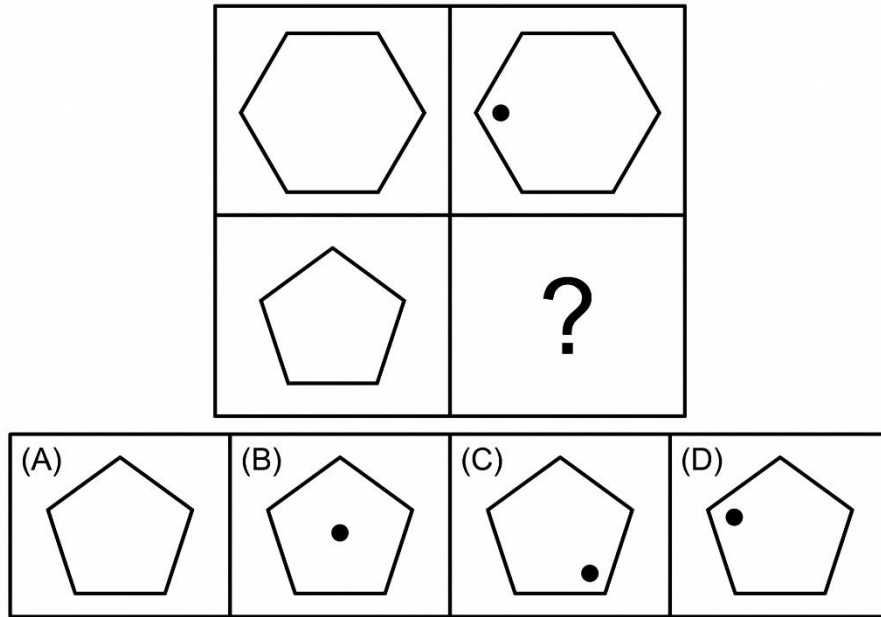
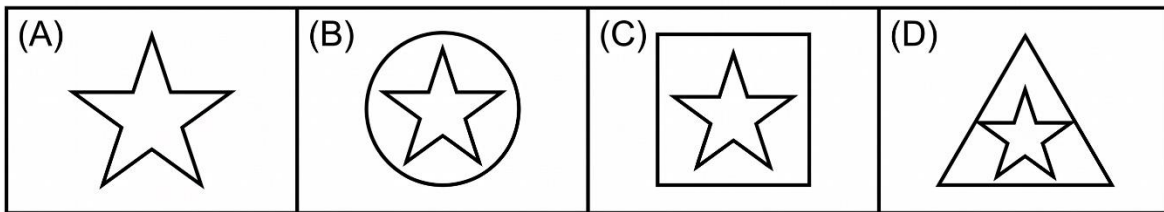
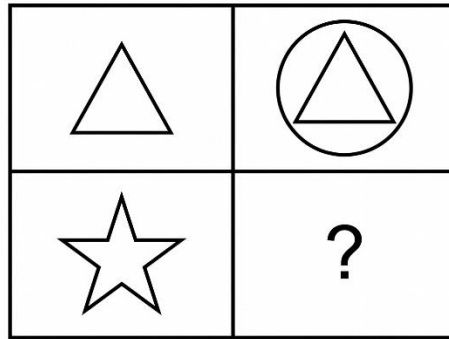


Figure PQ-14

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

129. Which figure completes the matrix?

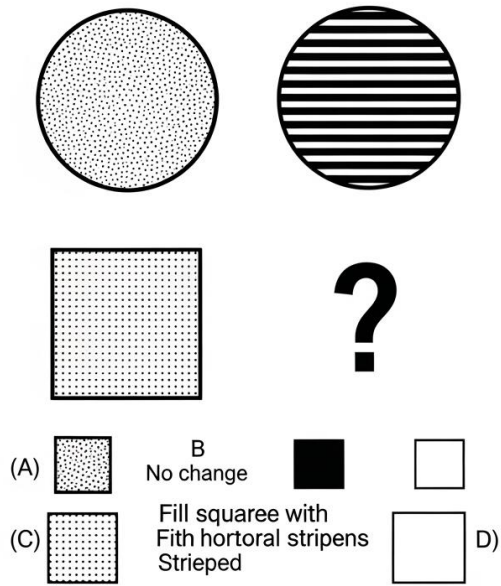
Figure PQ-15



- A. a standalone star
- B. a star inside a circle
- C. a star inside a square
- D. a star inside a triangle

130. Which figure completes the matrix?

Figure PQ-16



- A. a square with dotted fill
- B. a solid black square
- C. a square with horizontal stripes
- D. a plain outlined square

131. Which figure completes the matrix?

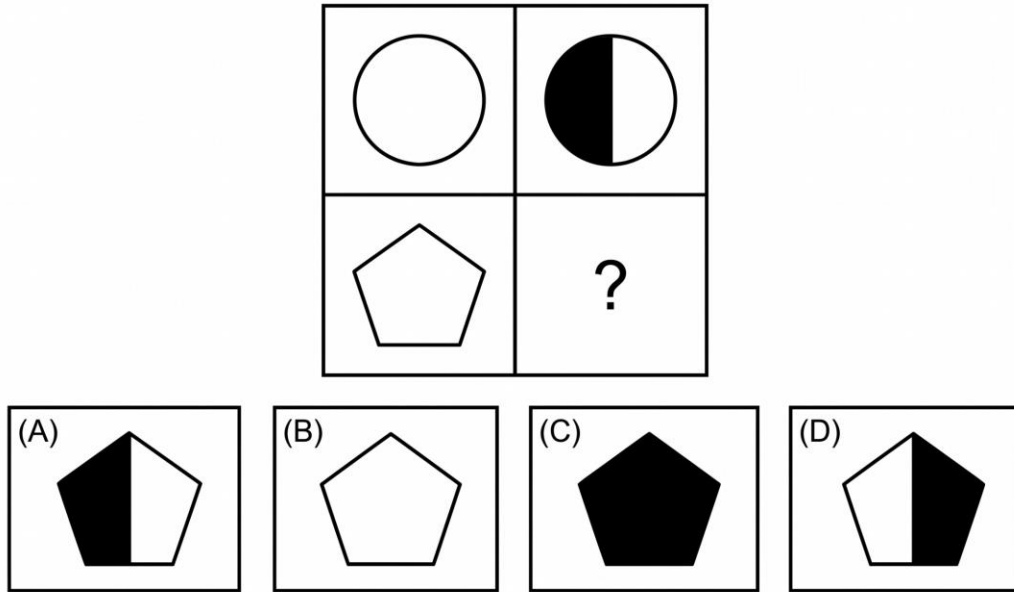
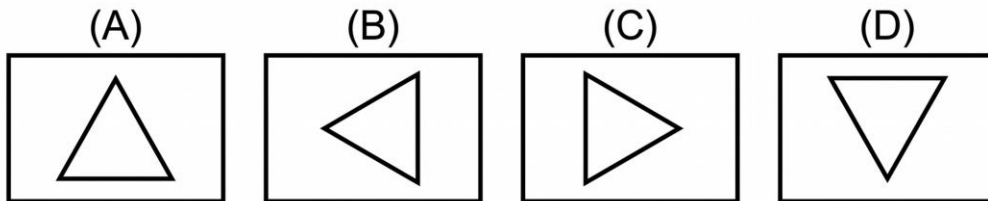
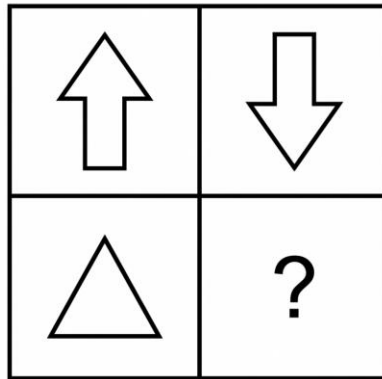


Figure PQ-17

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

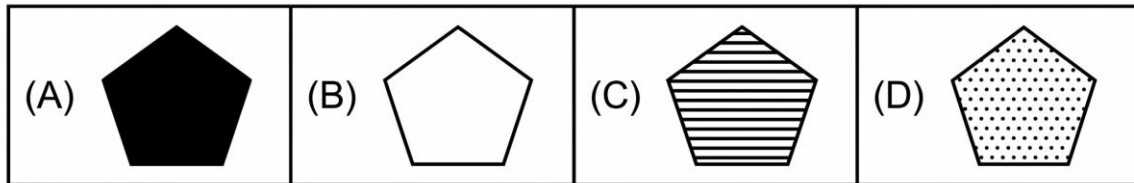
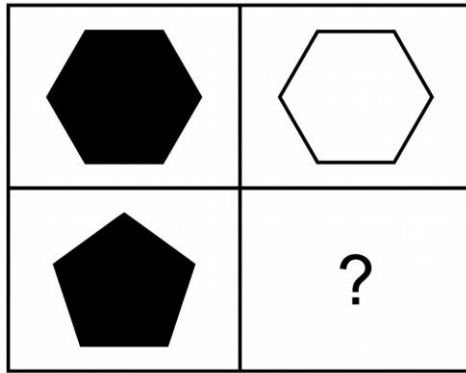
132. Which figure completes the matrix?



