

PRACTICE EXAM 3: CCAT-7

MULTILEVEL SIMULATION (176 QUESTIONS)

VERBAL BATTERY

Recommended Time: 30 Minutes — 60 Questions

Do not turn back to a previous section or go ahead to the next section.

Section 1: Verbal Analogies (Questions 1–24)

Directions: In each question below, the first two words go together in a certain way. Choose the answer that goes with the third word in the same way.

1. soft : hard :: weak : _____

- A. gentle
- B. tired
- C. small
- D. strong
- E. slow

2. bread : baker :: medicine : _____

- A. pharmacist
- B. hospital
- C. pill
- D. sick
- E. bottle

3. leaf : tree :: feather : _____

- A. nest
- B. soft
- C. fly
- D. pillow
- E. bird

4. piano : keys :: guitar : _____

- A. music
- B. strings
- C. case
- D. play
- E. wood

5. minute : hour :: day : _____

- A. time
- B. morning
- C. week
- D. calendar
- E. sunrise

6. roof : house :: lid : _____

- A. jar
- B. kitchen
- C. round
- D. open
- E. glass

7. teeth : chew :: legs : _____

- A. body
- B. knee
- C. shoe
- D. walk
- E. two

8. map : navigator :: recipe : _____

- A. kitchen
- B. meal
- C. ingredients
- D. oven
- E. cook

9. shy : outgoing :: generous : _____

- A. kind
- B. selfish
- C. rich
- D. helpful
- E. giving

10. helmet : head :: shield : _____

- A. knight
- B. metal
- C. body
- D. round
- E. sword

11. flame : heat :: ice : _____

- A. water
- B. winter
- C. cube
- D. cold
- E. slippery

12. forest : trees :: flock : _____

- A. birds
- B. wool
- C. farm
- D. sky
- E. feather

13. camera : photograph :: oven : _____

- A. kitchen
- B. hot
- C. cook
- D. metal
- E. meal

14. whale : mammal :: snake : _____

- A. poison
- B. reptile
- C. long
- D. scales
- E. garden

15. young : old :: ancient : _____

- A. modern
- B. building
- C. history
- D. dusty
- E. museum

16. blanket : warm :: fan : _____

- A. ceiling
- B. electricity
- C. cool
- D. spin
- E. summer

17. caterpillar : butterfly :: tadpole : _____

- A. pond
- B. swim
- C. green
- D. water
- E. frog

18. shovel : dig :: saw : _____

- A. tool
- B. sharp
- C. wood
- D. cut
- E. blade

19. desert : dry :: jungle : _____

- A. hot
- B. humid
- C. animal
- D. tree
- E. green

20. wheel : bicycle :: runner : _____

- A. sled
- B. foot
- C. shoe
- D. fast
- E. race

21. thermometer : temperature :: scale : _____

- A. fish
- B. balance
- C. weight
- D. number
- E. metal

22. acorn : oak :: seed : _____

- A. soil
- B. small
- C. water
- D. garden
- E. flower

23. student : learn :: athlete : _____

- A. uniform
- B. strong
- C. medal
- D. train
- E. team

24. frown : sadness :: smile : _____

- A. face
- B. happiness
- C. teeth
- D. mouth
- E. laugh

Section 2: Sentence Completion (Questions 25–44)

Directions: In each question below, choose the word that best completes the sentence.

25. The magician's trick was so ____ that even the adults in the audience could not figure out how it was done.

- A. boring
- B. simple
- C. slow
- D. loud
- E. convincing

26. The heavy snowfall ____ the roads, making it impossible for cars to pass through the mountain village.

- A. widened
- B. decorated

- C. blocked
- D. melted
- E. dried

27. The student's essay was well-organised and ____, making it easy for the teacher to follow every argument from start to finish.

- A. clear
- B. confusing
- C. short
- D. messy
- E. colourful

28. Because the old bridge could no longer support heavy traffic, the city decided to ____ it and build a new one in its place.

- A. paint
- B. widen
- C. celebrate
- D. demolish
- E. photograph

29. The hikers were ____ when they finally reached the mountain summit after climbing for seven exhausting hours.

- A. disappointed
- B. thrilled
- C. bored
- D. confused
- E. angry

30. The thick morning fog made the familiar path look ____ and strange, as if the children had never walked there before.

- A. bright
- B. wide
- C. noisy
- D. crowded
- E. unfamiliar

31. The invention of the telephone ___ the way people communicated, allowing voices to travel across great distances instantly.

- A. prevented
- B. delayed
- C. transformed
- D. ignored
- E. copied

32. Unlike her brother, who rushed through his homework, Marta was very ___ and checked every answer twice before handing it in.

- A. thorough
- B. careless
- C. fast
- D. lazy
- E. distracted

33. The beaver's dam across the stream was an ___ piece of natural engineering, built entirely from sticks and mud.

- A. ugly
- B. accidental
- C. ordinary
- D. impressive
- E. invisible

34. The sailor used the position of the stars to ___ across the open ocean long before GPS technology existed.

- A. swim
- B. navigate
- C. fish
- D. sleep
- E. communicate

35. The old map was so ___ that some of the markings had faded completely and could no longer be read at all.

- A. new
- B. colourful
- C. heavy
- D. large
- E. worn

36. The chameleon changed the colour of its skin to ___ with the leaves around it, making it nearly invisible to predators.

- A. contrast
- B. argue
- C. blend
- D. compete
- E. clash

37. The firefighters had to act with extreme ___ when entering the unstable building because the floors could collapse at any moment.

- A. speed
- B. noise
- C. humour
- D. caution

E. confusion

38. The community garden ____ people from different backgrounds, giving neighbours a shared space to work side by side.

A. united

B. separated

C. confused

D. frightened

E. bored

39. The arctic fox's white winter coat provides excellent ____ against the snow, helping it hide from wolves and other predators.

A. warmth

B. speed

C. weight

D. colour

E. camouflage

40. The young musician practised the same piece over and over until she could play it ____ without a single mistake.

A. loudly

B. flawlessly

C. slowly

D. nervously

E. rarely

41. The documentary about coral reefs showed how ____ the ocean ecosystem is, with thousands of species depending on one another for survival.

A. simple

B. boring

- C. empty
- D. complex
- E. shallow

42. The engineer designed the new bridge to ___ earthquakes, using flexible materials that could bend without breaking.

- A. attract
- B. create
- C. withstand
- D. ignore
- E. predict

43. The archaeologist's discovery of an ancient city beneath the sand was completely ___ — she had been digging in the area for an entirely different reason.

- A. accidental
- B. planned
- C. boring
- D. ordinary
- E. expected

44. The migratory birds arrived at the wetlands in enormous numbers, turning the quiet marsh into a ___ scene of flapping wings and loud calls.

- A. peaceful
- B. empty
- C. silent
- D. frozen
- E. chaotic

Section 3: Verbal Classification (Questions 45–60)

Directions: The three words in each question below go together in some way. Choose the answer that belongs with them.

45. whale, dolphin, seal

- A. fish
- B. walrus
- C. ocean
- D. flipper
- E. swim

46. guitar, piano, flute

- A. song
- B. concert
- C. musician
- D. note
- E. trumpet

47. square, hexagon, octagon

- A. angle
- B. line
- C. triangle
- D. circle
- E. ruler

48. oxygen, carbon, iron

- A. element
- B. gas
- C. metal
- D. periodic

E. science

49. evaporation, condensation, precipitation

A. cloud

B. science

C. temperature

D. water cycle stage

E. rain

50. hurricane, tornado, blizzard

A. rain

B. earthquake

C. wind

D. damage

E. cloud

51. Mars, Jupiter, Saturn

A. star

B. moon

C. space

D. telescope

E. Neptune

52. Ontario, Quebec, Alberta

A. country

B. city

C. British Columbia

D. Ottawa

E. maple

53. biography, autobiography, memoir

A. nonfiction narrative

B. fiction

C. novel

D. poem

E. play

54. simmer, boil, fry

A. food

B. kitchen

C. recipe

D. cooking method

E. oven

55. granite, limestone, marble

A. mineral

B. building

C. heavy

D. cave

E. rock

56. democracy, monarchy, dictatorship

A. country

B. government type

C. president

D. election

E. law

57. sonnet, haiku, limerick

A. poem type

B. writing

C. rhyme

D. book

E. literature

58. microscope, telescope, binoculars

A. glass

B. scientist

C. optical instrument

D. lens

E. eye

59. latitude, longitude, equator

A. map

B. travel

C. compass

D. geographic term

E. ocean

60. watt, joule, ampere

A. science

B. electricity

C. number

D. math

E. unit of measurement

QUANTITATIVE BATTERY

Recommended Time: 30 Minutes — 54 Questions

Do not turn back to the Verbal Battery or go ahead to the Nonverbal Battery.

Section 4: Number Analogies (Questions 61–78)

Directions: In each question below, the numbers in the first two pairs follow the same rule. Find the number that completes the third pair using the same rule.