- A. a triangle pointing upward
- B. a triangle pointing leftward
- C. a triangle pointing rightward
- D. a triangle pointing downward

133. Which figure completes the matrix?

[Figure PQ-19]



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

Figure Classification (Questions 134–152)

134. Which figure belongs with the three given figures?

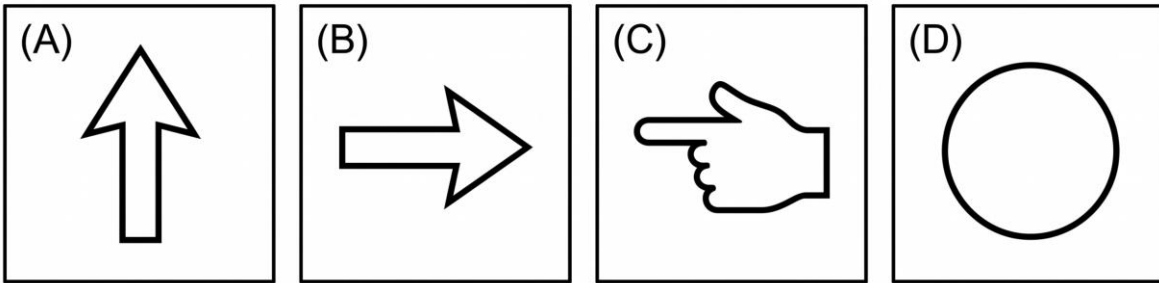
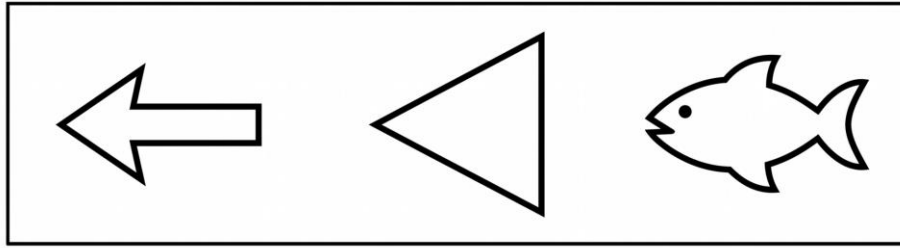
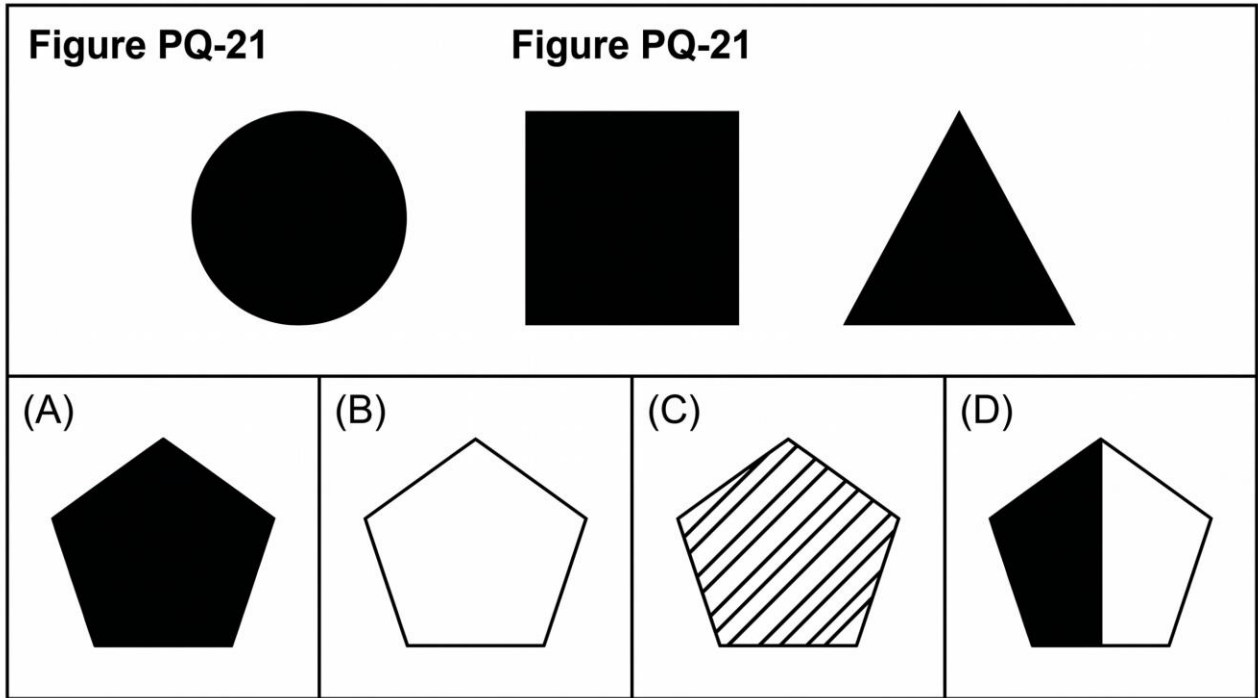


Figure PQ-20

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

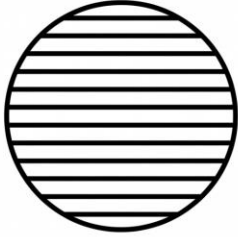
135. Which figure belongs with the three given figures?



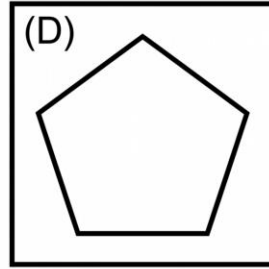
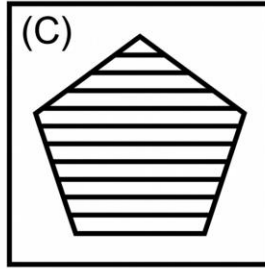
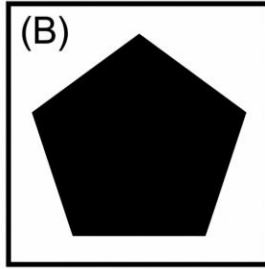
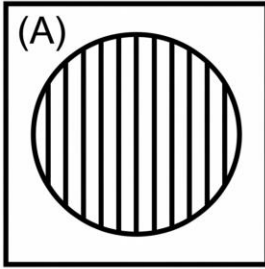
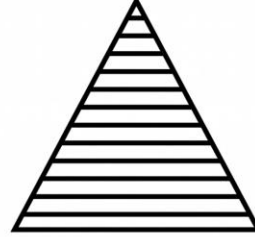
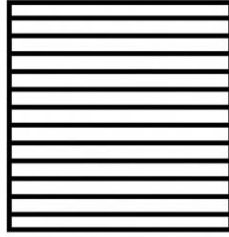
- A. a solid black pentagon
- B. a plain outlined pentagon
- C. a striped pentagon
- D. a half-shaded pentagon

136. Which figure belongs with the three given figures?

[Figure]



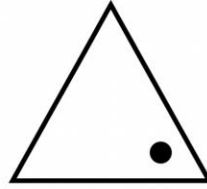
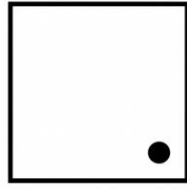
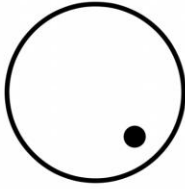
[Figure PQ-22]



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

137. Which figure belongs with the three given figures?

Given Figures



???

Answer Options

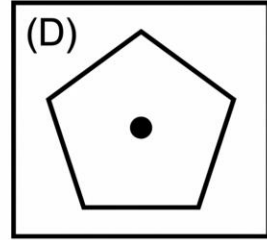
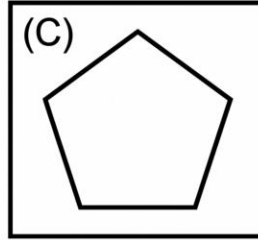
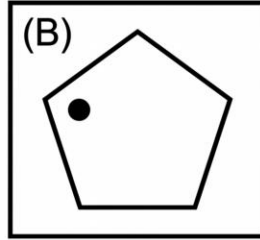
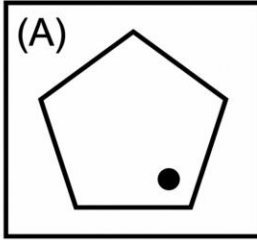
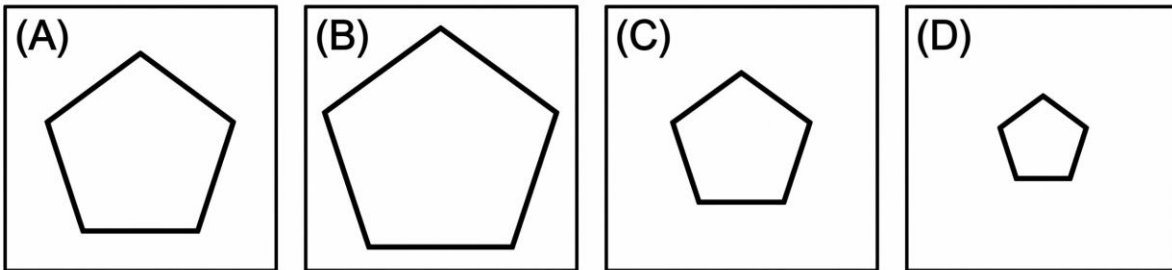
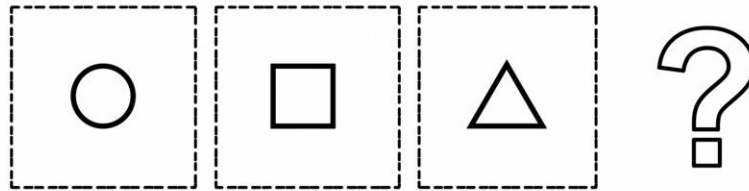


Figure PQ-23

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

138. Which figure belongs with the three given figures?

[Figure PQ-24]

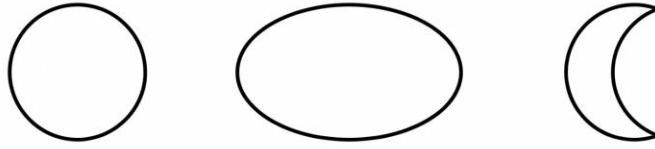


- A. a large pentagon
- B. a very large pentagon
- C. a medium pentagon
- D. a small pentagon

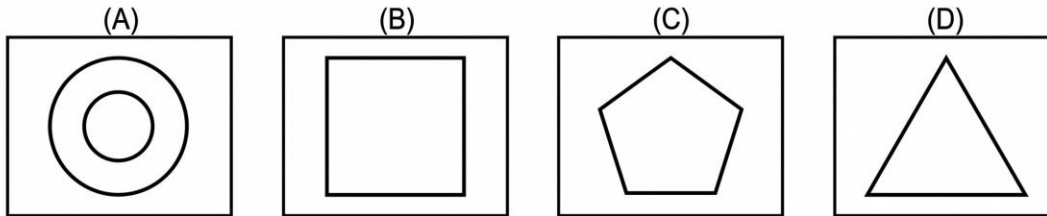
139. Which figure belongs with the three given figures?

[Figure PQ-25]

GIVEN FIGURES: (Notice that all have curved boundaries with no straight sides)



WHICH OF THE FOLLOWING FOLLOWS THE SAME RULE AS THE GIVEN FIGURES?

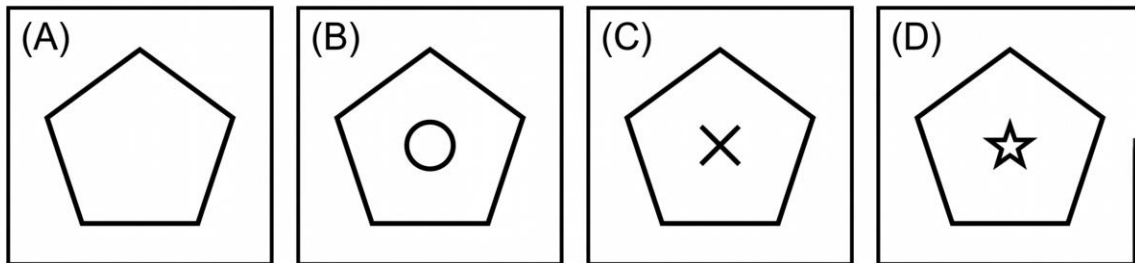


[Figure PQ-25]

- A. a ring
- B. a square
- C. a pentagon
- D. a triangle

140. Which figure belongs with the three given figures?

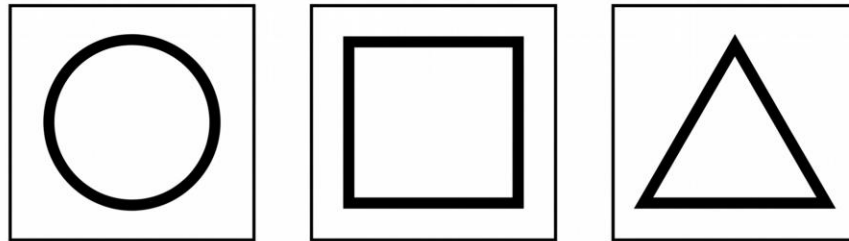
[Figure PQ-26]



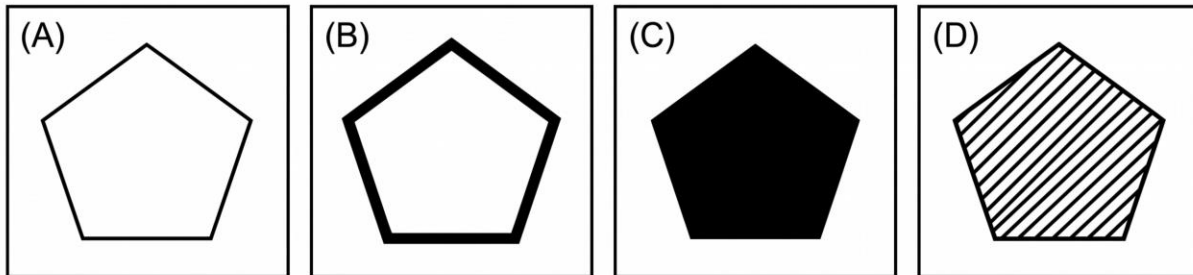
- A. a plain pentagon
- B. a pentagon with a circle inside
- C. a pentagon with an X inside
- D. a pentagon with a star inside

141. Which figure belongs with the three given figures?

Figure PQ-27. Gin described a mociote that contyin cittich figures.



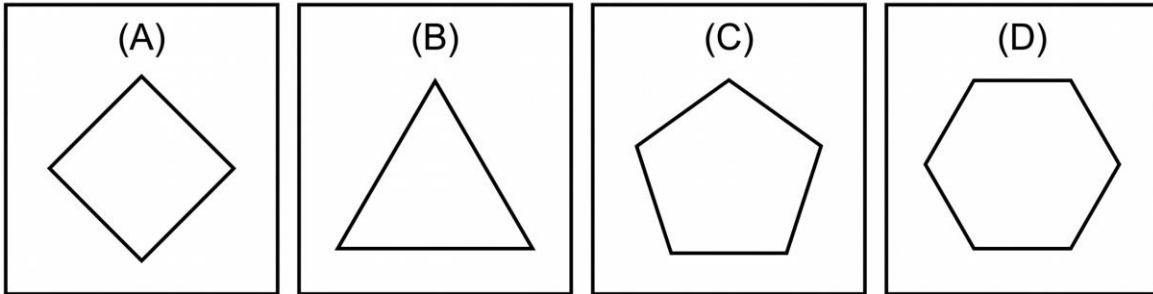
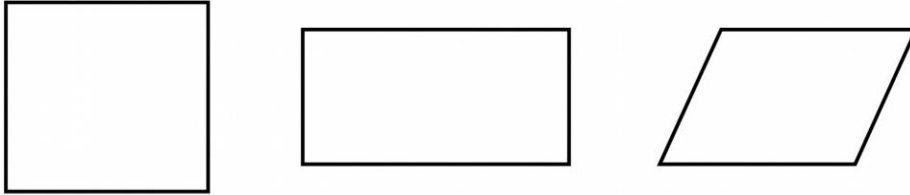
ANSWER OPTIONS: Choose the corresponding pentagon pattern.



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

142. Which figure belongs with the three given figures?

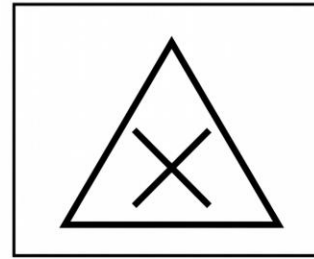
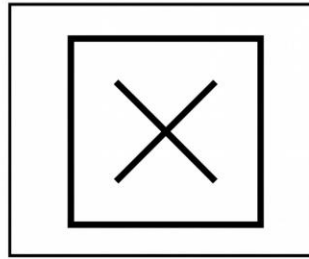
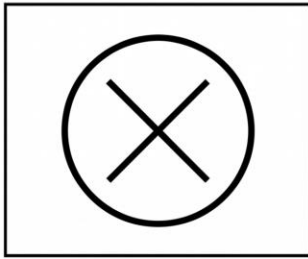
Figure PQ-28



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

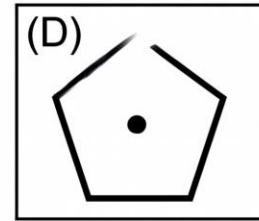
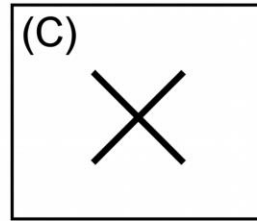
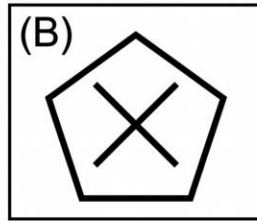
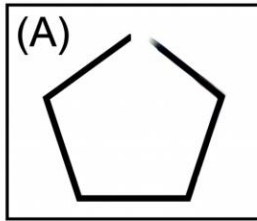
143. Which figure belongs with the three given figures?