61. $[4 \rightarrow 12] [6 \rightarrow 18] [9 \rightarrow ?]$

A. 27

B. 18

C. 36

D. 45

E. 21

62. $[20 \rightarrow 10] [16 \rightarrow 8] [12 \rightarrow ?]$

A. 3

B. 4

C. 6

D. 8

E. 24

63. $[2 \rightarrow 5] [6 \rightarrow 13] [4 \rightarrow ?]$

A. 7

B. 8

- C. 10
- D. 12
- E. 9

64. $[3 \rightarrow 9] [5 \rightarrow 25] [6 \rightarrow ?]$

- A. 12
- B. 36
- C. 30
- D. 18
- E. 42

65. $[14 \rightarrow 9] [22 \rightarrow 17] [30 \rightarrow ?]$

- A. 20
- B. 24
- C. 35
- D. 25
- E. 15

66. $[7 \rightarrow 28] [3 \rightarrow 12] [8 \rightarrow ?]$

- A. 32
- B. 16
- C. 24
- D. 40
- E. 36

67. $[1 \rightarrow 2] [4 \rightarrow 8] [9 \rightarrow ?]$

- A. 12
- B. 27

- C. 18
- D. 36
- E. 15

68. $[40 \rightarrow 8] [25 \rightarrow 5] [35 \rightarrow ?]$

- A. 5
- B. 6
- C. 10
- D. 15
- E. 7

69. $[5 \rightarrow 11] [8 \rightarrow 17] [3 \rightarrow ?]$

- A. 5
- B. 6
- C. 9
- D. 7
- E. 8

70. $[6 \rightarrow 7] [10 \rightarrow 11] [25 \rightarrow ?]$

- A. 30
- B. 26
- C. 24
- D. 50
- E. 27

71. $[2 \rightarrow 10] [4 \rightarrow 20] [7 \rightarrow ?]$

- A. 35
- B. 14

- C. 42
- D. 28
- E. 21

72. $[3 \rightarrow 8] [7 \rightarrow 16] [10 \rightarrow ?]$

- A. 20
- B. 21
- C. 18
- D. 30
- E. 22

73. $[36 \rightarrow 6] [49 \rightarrow 7] [64 \rightarrow ?]$

- A. 16
- B. 32
- C. 8
- D. 9
- E. 12

74. $[5 \rightarrow 15] [9 \rightarrow 27] [4 \rightarrow ?]$

- A. 8
- B. 16
- C. 20
- D. 12
- E. 24

75. $[11 \rightarrow 6] [18 \rightarrow 13] [24 \rightarrow ?]$

- A. 12
- B. 19

- C. 14
- D. 29
- E. 20

76. $[1 \rightarrow 4] [2 \rightarrow 7] [3 \rightarrow ?]$

- A. 10
- B. 9
- C. 12
- D. 11
- E. 8

77. $[8 \rightarrow 64] [5 \rightarrow 25] [10 \rightarrow ?]$

- A. 20
- B. 30
- C. 50
- D. 80
- E. 100

78. $[12 \rightarrow 5] [20 \rightarrow 9] [16 \rightarrow ?]$

- A. 6
- B. 8
- C. 7
- D. 10
- E. 11

Section 5: Number Series (Questions 79–96)

Directions: In each question below, a sequence of numbers follows a pattern. Find the number that comes next or fills the missing position in the pattern.

79. 4, 8, 12, 16, ?

A. 18

B. 22

C. 24

D. 20

E. 19

80. 2, 6, 18, 54, ?

A. 72

B. 162

C. 108

D. 216

E. 60

81. 90, 80, 70, 60, ?

A. 55

B. 40

C. 45

D. 30

E. 50

82. 1, 3, 6, 10, 15, ?

A. 21

B. 18

C. 20

D. 25

E. 22

83. 5, 10, 20, 40, ?

- A. 50
- B. 60
- C. 80
- D. 100
- E. 45

84. 9, 18, 27, 36, ?

- A. 40
- B. 42
- C. 54
- D. 45
- E. 48

85. 1, 1, 2, 3, 5, 8, 13, ?

- A. 15
- B. 21
- C. 18
- D. 20
- E. 26

86. 256, 128, 64, 32, ?

- A. 8
- B. 24
- C. 28
- D. 4
- E. 16

87. 3, 7, 11, 15, ?

A. 19

B. 18

C. 20

D. 21

E. 17

88. 2, 5, 10, 17, 26, ?

A. 30

B. 34

C. 37

D. 36

E. 33

89. 500, 250, 125, ?

A. 100

B. 50

C. 75

D. 62.5

E. 60

90. 1, 4, 9, 16, 25, 36, ?

A. 42

B. 49

C. 48

D. 40

E. 45

91. 12, 24, 36, 48, ?

A. 54

B. 50

C. 56

D. 52

E. 60

92. 1, 2, 4, 8, 16, 32, ?

A. 64

B. 48

C. 36

D. 40

E. 96

93. 81, 72, 63, 54, ?

A. 50

B. 48

C. 45

D. 42

E. 36

94. 3, 4, 6, 9, 13, 18, ?

A. 20

B. 22

C. 25

D. 24

E. 21

95. 10, 30, 90, 270, ?

A. 540

B. 810

C. 360

D. 300

E. 900

96. 1, 2, 6, 24, 120, ?

A. 720

B. 240

C. 600

D. 480

E. 144

Section 6: Number Puzzles (Questions 97–114)

Directions: In each question below, find the number that makes the equation true.

97. $9 + ? = 23$

A. 12

B. 13

C. 15

D. 32

E. 14

98. $? \times 8 = 56$

A. 6

B. 8

- C. 7
- D. 9
- E. 48

99. $34 - ? = 19$

- A. 15
- B. 53
- C. 16
- D. 14
- E. 25

100. $72 \div ? = 8$

- A. 6
- B. 64
- C. 8
- D. 9
- E. 7

101. $? + 19 = 35$

- A. 54
- B. 16
- C. 14
- D. 26
- E. 19

102. $6 \times ? = 54$

- A. 6
- B. 7

- C. 8
- D. 48
- E. 9

103. $5 \times ? - 7 = 18$

- A. 5
- B. 4
- C. 6
- D. 25
- E. 3

104. $? - 17 = 33$

- A. 16
- B. 60
- C. 50
- D. 40
- E. 56

105. $9 \times 6 = ? + 14$

- A. 54
- B. 44
- C. 68
- D. 40
- E. 48

106. $\blacktriangle + \blacktriangle + \blacktriangle + \blacktriangle + \blacktriangle = 40$. What is \blacktriangle ?

- A. 5
- B. 8

- C. 10
- D. 4
- E. 20

107. $96 \div ? = 12$

- A. 6
- B. 84
- C. 12
- D. 9
- E. 8

108. $4 \times ? + 6 = 30$

- A. 6
- B. 9
- C. 7
- D. 24
- E. 8

109. $? + ? + 7 = 25$. What is ?

- A. 7
- B. 25
- C. 18
- D. 9
- E. 12

110. $64 \div 8 = ? - 5$

- A. 3
- B. 8

C. 13

D. 11

E. 7

111. $\star + \star = 20$. $\star - 3 = ?$

A. 17

B. 7

C. 10

D. 20

E. 13

112. $17 + ? = 6 \times 5$

A. 30

B. 17

C. 23

D. 7

E. 13

113. $(? + 4) \times 5 = 45$

A. 5

B. 9

C. 41

D. 8

E. 6

114. $90 \div 10 = ? + 3$

A. 3

B. 9

- C. 12
- D. 6
- E. 7

NONVERBAL BATTERY

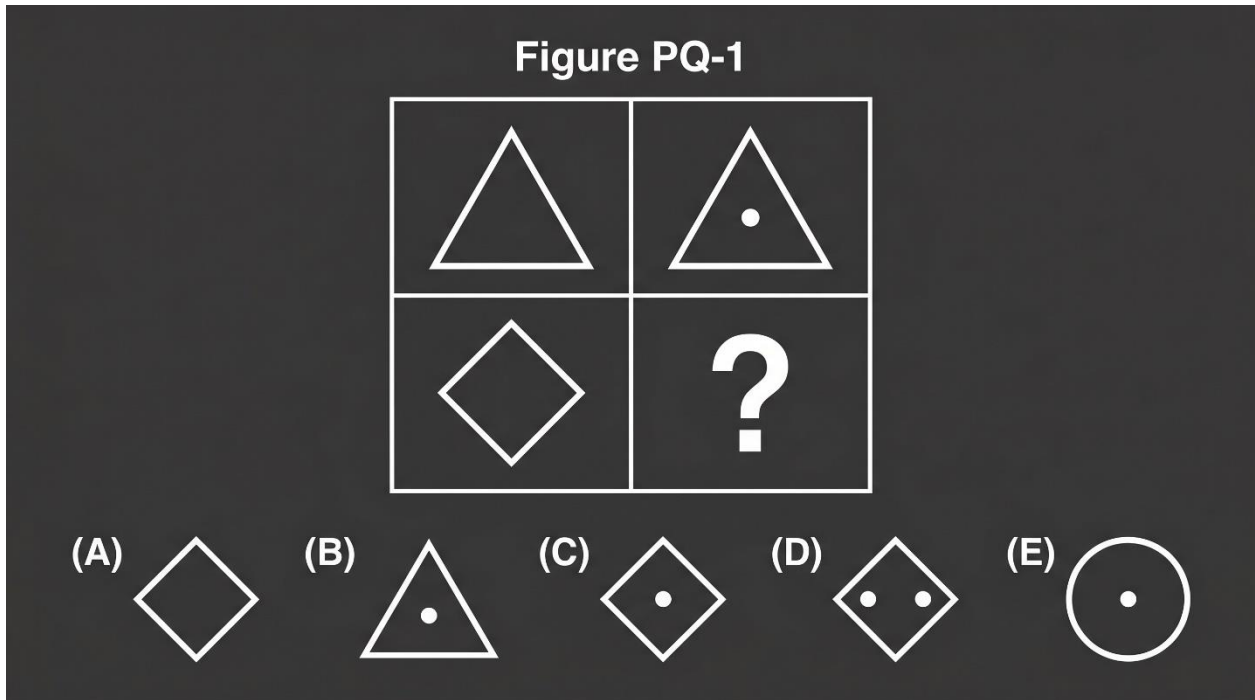
Recommended Time: 30 Minutes — 62 Questions

Do not turn back to the Quantitative Battery.

Section 7: Figure Matrices (Questions 115–136)

Directions: In each question below, the shapes in the boxes follow a rule. Find the shape that completes the pattern in the empty box.

115. Look at the shapes in the grid below. Which answer choice completes the grid?






- A. a diamond with no dot
- B. a triangle with a dot



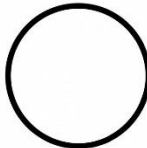


- C. a diamond with a small dot in the centre
- D. a diamond with two dots
- E. a circle with a dot

116. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-2]

	
	?