[Figure PQ-29]



[Figure PQ-29]

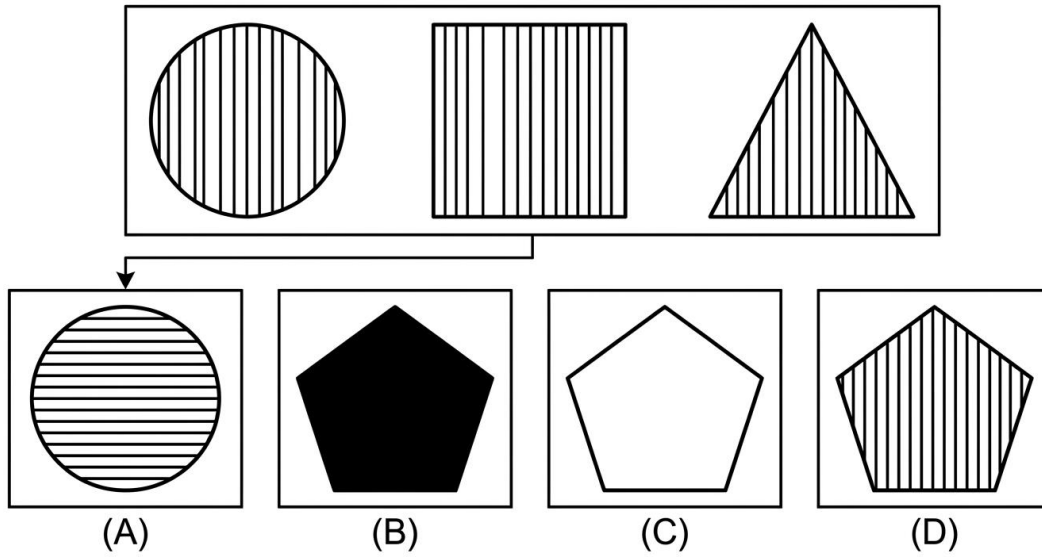
Options



- A. a plain pentagon
- B. a pentagon with an X
- C. an X mark alone
- D. a pentagon with a dot

144. Which figure belongs with the three given figures?

[Figure PQ-30]



A. a circle with horizontal stripes

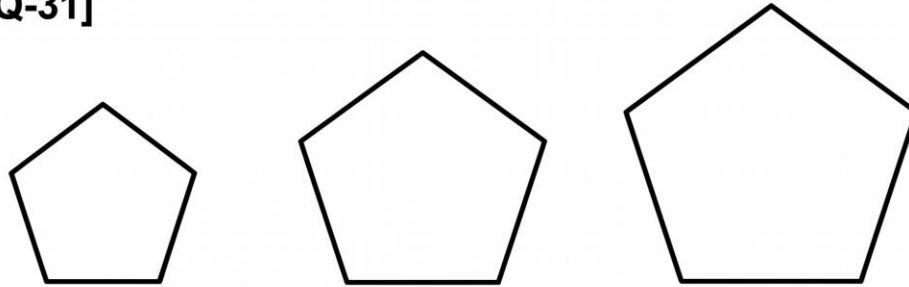
B. a solid black pentagon

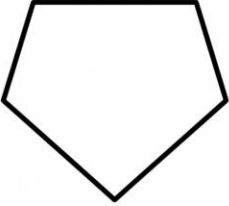
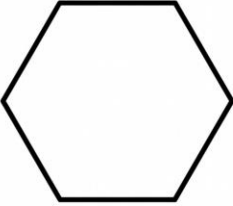
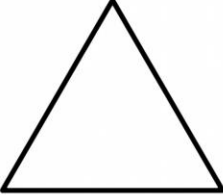
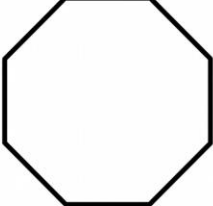
C. a plain pentagon

D. a pentagon with vertical stripes

145. Which figure belongs with the three given figures?

[Figure PQ-31]



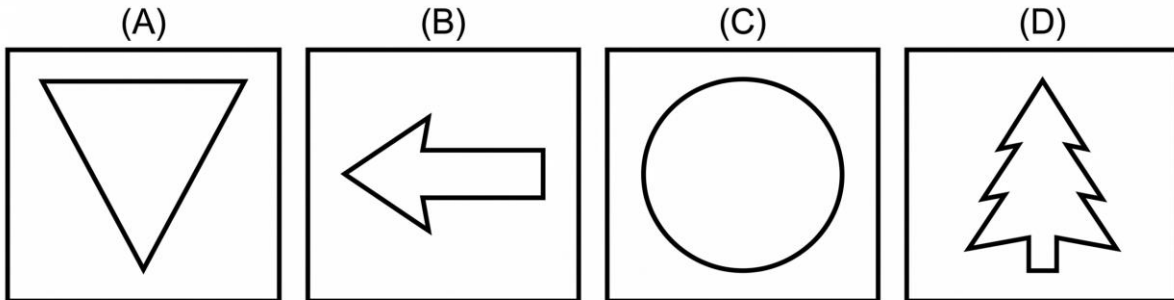
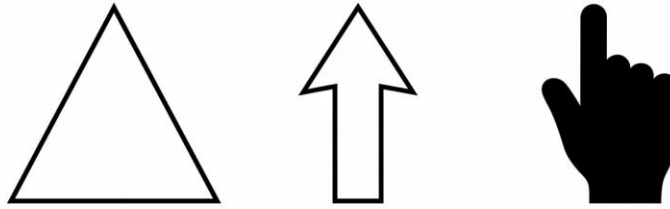
(A)	(B)	(C)	(D)
			

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

146. Which figure belongs with the three given figures?

[Figure PQ-32: Clean black-line technical diagram on white background.]

Given Figures

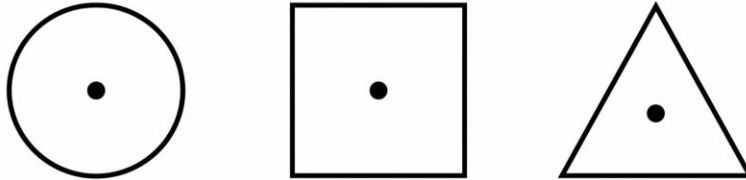


- A. a triangle pointing downward
- B. an arrow pointing leftward
- C. a plain circle
- D. an evergreen tree pointing upward

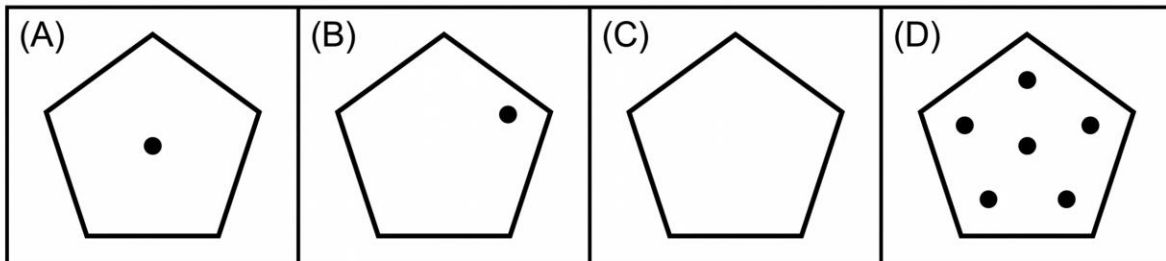
147. Which figure belongs with the three given figures?

[Figure PQ-33]

GIVEN FIGURES



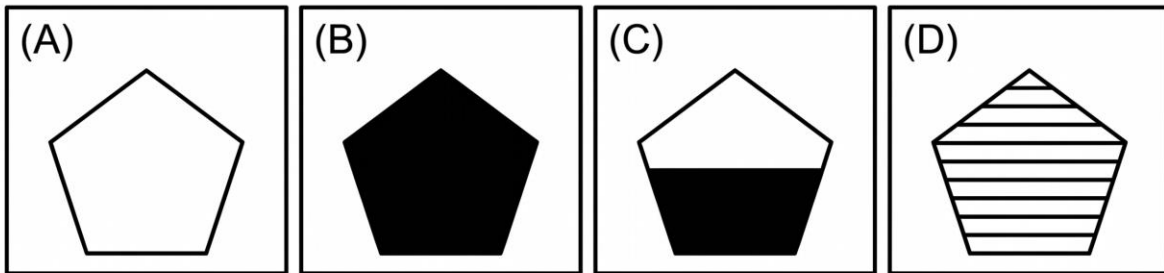
ANSWER OPTIONS



- A. a pentagon with dot at centre
- B. a pentagon with dot in corner
- C. a plain pentagon
- D. a pentagon with multiple dots

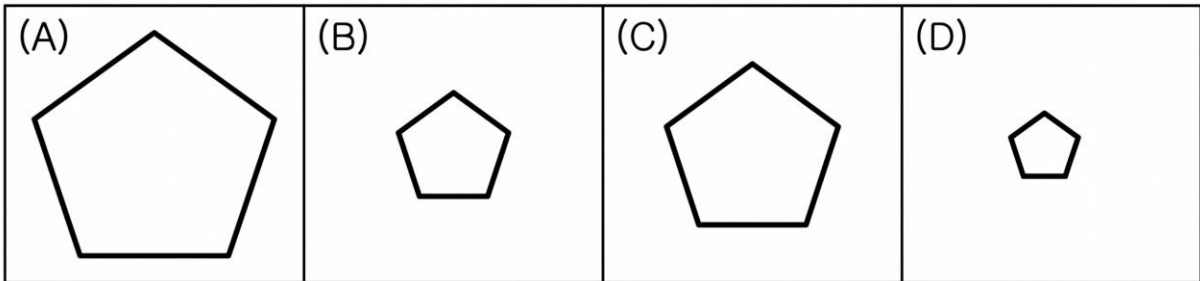
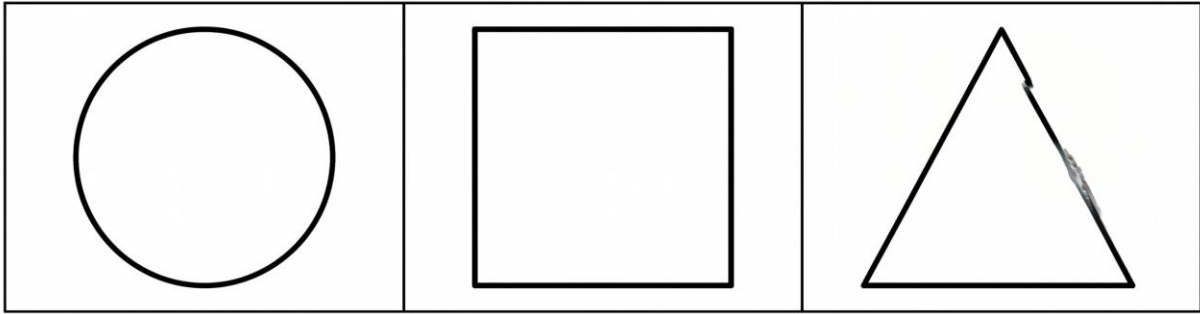
148. Which figure belongs with the three given figures?

[Figure PQ-34]



- A. a plain pentagon
- B. a solid black pentagon
- C. a pentagon with bottom half black
- D. a striped pentagon

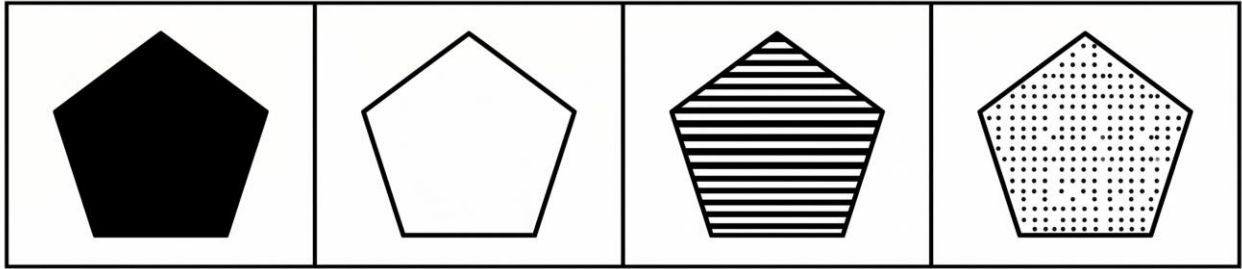
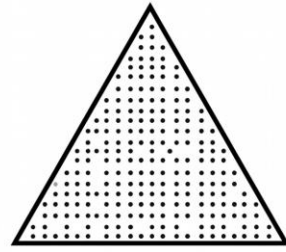
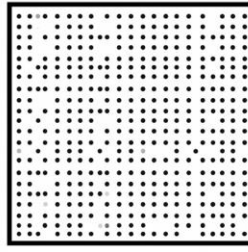
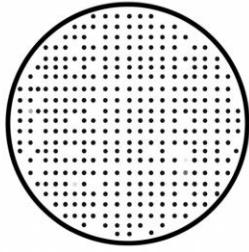
149. Which figure belongs with the three given figures?



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

150. Which figure belongs with the three given figures?

[Figure PQ-36]



(A)

(B)

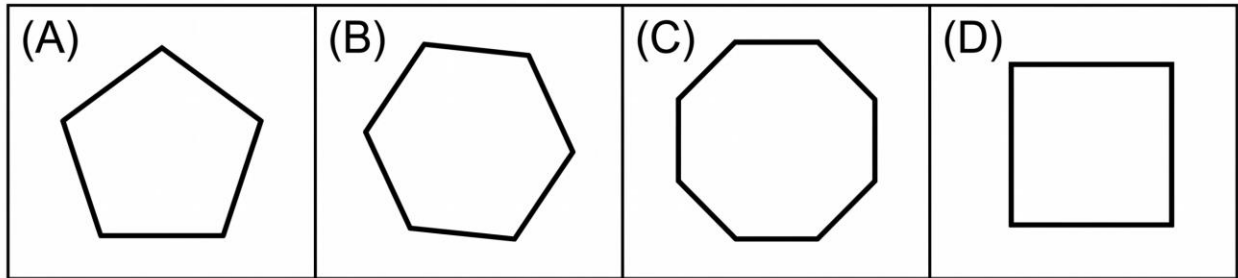
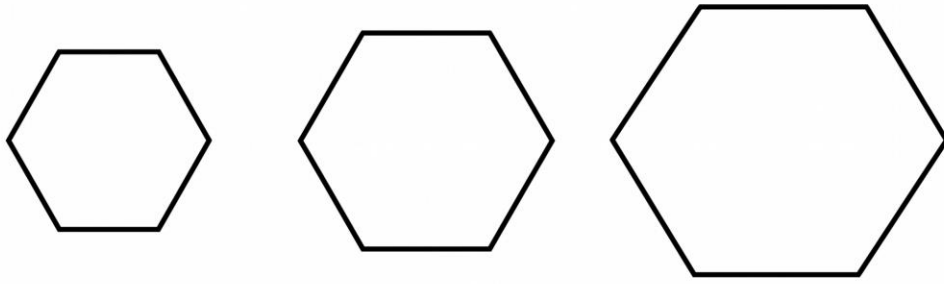
(C)

(D)

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

151. Which figure belongs with the three given figures?

[Figure PQ-37]



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

152. Which figure belongs with the three given figures?

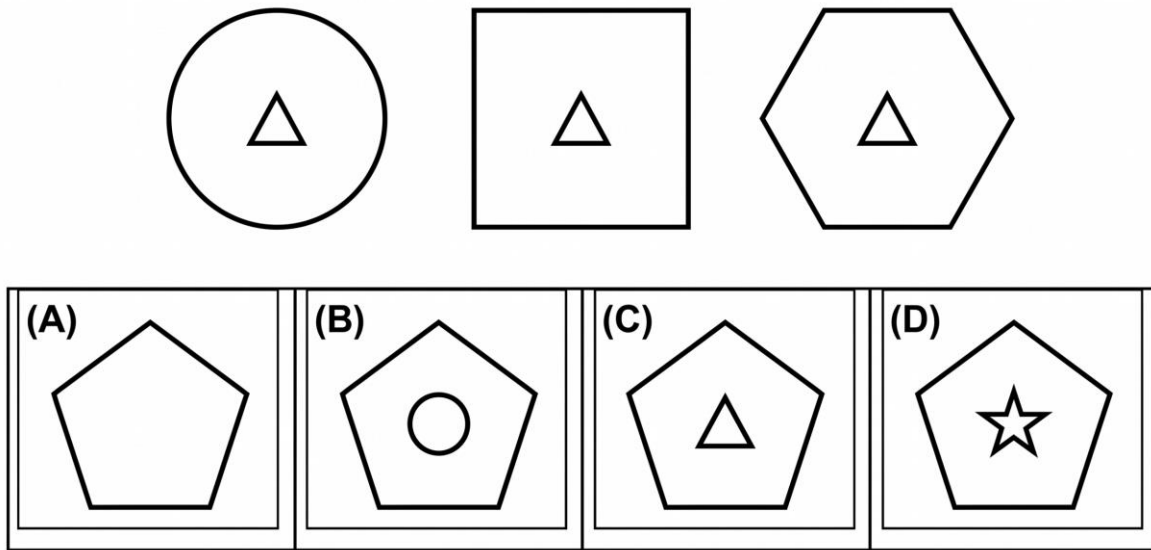


Figure PQ-38

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

Paper Folding (Questions 153–170)

153. 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 area, 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 left edge of the paper
- C. Two holes on the bottom edge of the paper
- D. Four holes — one near each of the four corners of the paper

154. A square sheet of paper is folded in half along a horizontal line, with the top half folded down over the bottom half. One hole is then punched through both layers approximately at the centre of the folded shape, midway between the left and right edges of the folded rectangle. 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 vertical centerline of the paper — one in the upper half and one in the lower half, mirrored across the horizontal middle
- C. Four holes spread around the centre
- D. Two holes on the horizontal centerline

155. 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 centre of this 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

156. 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 midpoint of the folded shape (midway between top and bottom). 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 vertical middle
- C. Four holes around the centre
- D. Two holes on the horizontal centerline

157. 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 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. Two holes on the right edge of the paper — one at the upper-right corner and one at the lower-right corner, mirrored across the horizontal middle
- C. Four holes spread around the right edge
- D. Two holes on the horizontal centerline

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 at the diagonal endpoints (top-left and bottom-right corners)
- C. Four holes spread around the centre
- D. Two holes symmetric across the diagonal — one in the upper-right interior and one in the lower-left interior of the paper

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

160. A square sheet of paper is folded along the diagonal that runs from the bottom-left corner to the top-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, near the middle of the diagonal. When the paper is fully unfolded, where will the holes appear?

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

161. 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 lower-right corner of the folded shape, at the original paper's lower-right corner, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

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

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

- A. Two holes on the left edge of the paper — one at the upper-left corner and one at the lower-left corner, mirrored across the horizontal middle
- B. One hole near the lower-left corner only
- C. Four holes near the corners
- D. Two holes on the bottom edge

163. 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 close together near the top edge and two close together near the bottom edge
- D. One hole at the very centre

164. 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 top edge of the folded shape. When the paper is fully unfolded, where will the holes appear?

- A. Two holes near the top edge of the paper
- B. One hole on the top edge of the paper, at the vertical middle
- C. Four holes spread along the top edge
- D. Two holes on the vertical centerline

165. 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 middle

166. A square sheet of paper is folded along the diagonal that runs from the bottom-left corner to the top-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-left interior and one in the lower-right interior of the paper
- C. Two holes at the diagonal endpoints
- D. Four holes spread around the centre

167. 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 on the bottom edge of the folded shape, midway between the vertical fold line and the left edge of the folded shape (not at any corner). When the paper is fully unfolded, where will the holes appear?