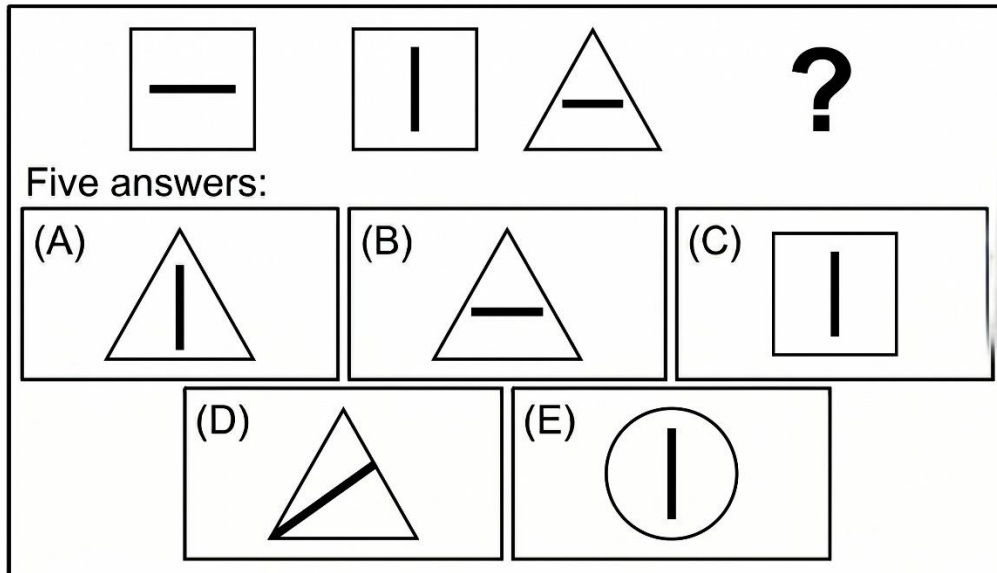
Given these figures, choose the figure that logically completes the pattern:

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

- A. a large black circle
- B. a small white circle
- C. a large white circle
- D. a small black square
- E. a small black-filled circle

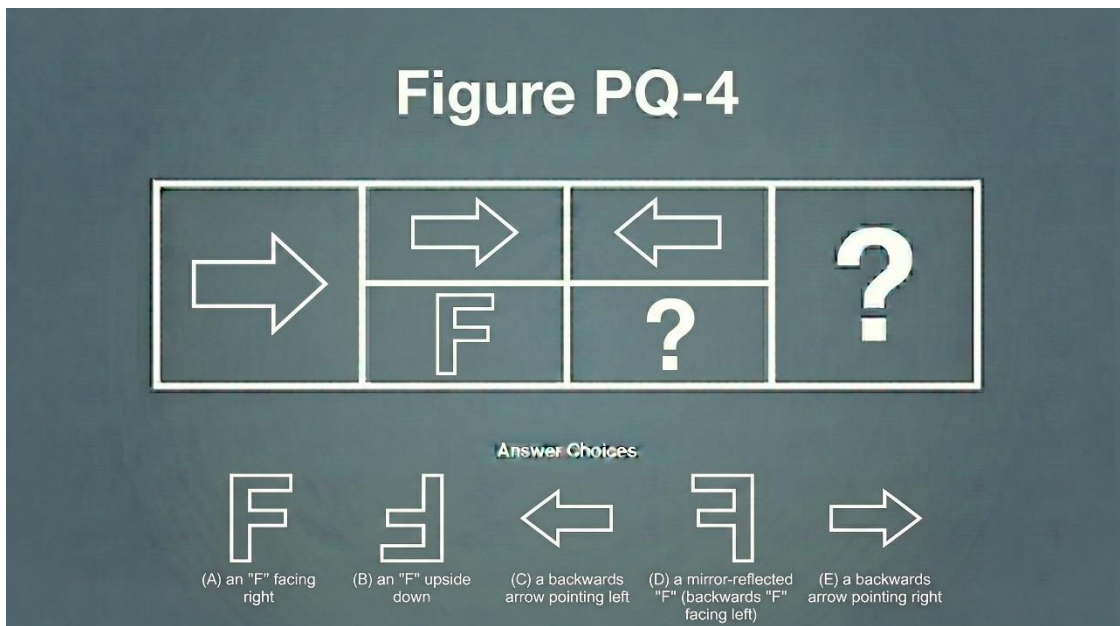
117. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-3]



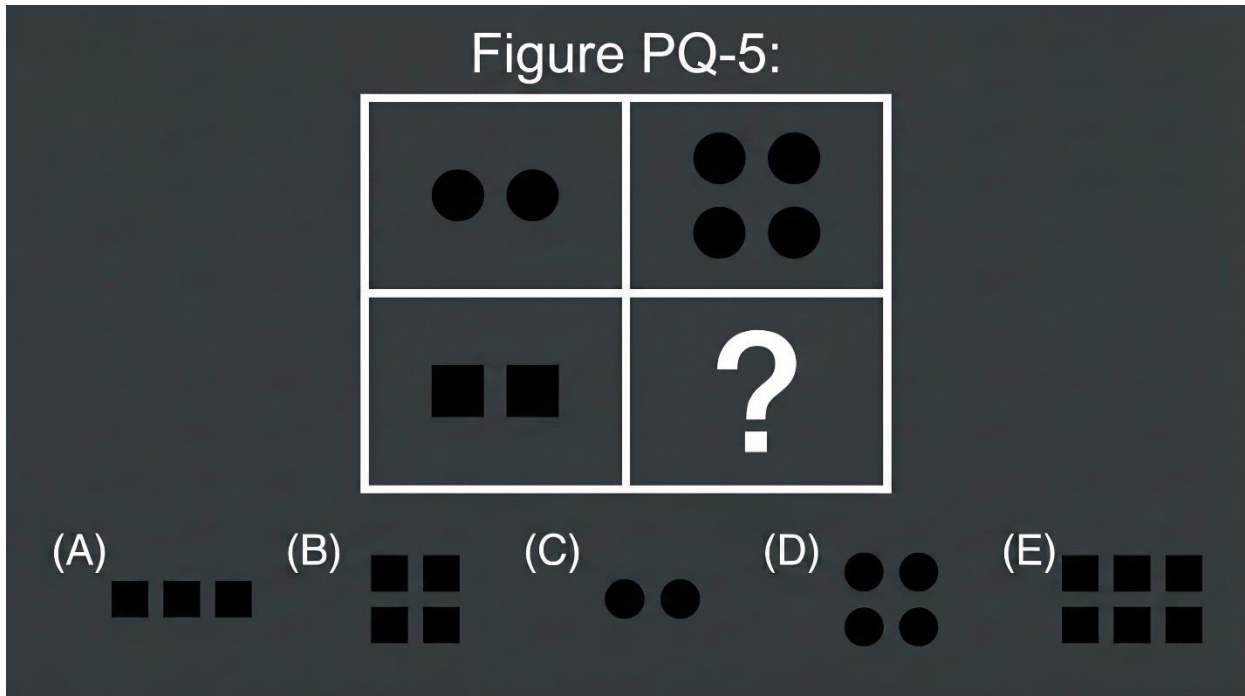
- A. a triangle with a vertical line through its centre
- B. a triangle with a horizontal line
- C. a square with a vertical line
- D. a triangle with a diagonal line
- E. a circle with a vertical line

118. Look at the shapes in the grid below. Which answer choice completes the grid?



- A. an "F" facing right
- B. an "F" upside down
- C. a backwards arrow pointing left
- D. a mirror-reflected "F" (backwards, facing left)
- E. a backwards arrow pointing right

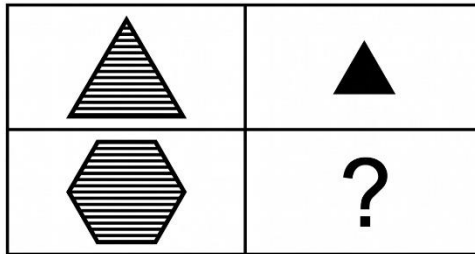
119. Look at the shapes in the grid below. Which answer choice completes the grid?



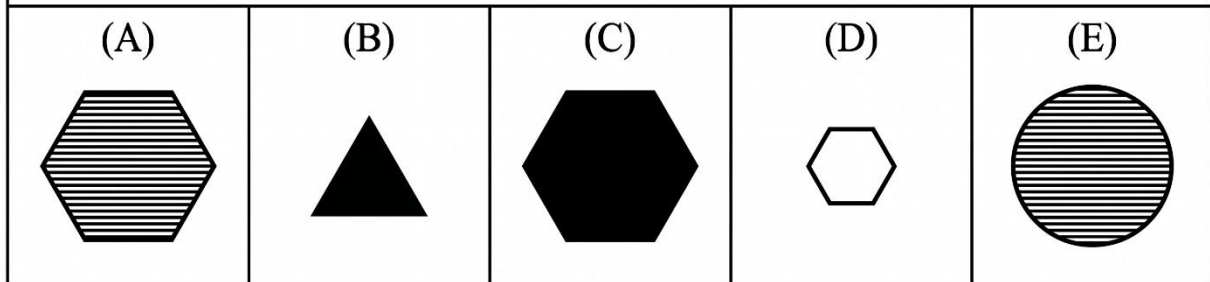
- A. three black squares
- B. four small black squares in a 2×2 grid
- C. two black circles
- D. four black circles
- E. six black squares

120. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-6]