- A. Two holes on the bottom edge of the paper — both away from the corners and equidistant from the vertical middle, mirrored across the vertical fold
- B. One hole at the bottom centre only
- C. Four holes along the bottom edge
- D. Two holes near the bottom corners

168. A square sheet of paper is folded in half along a vertical line, with the left half folded over the right 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 close together near the top edge and two close together near the bottom edge
- D. One hole at the very centre

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

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

170. 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 area, well away from both fold lines. When the paper is fully unfolded, where will the holes appear?

- A. One hole near 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

PRACTICE EXAM 5 — ANSWER KEY AND EXPLANATIONS

Verbal Analogies

1. **C** — A bee produces honey; a cow produces milk. The relationship is "animal and the food it produces." Grass is what cows eat, tail is a body part, and calf is the young.
2. **D** — A hammer drives a nail; a screwdriver drives a screw. The relationship is "tool and what it acts on." Wood is the material, turn is the action, and handle is part of the tool.
3. **B** — A library houses books; a gallery houses paintings. The relationship is "building and what it displays or stores." Wall is part of a gallery, frame holds the painting, and visitor is who comes to see.
4. **A** — An engine powers a car; a motor powers a boat. The relationship is "power source and the vehicle it drives." Wheel is part of a car, road is where cars travel, and driver controls the car.

- 5. B** — Day and night are opposites; light and dark are opposites. The relationship is "opposite pair describing brightness or time." Bright is a synonym of light, sun produces light, and lamp gives off light.
- 6. D** — An apple belongs to the food category of fruit; a carrot belongs to the food category of vegetable. The relationship is "specific food and its category." Orange is another fruit, crunchy describes texture, and salad contains carrots but is not a category.
- 7. C** — A wing is the limb a bird uses to move; a fin is the limb a fish uses to move. The relationship is "body part and the animal that uses it for movement." Water is the medium, swim is the action, and scale is a different body part.
- 8. D** — A mother and daughter are a female parent-child pair; a father and son are a male parent-child pair. The relationship is "parent-child same-gender pair." Mother is the female parent, wife is a spouse, and sister is a sibling.
- 9. C** — Bread is made from wheat; cheese is made from milk. The relationship is "food and its main raw ingredient." Yellow describes cheese colour, block describes shape, and cracker is eaten with cheese.
- 10. A** — Lazy and active are opposites describing energy level; quiet and loud are opposites describing sound level. The relationship is "opposite pair." Soft is similar to quiet, peaceful means calm, and still means without motion.
- 11. B** — A doctor's workplace is a hospital; a judge's workplace is a courtroom. The relationship is "professional and their workplace." Law is what a judge applies, crime is what is tried, and lawyer is a different role.
- 12. C** — A sock covers a foot; a glove covers a hand. The relationship is "body part and the clothing item that fits over it." Finger is part of the hand, ring is jewellery, and wrist is a body part.
- 13. A** — A refrigerator's defining property is being cold; an oven's defining property is being hot. The relationship is "appliance and its temperature adjective." Food is what is stored or cooked, metal is the material, and heat is the noun form rather than the adjective that parallels cold.
- 14. B** — Slow describes the turtle, which is famously the slowest land animal; fast describes the cheetah, which is famously the fastest land animal. The relationship is "speed property and the animal known for it." Car is a vehicle, running is an action, and quick is a synonym of fast.
- 15. D** — A page is one unit of a chapter; a minute is one unit of an hour. The relationship is "smaller unit and the larger unit it builds up to." Clock measures time, second is smaller than a minute, and day is much larger than an hour.
- 16. C** — A roar is the signature sound of a lion; a howl is the signature sound of a wolf. The relationship is "sound and the animal that makes it." Bark is a dog sound, dog is an animal but does not howl as its signature, and moon is what wolves howl at.

17. A — A hospital's main worker is a nurse; a kitchen's main worker is a chef. The relationship is "workplace and the person who works there." Food is what is cooked, stove is the equipment, and meal is the product.

18. B — A smile is made with the mouth; a wink is made with the eye. The relationship is "facial expression and the body part that makes it." Cheek is nearby, face contains both, and happy is a related feeling.

19. A — A square has the three-dimensional form of a box; a circle has the three-dimensional form of a ball. The relationship is "two-dimensional shape and its three-dimensional counterpart." Round describes a circle, wheel is round but functional, and ring is a flat circular shape.

Sentence Completion

20. C — Strong wind shaking ripe apples loose causes them to fall down — they tumble to the ground. The signal "strong wind blew through the orchard" combined with "ripe apples" calls for a downward falling motion. Floated and flew go upward, and climbed contradicts gravity.

21. D — A buried garden in winter is buried under snow. The signal "the garden was buried" combined with the recipe needing dried herbs (no fresh available) calls for a winter condition. Flowers and weeds do not bury a garden, and rain would not bury herbs.

22. A — Hours of study allow Felix to recognise and name constellations — he can identify them. The signal "studying the night sky for hours" combined with "his grandfather had taught him" calls for a verb meaning to recognise. Forget and ignore contradict learning, and count alone misses naming.

23. C — A chef adding a small amount of salt to balance flavours adds a dash. The signal "tasted the soup, frowned slightly, and added a ___" combined with "to balance" calls for a small precise quantity. Bucket and pound are too much, and cup is far too much for seasoning.

24. A — A low voice that still carries every word in a marble hallway means the words are clear. The signal "every word was perfectly ___" combined with "marble hallway" (echoes) calls for an audibility quality. Quiet contradicts being audible, and fast and private do not describe how speech sounds.

25. D — An unused path overgrown with tall grass and wildflowers becomes hidden from view. The signal "not been used in many years" combined with "nearly ___ by tall grass" calls for a verb meaning concealed. Shorter and wider describe shape, and cleaner contradicts overgrowth.

26. B — A long international flight and going straight to bed without dinner indicates physical exhaustion. The signal "long flight from London all the way to Toronto" combined with "went straight to bed" calls for a state of being very tired. Excited and proud would not lead to skipping dinner, and hungry would lead to eating.

27. A — A lighthouse lamp guides ships at night, so it must be burning. The signal "ships could find their way safely" combined with "every single night" calls for the lamp being lit. Broken and closed contradict the safety function, and spinning describes motion but not light.

28. B — A rabbit avoiding a nearby fox keeps motionless to avoid detection — it remains still. The signal "knew the fox was nearby" combined with "until the danger had passed" calls for a stillness response. Busy and fast would attract attention, and loud would alert the fox.

29. D — Practising until every note becomes "as glass" means achieving smoothness — the notes are smooth as glass. The signal "practised the same difficult passage over and over" combined with "as glass" (a familiar simile for smoothness) calls for that comparison. Heavy, broken, and dark do not match the glass simile.

30. B — Setting six places but having four guests leaves two seats unused — they are empty. The signal "set the table for six guests but only four arrived" calls for the state of two unfilled seats. Busy and fancy do not describe unused seats, and tilted is unrelated.

31. C — Running through puddles leaves boots covered in mud — they become muddy. The signal "running through every puddle" calls for a wet-dirty result. Dry and clean contradict puddles, and heavy describes weight but not the reason for leaving them outside.

32. D — A single distraction can ruin or interrupt deep concentration — it can break it. The signal "even a single distraction could ___ her concentration" calls for a verb meaning to disrupt. Help, begin, and encourage all give concentration a positive boost, contradicting the warning.

33. C — In an empty cathedral, the smallest sound is made louder by echoes — it is amplified. The signal "every footstep echoed off the high stone ceiling" calls for a word meaning made louder. Silent and tiny contradict echoes, and ignored describes attention rather than sound.

34. A — Solving a riddle by relaxing the mind often means arriving at the answer suddenly — he guessed it. The signal "stopped trying so hard and let his mind relax" calls for a verb meaning to arrive at the answer. Ignored and forgot contradict solving, and lost is the opposite of finding.

35. B — Getting a tightly held ball out of a puppy's mouth requires gentle prying. The signal "puppy refused to drop the rubber ball" combined with "gently" calls for a careful removal verb. Push, throw, and catch describe other actions, not extraction.

36. D — Muddy boots are taken off and left at the back door before going inside — they are removed. The signal "muddy boots" combined with "by the back door" calls for a verb meaning to take off. Wore is the opposite, polished and cleaned are time-consuming and not done at the doorstep.

37. A — A kayak gliding silently on smooth water leaves only a tiny disturbance behind — a ripple. The signal "slid silently across the smooth lake water" combined with "small ___" calls for a small water disturbance. Wave is much larger, splash is louder, and stone is unrelated.

38. D — The most powerful storm a sailor has ever seen is described as the fiercest. The signal "most experienced sailor had to admit" combined with "raging that night" calls for an extreme intensity adjective. Quietest, simplest, and cleanest all contradict a raging storm.