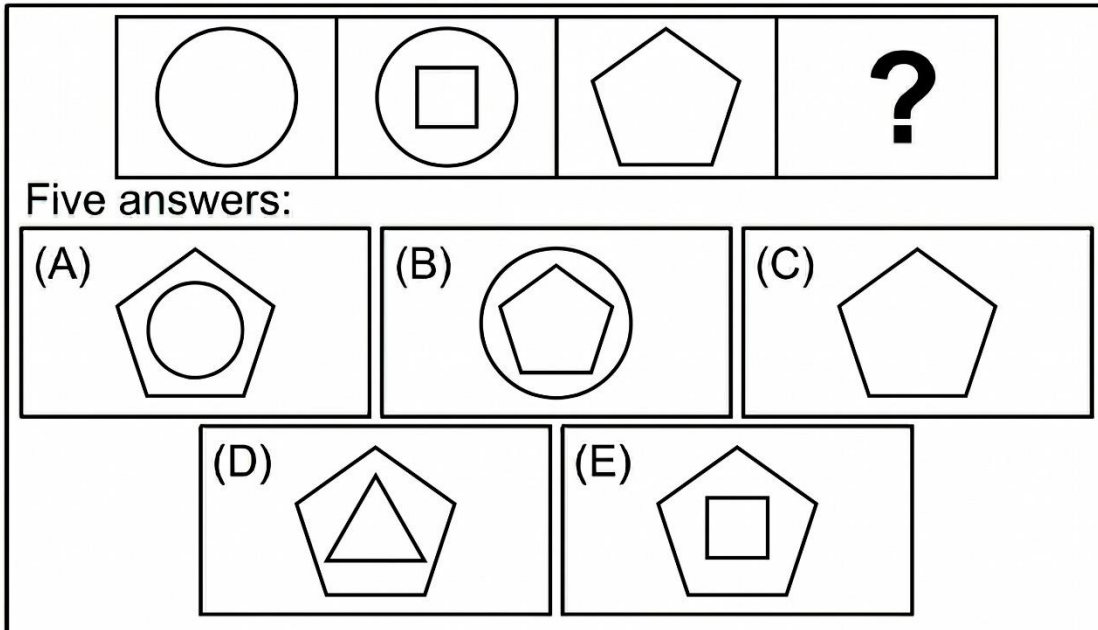
Given these figures, choose the figure that logically completes the pattern:



- A. a striped hexagon
- B. a black-filled triangle
- C. a black-filled hexagon
- D. a white hexagon
- E. a striped circle

121. Look at the shapes in the grid below. Which answer choice completes the grid?

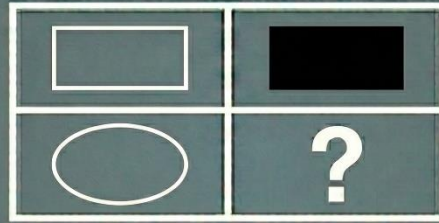
[Figure PQ-7]



- A. a pentagon with a circle inside
- B. a circle with a pentagon inside
- C. a pentagon with no shape inside
- D. a pentagon with a triangle inside
- E. a pentagon with a small square inside

122. Look at the shapes in the grid below. Which answer choice completes the grid?

Figure PQ-8



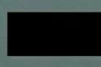
Answer Choices



(A) a black-filled oval oriented horizontally



(B) a white-outlined oval



(C) a black-filled rectangle



(D) a striped oval



(E) a white-outlined rectangle

A. a black-filled oval oriented horizontally

B. a white-outlined oval

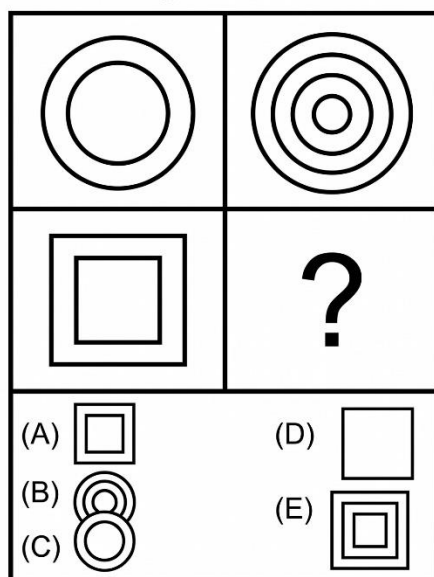
C. a black-filled rectangle

D. a striped oval

E. a white-outlined rectangle

123. Look at the shapes in the grid below. Which answer choice completes the grid?

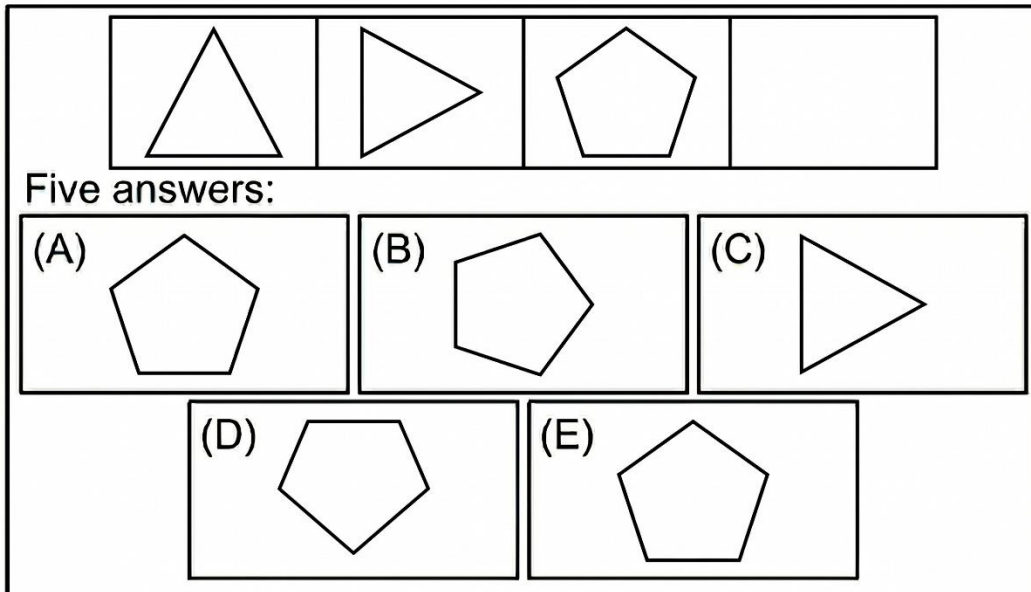
Figure PQ-9



- A. a small white heart
- B. a large black heart
- C. a small black heart
- D. a large white-outlined heart
- E. a large white star

124. Look at the shapes in the grid below. Which answer choice completes the grid?

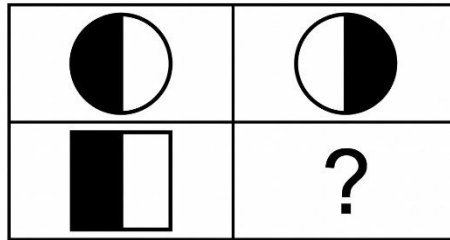
[Figure PQ-10]



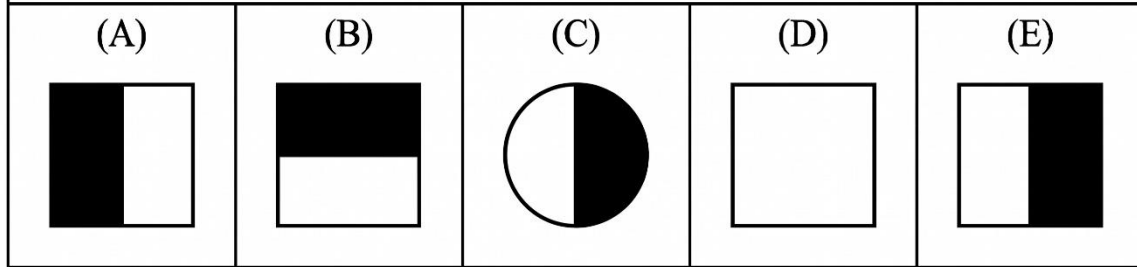
- A. a pentagon pointing up
- B. a pentagon rotated 90° clockwise (one vertex pointing right)
- C. a triangle pointing right
- D. a pentagon pointing down
- E. a pentagon rotated counter-clockwise

125. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-11]



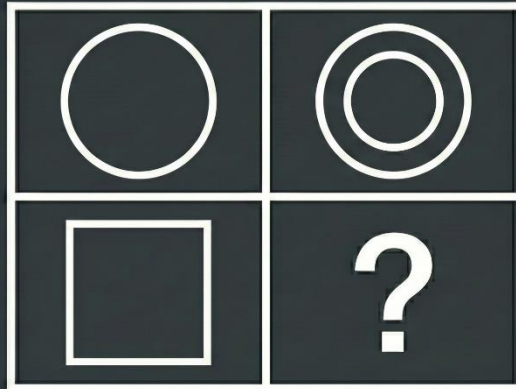
Given these figures, choose the figure that logically completes the pattern:



- A. a square with left half black
- B. a square with top half black
- C. a circle with right half black
- D. a square with no shading
- E. a square with its right half shaded black

126. Look at the shapes in the grid below. Which answer choice completes the grid?

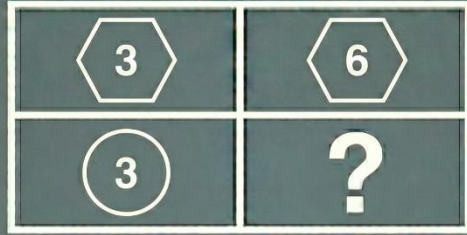
Figure PQ-12:



- A. one square
- B. three concentric squares
- C. two concentric squares
- D. two concentric circles
- E. one circle

127. Look at the shapes in the grid below. Which answer choice completes the grid?

Figure PQ-13



Answer Choices



(A) a circle containing 6



(B) a hexagon containing 6



(C) a circle containing 9



(D) a circle containing 3

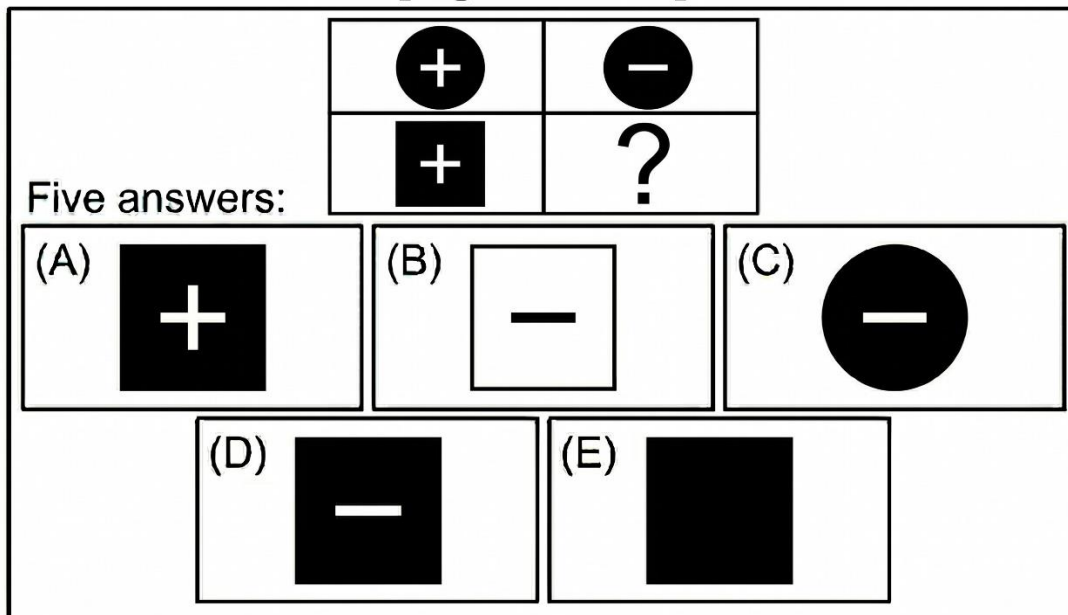


(E) a hexagon containing 3

- A. a circle containing "6"
- B. a hexagon containing "6"
- C. a circle containing "9"
- D. a circle containing "3"
- E. a hexagon containing "3"

128. Look at the shapes in the grid below. Which answer choice completes the grid?

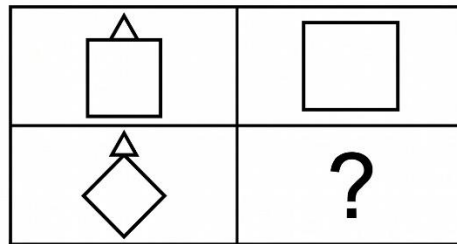
[Figure PQ-14]



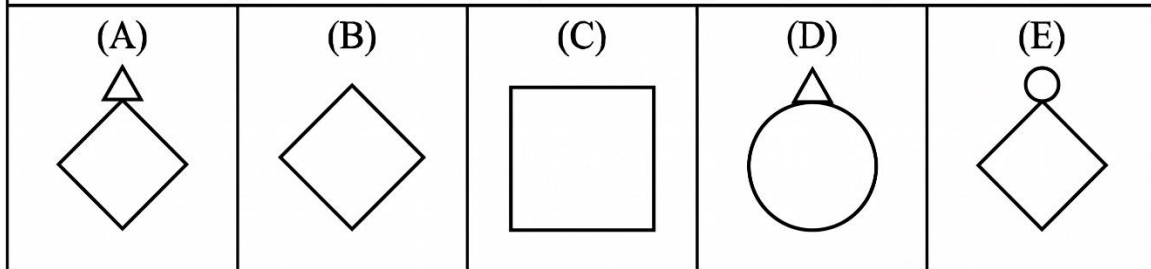
- A. a black square with white "+"
- B. a white square with black "--"
- C. a black circle with white "--"
- D. a black-filled square with a white "--" inside
- E. a black square with no symbol

129. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-15]



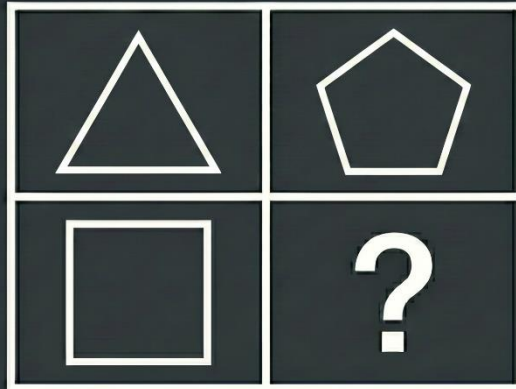
Given these figures, choose the figure that logically completes the pattern:



- A. a diamond with a triangle on top
- B. a diamond with no shape on top
- C. a square with no shape on top
- D. a circle with a triangle on top
- E. a diamond with a circle on top

130. Look at the shapes in the grid below. Which answer choice completes the grid?

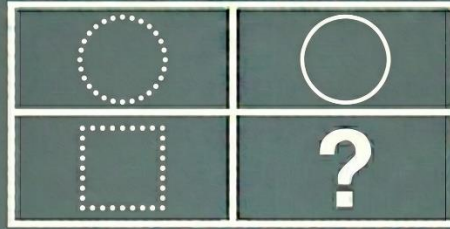
Figure PQ-16:



- A. a triangle
- B. a square
- C. a pentagon
- D. a circle
- E. a hexagon (6 sides)

131. Look at the shapes in the grid below. Which answer choice completes the grid?

Figure PQ-17



Answer Choices



(A) a dotted square



(B) a black square



(C) a white-outlined square (no dots)



(D) a dotted circle

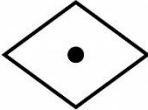
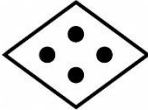




(E) a striped square



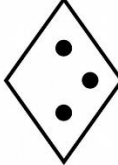


- A. a dotted square
- B. a black square
- C. a white-outlined square (no dots)
- D. a dotted circle
- E. a striped square

132. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-18]

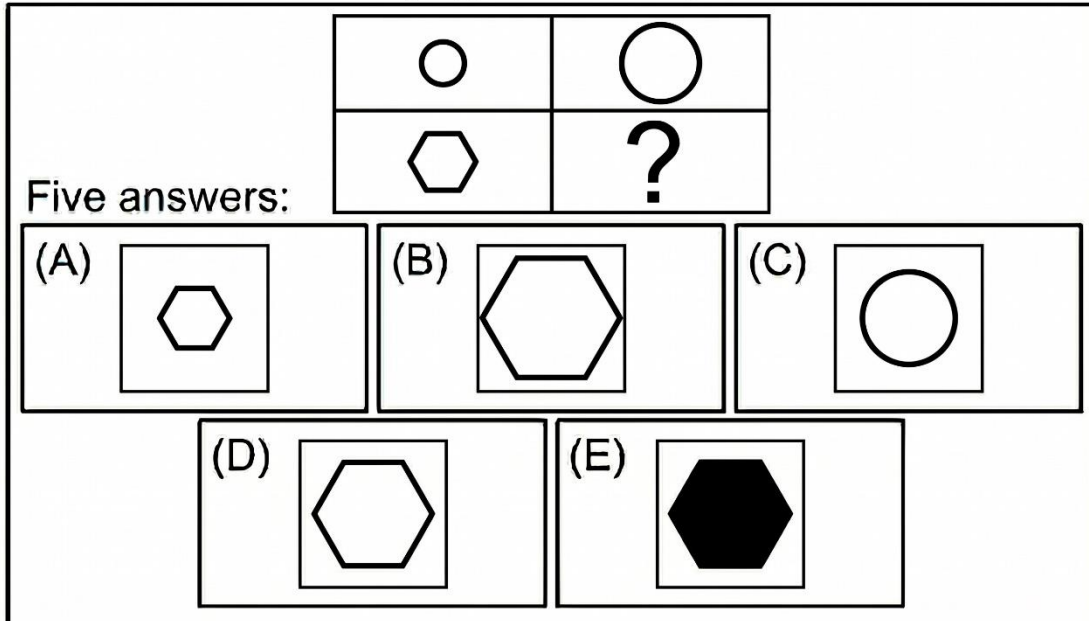
Given these figures, choose the figure that logically completes the pattern:

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

- A. an oval with three small dots inside
- B. an oval with one dot
- C. a diamond with three dots
- D. an oval with two dots
- E. an oval with no dots

133. Look at the shapes in the grid below. Which answer choice completes the grid?

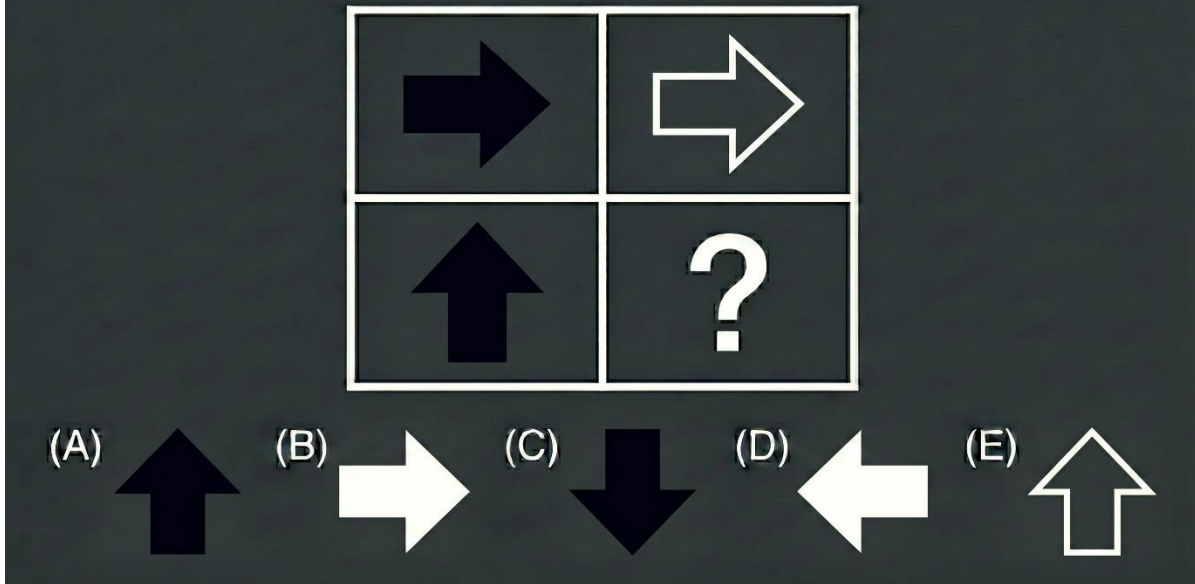
[Figure PQ-19]



- A. a small hexagon
- B. a large hexagon
- C. a medium circle
- D. a medium white-outlined hexagon
- E. a medium black hexagon