Verbal Classification

- 39. B** — Thunder, lightning, and rain are all weather phenomena that occur during thunderstorms; hail is also a thunderstorm phenomenon. Wind can occur without storms, sunshine contradicts storms, and rainbow appears after storms but is not part of one. The category is "thunderstorm phenomena."
- 40. D** — Above, below, and beside are all spatial prepositions describing position; between is also a spatial preposition. But, and, or are conjunctions joining ideas. The category is "spatial prepositions."
- 41. C** — Saw, hammer, and drill are all workshop or carpentry tools; wrench is also a workshop tool. Shovel is a garden tool, spoon is for eating, and pen is for writing. The category is "workshop tools."
- 42. B** — Soccer, basketball, and tennis are all ball sports; baseball is also a ball sport. Running, swimming, and chess do not use a ball. The category is "ball sports."
- 43. D** — Ant, fly, and mosquito are all small insects; gnat is also a small insect (closely related to flies). Spider is an arachnid, lizard is a reptile, and worm has no legs. The category is "small insects."
- 44. A** — Red, orange, and yellow are all warm colours; pink is also a warm colour (closely related to red). Blue, green, and purple are cool colours. The category is "warm colours."
- 45. C** — Spring, summer, and autumn are three of the four seasons; winter is the fourth season. Month, year, and holiday are different time units or events. The category is "seasons."
- 46. B** — Happy, sad, and angry are all emotions; excited is also an emotion. Tall describes height, white is a colour, and quickly is a manner. The category is "emotions."
- 47. D** — Trumpet, flute, and saxophone are all wind instruments (sound made by blowing air); clarinet is also a wind instrument. Drum is percussion, and guitar and violin are string instruments.
- 48. C** — Pacific, Atlantic, and Indian are three of the world's oceans; Arctic is the fourth named ocean. Sea is a smaller body, lake is inland water, and river flows on land.
- 49. D** — Circle, square, and triangle are all flat (two-dimensional) shapes; rectangle is also a flat two-dimensional shape. Cube, sphere, and cylinder are three-dimensional solids.
- 50. B** — Tuesday, Wednesday, and Thursday are weekdays; Monday is also a weekday. Month, afternoon, and spring are different time units.
- 51. A** — Spoon, ladle, and scoop are all utensils used to serve or transfer food; spatula is also a serving and cooking utensil. Plate, cup, and napkin are other kitchen items but not utensils for transferring food.
- 52. C** — Elephant, hippo, and rhino are all large mammals; giraffe is also a large mammal. Mouse is small, bird is in a different class, and fish is aquatic. The category is "large mammals."
- 53. D** — Violin, cello, and guitar are all string instruments; harp is also a string instrument. Piano is a keyboard, drum is percussion, and trumpet is brass.

54. C — Sahara, Gobi, and Mojave are all deserts; Kalahari is also a desert. Ocean, river, and mountain are different geographical features.

55. B — Morning, evening, and noon are all specific times within a 24-hour day; midnight is also a specific time. Clock, sundial, and season measure time but are not times of day.

56. C — Kitten, puppy, and calf are all baby animals; lamb is also a baby animal (baby sheep). Cat, dog, and cow are the adult versions. The category is "baby animals."

57. A — Ear, nose, and eye are all sensory organs on the head; tongue is also a sensory organ (taste). Arm, hair, and tooth are body parts but not primary sensory organs.

Number Analogies

58. C — The rule is "multiply by 7." First pair ($2 \times 7 = 14$), second pair ($3 \times 7 = 21$), so $4 \times 7 = 28$. The consistent $\times 7$ multiplier confirms multiplication.

59. A — The rule is "divide by 8." First pair ($16 \div 8 = 2$), second pair ($24 \div 8 = 3$), so $40 \div 8 = 5$. The consistent ratio of one-eighth confirms division.

60. D — The rule is "multiply by 8." First pair ($2 \times 8 = 16$), second pair ($3 \times 8 = 24$), so $5 \times 8 = 40$.

61. B — The rule is a combined operation: "multiply by 2, then add 6." First pair ($1 \times 2 + 6 = 8$), second pair ($2 \times 2 + 6 = 10$), so $3 \times 2 + 6 = 12$.

62. A — The rule is a combined operation: "multiply by 3, then add 6." First pair ($1 \times 3 + 6 = 9$), second pair ($2 \times 3 + 6 = 12$), so $3 \times 3 + 6 = 15$.

63. D — The rule is a combined operation: "multiply by 4, then subtract 2." First pair ($2 \times 4 - 2 = 6$), second pair ($3 \times 4 - 2 = 10$), so $4 \times 4 - 2 = 14$.

64. B — The rule is a combined operation: "multiply by 5, then subtract 2." First pair ($2 \times 5 - 2 = 8$), second pair ($3 \times 5 - 2 = 13$), so $4 \times 5 - 2 = 18$.

65. 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.

66. A — The rule is a combined operation: "multiply by 6, then add 1." First pair ($1 \times 6 + 1 = 7$), second pair ($2 \times 6 + 1 = 13$), so $3 \times 6 + 1 = 19$.

67. D — The rule is a combined operation: "multiply by 6, then subtract 1." First pair ($2 \times 6 - 1 = 11$), second pair ($3 \times 6 - 1 = 17$), so $4 \times 6 - 1 = 23$.

68. B — The rule is a combined operation: "multiply by 4, then add 5." First pair ($1 \times 4 + 5 = 9$), second pair ($2 \times 4 + 5 = 13$), so $3 \times 4 + 5 = 17$.

- 69. A** — The rule is "divide by 6." First pair ($12 \div 6 = 2$), second pair ($18 \div 6 = 3$), so $30 \div 6 = 5$.
- 70. C** — The rule is a combined operation: "multiply by 3, then add 7." First pair ($1 \times 3 + 7 = 10$), second pair ($2 \times 3 + 7 = 13$), so $3 \times 3 + 7 = 16$.
- 71. B** — The rule is "multiply by 9." First pair ($2 \times 9 = 18$), second pair ($3 \times 9 = 27$), so $5 \times 9 = 45$.
- 72. C** — The rule is a combined operation: "multiply by 7, then add 1." First pair ($1 \times 7 + 1 = 8$), second pair ($2 \times 7 + 1 = 15$), so $3 \times 7 + 1 = 22$.
- 73. B** — The rule is "divide by 4." First pair ($16 \div 4 = 4$), second pair ($20 \div 4 = 5$), so $32 \div 4 = 8$.
- 74. D** — The rule is a combined operation: "multiply by 2, then add 7." First pair ($1 \times 2 + 7 = 9$), second pair ($2 \times 2 + 7 = 11$), so $4 \times 2 + 7 = 15$.
- 75. B** — The rule is a combined operation: "multiply by 8, then add 1." First pair ($1 \times 8 + 1 = 9$), second pair ($2 \times 8 + 1 = 17$), so $3 \times 8 + 1 = 25$.
- 76. C** — The rule is "cube the input" (raise to the third power). First pair ($1^3 = 1$), second pair ($2^3 = 8$), so $4^3 = 64$. The cube pattern matches both establishing pairs.

Number Puzzles

- 77. A** — Subtract 22 from both sides: $? = 40 - 22 = 18$. Substituting confirms $18 + 22 = 40$.
- 78. D** — Divide both sides by 8: $? = 56 \div 8 = 7$. Substituting confirms $8 \times 7 = 56$.
- 79. B** — Add 15 to both sides: $? = 20 + 15 = 35$. Substituting confirms $35 - 15 = 20$.
- 80. A** — Rearrange: if $72 \div ? = 8$, then $? = 72 \div 8 = 9$. Substituting confirms $72 \div 9 = 8$.
- 81. B** — Divide both sides by 6: $? = 48 \div 6 = 8$. Substituting confirms $6 \times 8 = 48$.
- 82. D** — Subtract 27 from both sides: $? = 60 - 27 = 33$. Substituting confirms $33 + 27 = 60$.
- 83. C** — Rearrange: if $100 - ? = 58$, then $? = 100 - 58 = 42$. Substituting confirms $100 - 42 = 58$.
- 84. D** — Divide both sides by 9: $? = 72 \div 9 = 8$. Substituting confirms $8 \times 9 = 72$.
- 85. B** — Combine the known numbers first: $18 + 6 = 24$. Then $24 + ? = 40$, so $? = 40 - 24 = 16$.
- 86. C** — Multiply both sides by 7: $? = 8 \times 7 = 56$. Substituting confirms $56 \div 7 = 8$.
- 87. A** — Subtract 4 from both sides first: $10 \times ? = 50$. Then divide by 10: $? = 50 \div 10 = 5$. Substituting confirms $10 \times 5 + 4 = 54$.

- 88. C** — Subtract 31 from both sides: $? = 70 - 31 = 39$. Substituting confirms $39 + 31 = 70$.
- 89. D** — Rearrange: if $96 \div ? = 8$, then $? = 96 \div 8 = 12$. Substituting confirms $96 \div 12 = 8$.
- 90. B** — Add 25 to both sides: $? = 15 + 25 = 40$. Substituting confirms $40 - 25 = 15$.
- 91. A** — Divide both sides by 11: $? = 77 \div 11 = 7$. Substituting confirms $11 \times 7 = 77$.
- 92. C** — Subtract 42 from both sides: $? = 80 - 42 = 38$. Substituting confirms $38 + 42 = 80$.
- 93. B** — Rearrange: if $99 \div ? = 9$, then $? = 99 \div 9 = 11$. Substituting confirms $99 \div 11 = 9$.
- 94. A** — Subtract 3 from both sides first: $12 \times ? = 48$. Then divide by 12: $? = 48 \div 12 = 4$. Substituting confirms $12 \times 4 + 3 = 51$.
- 95. C** — Add 28 to both sides: $? = 22 + 28 = 50$. Substituting confirms $50 - 28 = 22$.