134. Look at the shapes in the grid below. Which answer choice completes the grid?

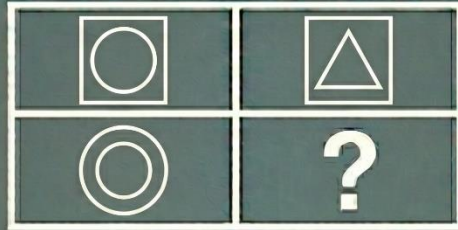
Figure PQ-20:



- A. a black upward arrow
- B. a white right-pointing arrow
- C. a black downward arrow
- D. a white left-pointing arrow
- E. a white-outlined upward-pointing arrow

135. Look at the shapes in the grid below. Which answer choice completes the grid?

Figure PQ-21



(A) a circle containing a square



(B) a circle containing a triangle

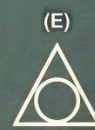
Answer Choices



(C) a square containing a circle



(D) a circle containing a circle

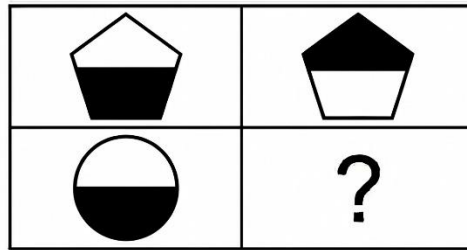


(E) a triangle containing a circle

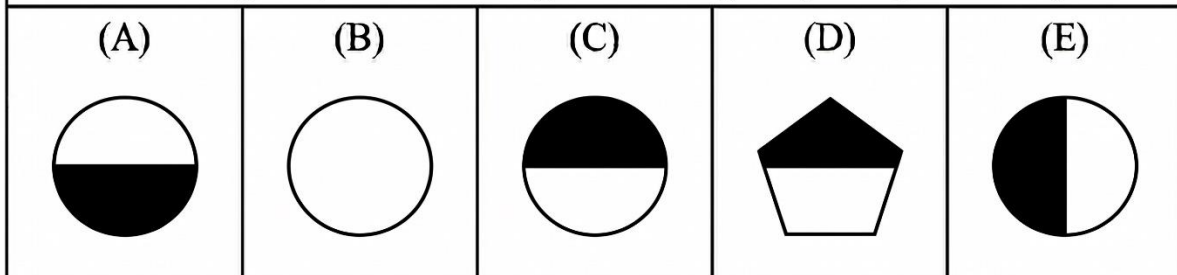
- A. a circle containing a square
- B. a circle containing a triangle
- C. a square containing a circle
- D. a circle containing a circle
- E. a triangle containing a circle

136. Look at the shapes in the grid below. Which answer choice completes the grid?

[Figure PQ-22]



Given these figures, choose the figure that logically completes the pattern:



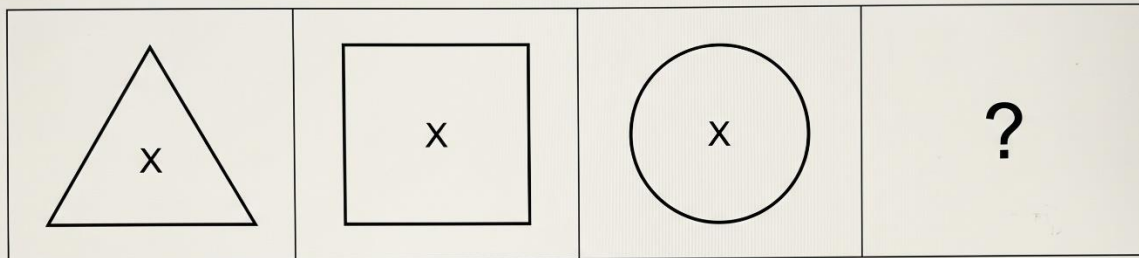
- A. a circle with bottom half black
- B. a circle with no shading
- C. a circle with its top half shaded black
- D. a pentagon with top half black
- E. a circle with left half black

Section 8: Figure Classification (Questions 137–158)

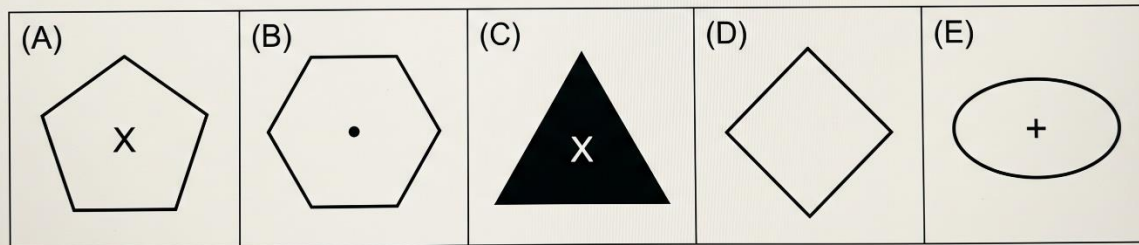
Directions: In each question below, the three shapes at the top go together in some way. Choose the answer choice that goes with them.

137. The three shapes are: a white-outlined triangle, a white-outlined square, a white-outlined circle — all contain a small "X" in the centre.

Figure PQ-23:



Select the shape that follows the pattern:



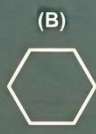
- A. a white-outlined pentagon with an "X" in the centre
- B. a hexagon with a dot in centre
- C. a black-filled triangle with an "X"
- D. a diamond with no symbol
- E. an oval with a "+"

138. The three shapes are: a small striped square, a small striped circle, a small striped triangle.

Figure PQ-24



(A) a large striped pentagon



(B) a small white-outlined hexagon

Answer Choices



(C) a small black-filled diamond



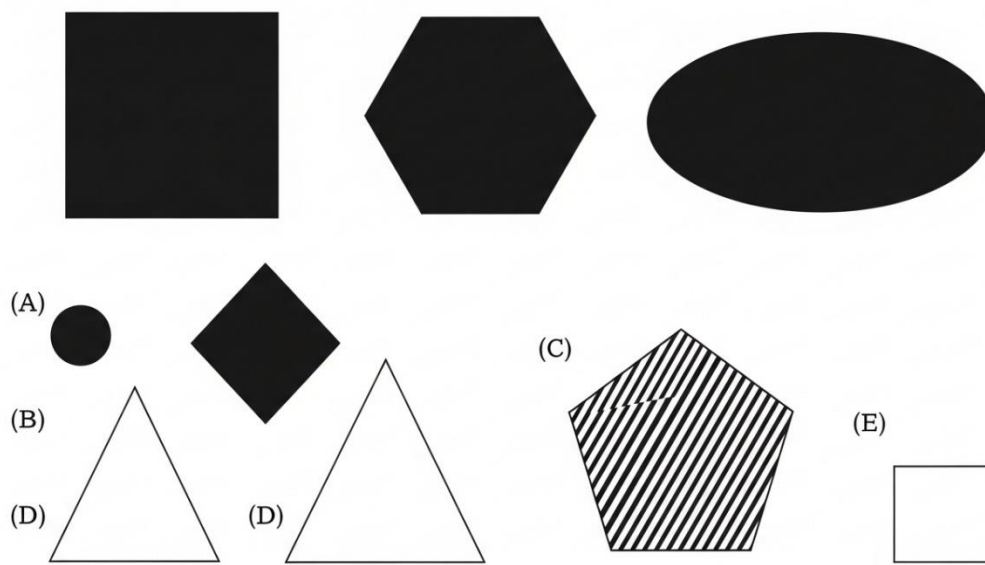
(D) a small striped diamond



(E) a small dotted circle

- A. a large striped pentagon
- B. a small white hexagon
- C. a small black diamond
- D. a small striped diamond
- E. a small dotted circle

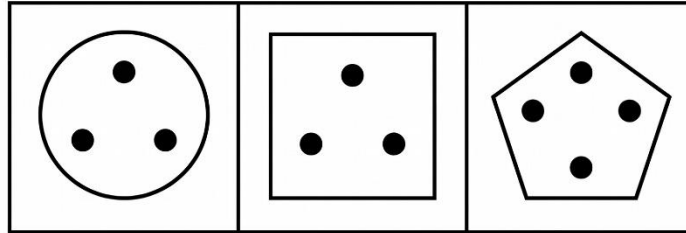
139. The three shapes are: a black-filled square, a black-filled hexagon, a black-filled oval — all large.



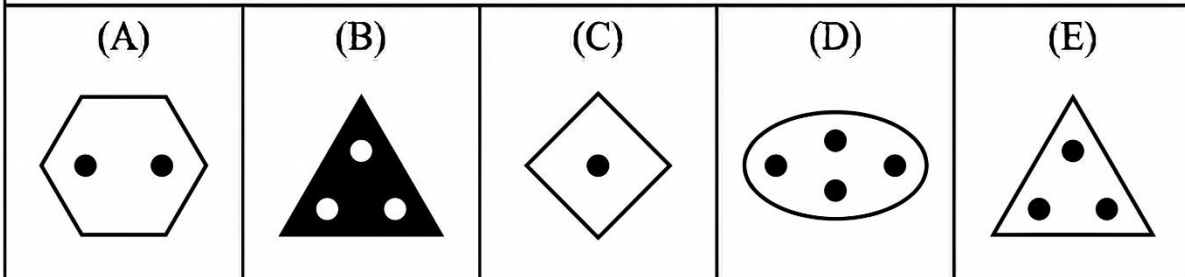
- A. a small black circle
- B. a large black-filled diamond
- C. a large white triangle
- D. a large striped pentagon
- E. a small white square

140. The three shapes are: a white-outlined circle with three dots inside, a white-outlined square with three dots inside, a white-outlined pentagon with three dots inside.

[Figure PQ-26]



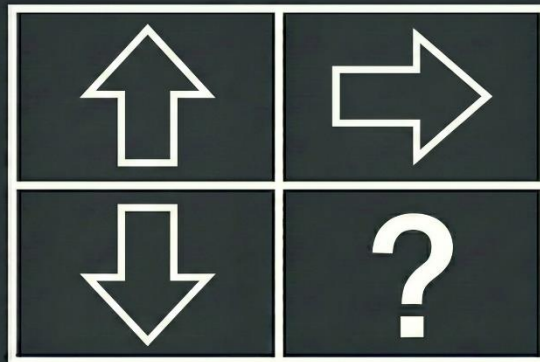
Given these figures, choose the figure that logically completes the pattern:



- A. a hexagon with two dots
- B. a black triangle with three dots
- C. a diamond with one dot
- D. an oval with four dots
- E. a white-outlined triangle with three dots

141. The three shapes are: a white-outlined arrow pointing up, a white-outlined arrow pointing right, a white-outlined arrow pointing down — all different directions, all white-outlined arrows.

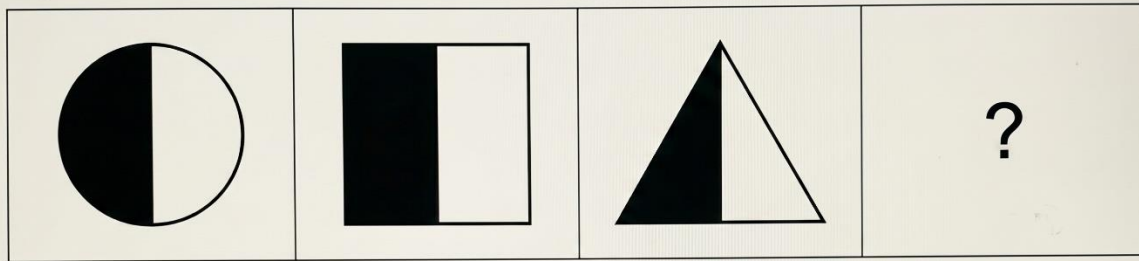
Figure PQ-27:
Question:



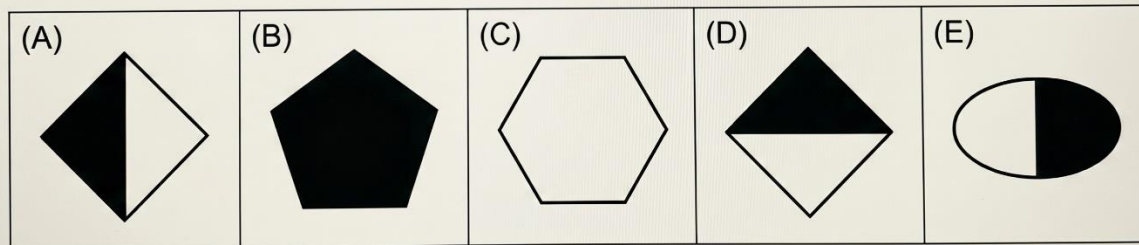
- A. a black arrow pointing left
- B. a white triangle pointing left
- C. a white-outlined arrow pointing left
- D. a white chevron pointing up
- E. a striped arrow pointing right

142. The three shapes are: a circle divided vertically — left half black, right half white; a square divided vertically — left half black, right half white; a triangle divided vertically — left half black, right half white.

Figure PQ-28:



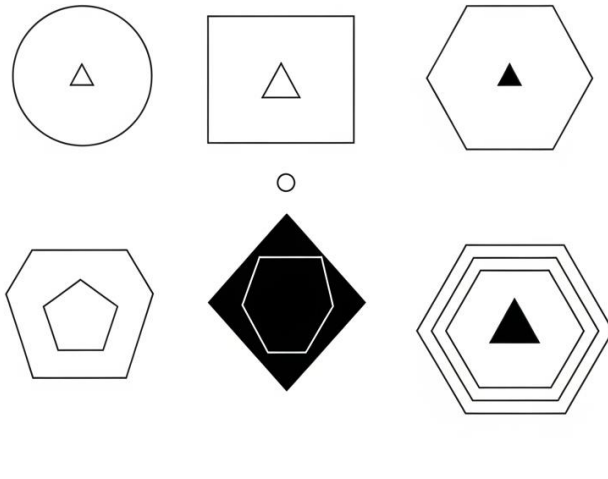
Select the shape that follows the pattern:



- A. a diamond — left black, right white
- B. a fully black pentagon
- C. a fully white hexagon
- D. a diamond — top black, bottom white
- E. an oval — left white, right black

143. The three shapes are: a large white-outlined circle containing a small black-filled triangle inside, a large white-outlined square containing a small black-filled triangle inside, a large white-outlined hexagon containing a small black-filled triangle inside.

Figure PQ-29



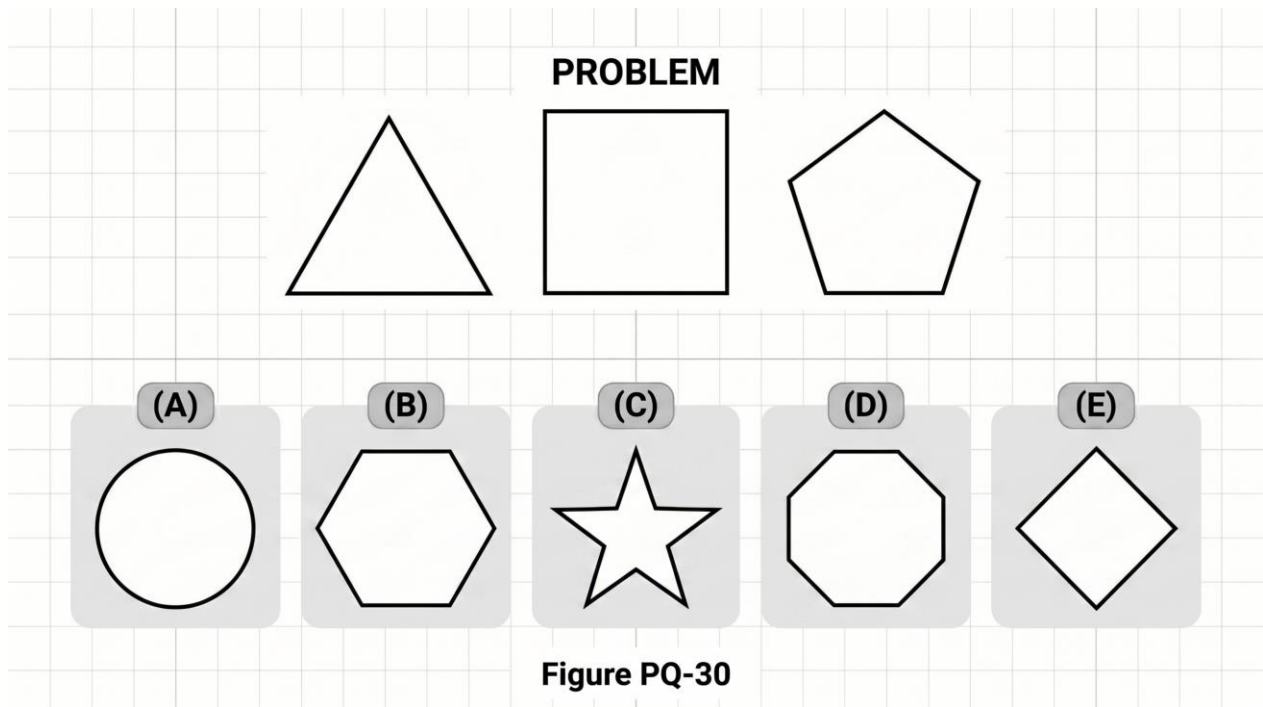
Answers

- (A) large white pentagon with no shape inside
- (C) large white oval
- (D) large white, no shape inside
- (D) large white, with
- (E) large triangle with black inside



- A. pentagon with small black circle
- B. black diamond with white triangle
- C. white oval, nothing inside
- D. a white diamond with a small black triangle inside
- E. white triangle with small black triangle

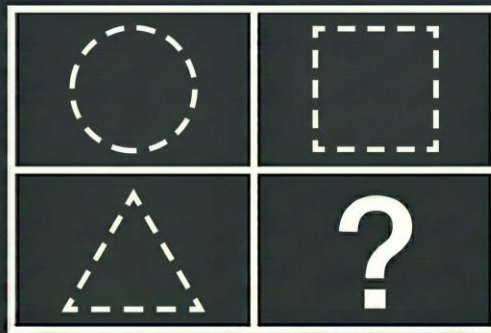
144. The three shapes are: a white-outlined equilateral triangle, a white-outlined square, a white-outlined regular pentagon — sides increase by one.



- A. a circle
- B. a regular hexagon
- C. a star
- D. an octagon
- E. a diamond

145. The three shapes are: a dashed-line circle, a dashed-line square, a dashed-line triangle.

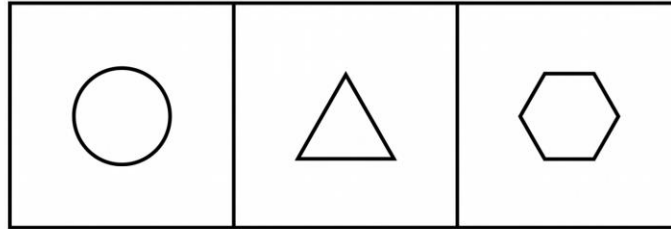
Figure PQ-31:
Question:



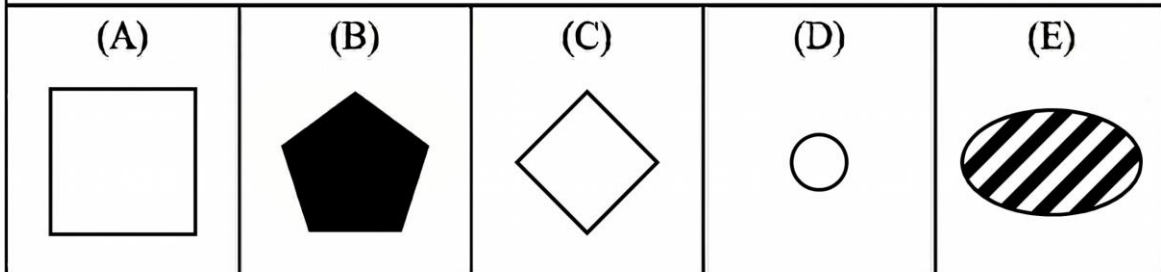
- A. solid pentagon
- B. dotted hexagon
- C. solid circle
- D. dashed circle
- E. a dashed-line diamond

146. The three shapes are: a medium white-outlined circle, a medium white-outlined triangle, a medium white-outlined hexagon — all medium-sized and white-outlined.