Number Series

- 96. D** — The rule is "add 11" each step ($9 \rightarrow 20 \rightarrow 31 \rightarrow 42$). Applying gives $42 + 11 = 53$.
- 97. B** — The rule is "subtract 8" each step ($80 \rightarrow 72 \rightarrow 64 \rightarrow 56$). Applying gives $56 - 8 = 48$.
- 98. A** — The rule is "multiply by 3" each step ($1 \rightarrow 3 \rightarrow 9 \rightarrow 27$, tripling). Applying gives $27 \times 3 = 81$.
- 99. C** — The rule is "add 13" each step ($5 \rightarrow 18 \rightarrow 31 \rightarrow 44$). Applying gives $44 + 13 = 57$.
- 100. D** — The rule is "multiply by 4" each step ($2 \rightarrow 8 \rightarrow 32 \rightarrow 128$, quadrupling). Applying gives $128 \times 4 = 512$.
- 101. A** — The rule is "subtract 15" each step ($95 \rightarrow 80 \rightarrow 65 \rightarrow 50$). Applying gives $50 - 15 = 35$.
- 102. C** — The rule is "powers of 2" (doubling each step: $1 \rightarrow 2 \rightarrow 4 \rightarrow 8 \rightarrow 16$). Applying gives $16 \times 2 = 32$.
- 103. D** — The rule is an alternating pattern: odd-position values (1, 3, 5) increase by 2, and even-position values (12, 10, 8) decrease by 2. The next term is in an odd position, so $5 + 2 = 7$.
- 104. C** — The rule is a growing gap — gaps increase by 1 each step (1, 2, 4, 7, 11, 16, with gaps of 1, 2, 3, 4, 5, then 6). Applying gives $16 + 6 = 22$.
- 105. A** — The rule is "add 12" each step ($8 \rightarrow 20 \rightarrow 32 \rightarrow 44$). Applying gives $44 + 12 = 56$.
- 106. D** — The rule is a combined operation: "multiply by 2, then add 1" ($2 \times 2 + 1 = 5$, $5 \times 2 + 1 = 11$, $11 \times 2 + 1 = 23$, $23 \times 2 + 1 = 47$). Applying gives $47 \times 2 + 1 = 95$.

- 107. B** — The rule is "subtract 9" each step ($90 \rightarrow 81 \rightarrow 72 \rightarrow 63$). Applying gives $63 - 9 = 54$.
- 108. C** — The rule is "perfect squares minus 1" — each term is $n^2 - 1$ for $n = 1, 2, 3, 4, 5$ (giving 0, 3, 8, 15, 24). The next term is $6^2 - 1 = 35$.
- 109. A** — The rule is the Fibonacci pattern — each term is the sum of the two previous terms ($3 + 5 = 8$, $5 + 8 = 13$, $8 + 13 = 21$, so $13 + 21 = 34$).
- 110. B** — The rule is "divide by 2" each step ($256 \rightarrow 128 \rightarrow 64 \rightarrow 32 \rightarrow 16$, halving). Applying gives $16 \div 2 = 8$.
- 111. A** — The rule is "add 16" each step ($10 \rightarrow 26 \rightarrow 42 \rightarrow 58$). Applying gives $58 + 16 = 74$.
- 112. B** — The rule is "multiply by 5" each step ($1 \rightarrow 5 \rightarrow 25 \rightarrow 125$). Applying gives $125 \times 5 = 625$.
- 113. D** — The rule is "subtract 11" each step ($100 \rightarrow 89 \rightarrow 78 \rightarrow 67$). Applying gives $67 - 11 = 56$.
- 114. B** — The rule is an alternating pattern: odd-position values (10, 20, 30) increase by 10, and even-position values (100, 90, 80) decrease by 10. The next term is in an odd position, so $30 + 10 = 40$.

Figure Matrices

- 115. A** — The transformation combines two changes: 180-degree rotation AND adding a small dot at the centre. The upward arrow becomes a downward arrow with a dot, so the upward triangle must rotate 180 degrees AND gain a centre dot, producing a downward triangle with a dot.
- 116. C** — The transformation combines two changes: size enlargement AND outlined-to-solid fill. The small outlined circle becomes a large solid black circle, so the small outlined hexagon must enlarge AND become solid black.
- 117. D** — The transformation is 90-degree clockwise rotation. The upward arrow becomes a rightward arrow, so the leftward arrow must rotate 90 degrees clockwise to become an upward arrow.
- 118. B** — The transformation is "add horizontal stripes throughout the interior." The plain triangle gains horizontal stripes, so the plain pentagon must also gain horizontal stripes filling its interior.
- 119. C** — The transformation combines two changes: 180-degree rotation AND solid-to-outlined fill. The solid upward arrow becomes an outlined downward arrow, so the solid rightward arrow must rotate 180 degrees AND become outlined, producing an outlined leftward arrow.
- 120. A** — The transformation is 90-degree counter-clockwise rotation. The upward triangle becomes a leftward triangle, so the upward arrow must rotate 90 degrees counter-clockwise to become a leftward arrow.
- 121. B** — The transformation is "add a single vertical line through the middle." The plain circle gains a vertical line, so the plain square must also gain a vertical line through its middle.

122. 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.

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

124. A — The transformation is "change the interior element from a dot to a star." The circle with a dot becomes a circle with a star, so the square with a dot must become a square with a star inside.

125. B — The transformation is "triple the number of interior elements" (1 to 3). The circle with 1 dot becomes a circle with 3 dots, so the square with 1 star must become a square with 3 stars.

126. D — The transformation combines two changes: 90-degree clockwise rotation AND size reduction. The large upward arrow becomes a small rightward arrow, so the large hand pointing up must rotate 90 degrees clockwise AND shrink to become a small hand pointing right.

127. C — The transformation is 180-degree rotation (half-turn). The upright letter F becomes an upside-down F, so the upright letter R must rotate 180 degrees to become an upside-down R with the vertical stroke on the right and the bump extending toward the upper-left.

128. D — The transformation is "add a single dot in the upper-left interior corner." The plain hexagon gains a dot in upper-left, so the plain pentagon must also gain a dot in its upper-left interior.

129. B — The transformation is "enclose the shape inside an outlined circle." The standalone triangle becomes a triangle inside a circle, so the standalone star must become a star inside an outlined circle.

130. C — The transformation is "change the fill pattern from dotted to horizontal stripes." The dotted circle becomes a striped circle, so the dotted square must become a square filled with horizontal stripes.

131. A — The transformation is "outlined to half-shaded with left half black." The plain circle becomes a circle with the left half filled solid black, so the plain pentagon must become a pentagon with the left half solid black.

132. D — The transformation is 180-degree rotation (half-turn). The upward arrow becomes a downward arrow, so the upward triangle must rotate 180 degrees to become a downward triangle.

133. B — The transformation is "solid black to outlined" (fill inversion). The solid hexagon becomes an outlined hexagon, so the solid pentagon must also become an outlined pentagon.

Figure Classification

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

135. A — The category rule is "fully solid black shapes." All three given figures are completely filled with solid black, and the solid black pentagon matches. Plain outlined, striped, and half-shaded versions all fail.

136. 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. Vertical stripes, solid black, and plain outline all fail.

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

138. D — The category rule is "small shapes." All three given figures are notably small, and the small pentagon matches their scale. Large, very large, and medium all fail the size requirement.

139. A — The category rule is "shapes with curved boundaries only" (no straight sides). Circle, oval, crescent, and ring all consist of curves. Square, pentagon, and triangle all have straight sides.

140. D — The category rule is "outlined shapes containing a small five-pointed star inside." All three given figures match, and the pentagon with a star inside also fits. Plain, circle-inside, and X-inside all fail.

141. 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.

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

143. B — The category rule is "outlined shapes containing a black X mark inside." All three given figures match, and the pentagon with an X also fits. Plain, standalone X, and dot-inside all fail.

144. D — The category rule is "shapes filled with vertical stripes." All three given figures share vertical-stripe fills, and the pentagon with vertical stripes matches. Horizontal stripes, solid black, and plain outline all fail.

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

146. D — The category rule is "shapes that point or face upward." Triangle, arrow, and hand pointing up all match, and the evergreen tree (which points upward at its top) also qualifies. Triangle downward, arrow leftward, and the directionless circle all fail.

147. A — The category rule is "outlined shapes with a single dot at the exact centre." All three given figures match this positional rule, and the pentagon with a centre dot also fits. Corner dot, no dot, and multiple dots all fail.

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

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

150. D — The category rule is "shapes filled with small dots throughout the interior" (dotted fill). All three given figures share dotted-fill texture, and the dotted-fill pentagon matches. Solid, plain, and striped all fail.

151. B — The category rule is "six-sided shapes" (hexagons). All three given figures are hexagons varying in size or shading, and a hexagon at a different angle is still six-sided. Pentagon has 5, octagon has 8, and square has 4.

152. C — The category rule is "outlined shapes containing a small outlined triangle inside." All three given figures match, and the pentagon with a triangle inside also fits. Plain, circle-inside, and star-inside all fail.

Paper Folding

153. 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.

154. 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. The result is two holes on the vertical centerline.

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

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

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

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

161. C — A double fold creates four layers. A hole near the lower-right corner of the folded shape (at the original paper's lower-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. A — A single horizontal fold creates two layers. A hole near the lower-left corner of the folded bottom half sits at the original paper's lower-left corner, and its mirror across the horizontal fold sits at the upper-left corner. The result is two holes on the left edge.

163. 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.

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

165. 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.

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

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

168. 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.

169. B — A single horizontal fold mirrors each punch across the fold line. A hole on the left edge of the folded shape, midway between the fold and the bottom edge (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 left edge, both away from the corners.

170. 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.