[Figure PQ-32]



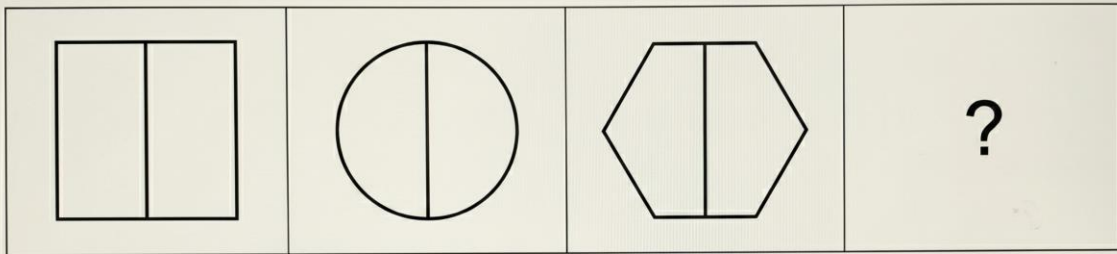
Given these figures, choose the figure that logically completes the pattern:



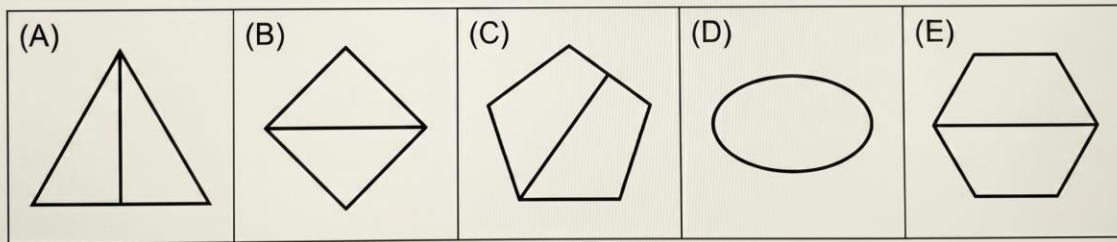
- A. a large white square
- B. a medium black pentagon
- C. a medium white-outlined diamond
- D. a small white circle
- E. a medium striped oval

147. The three shapes are: a white-outlined square with a vertical line through the centre, a white-outlined circle with a vertical line through the centre, a white-outlined hexagon with a vertical line through the centre.

Figure PQ-33:



Select the shape that follows the pattern:



- A. a triangle with a vertical line through its centre
- B. a diamond with a horizontal line
- C. a pentagon with a diagonal line
- D. an oval with no line
- E. a hexagon with a horizontal line

148. The three shapes are: a large black-filled triangle with a small white circle cut out of the centre, a large black-filled square with a small white circle cut out, a large black-filled pentagon with a small white circle cut out.

Figure PQ-34



?



(A) a large white hexagon with a black circle



(B) a large black hexagon with no hole

Answer Choices



(C) a small black circle with white hole



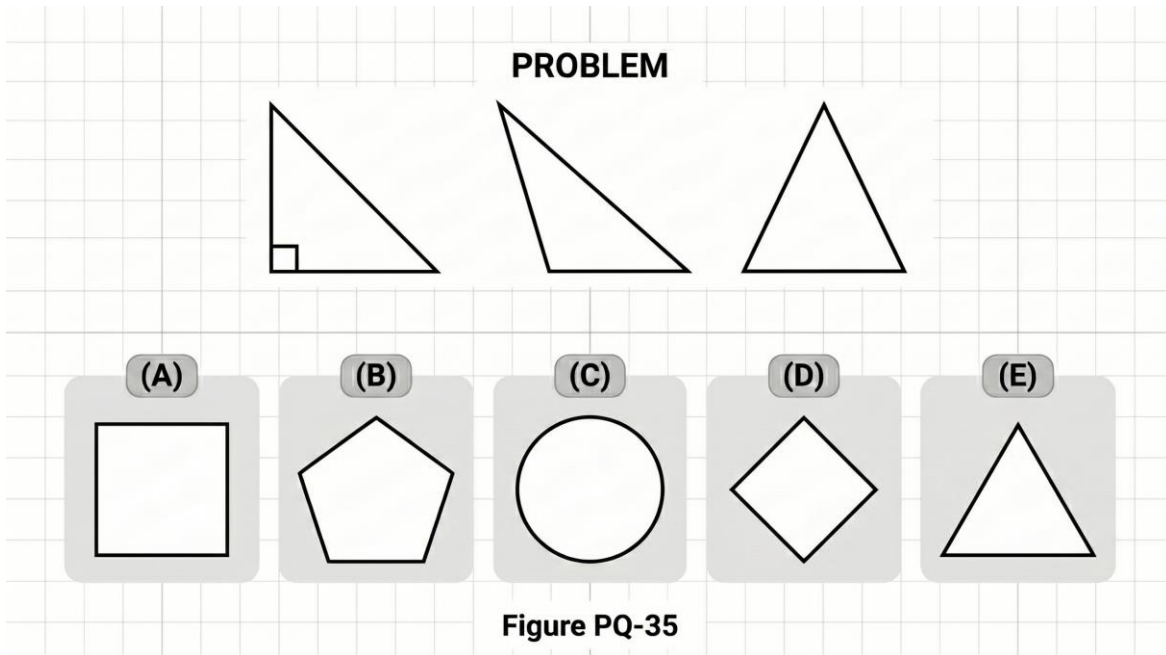
(D) a large black-filled hexagon with a small white circle cut out of the centre



(E) a large black diamond with a white triangle cut out

- A. white hexagon with black circle
- B. black hexagon with no hole
- C. small black circle with white hole
- D. a large black hexagon with a small white circle cut out
- E. black diamond with white triangle cut out

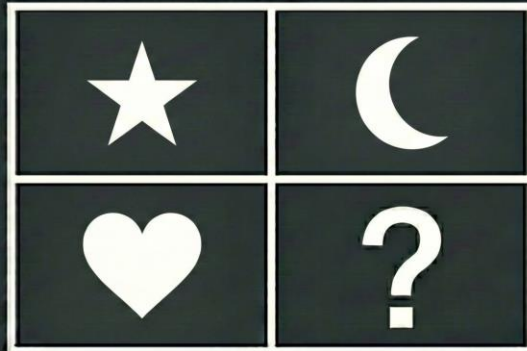
149. The three shapes are: a white-outlined right triangle, a white-outlined scalene triangle, a white-outlined isosceles triangle — all types of triangles.



- A. square
- B. pentagon
- C. circle
- D. diamond
- E. an equilateral triangle

150. The three shapes are: a small black-filled star, a small black-filled crescent, a small black-filled heart.

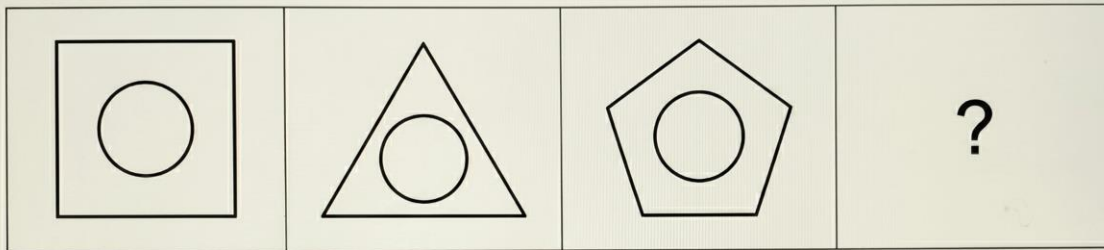
Figure PQ-36:
Question:



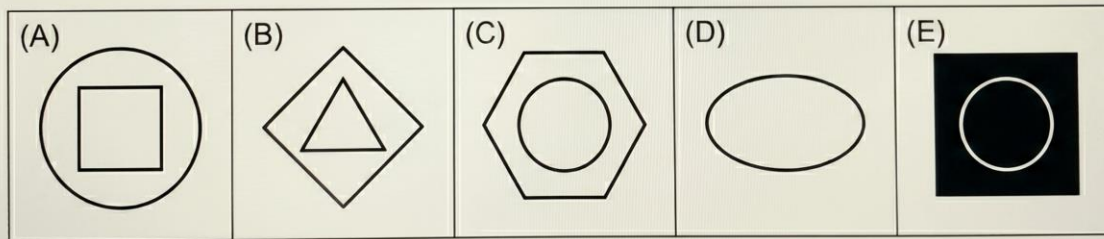
- A. a large black star
- B. a small black-filled lightning bolt
- C. a small white heart
- D. a small striped crescent
- E. a medium black star

151. The three shapes are: a large white-outlined square containing a small white-outlined circle, a large white-outlined triangle containing a small white-outlined circle, a large white-outlined pentagon containing a small white-outlined circle.

Figure PQ-37:



Select the shape that follows the pattern:



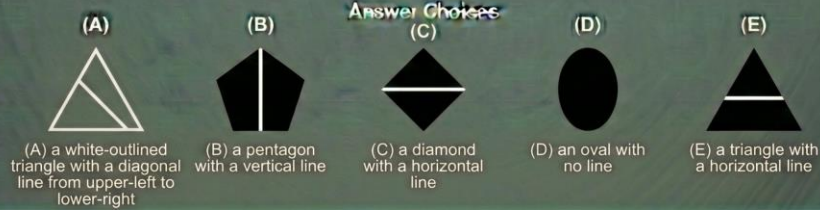
- A. circle with square inside
- B. diamond with triangle inside
- C. a white hexagon containing a small white circle
- D. white oval with nothing inside
- E. black square with white circle

152. The three shapes are: a white-outlined circle with a diagonal line from upper-left to lower-right, a white-outlined square with the same diagonal line, a white-outlined hexagon with the same diagonal line.

Figure PQ-38

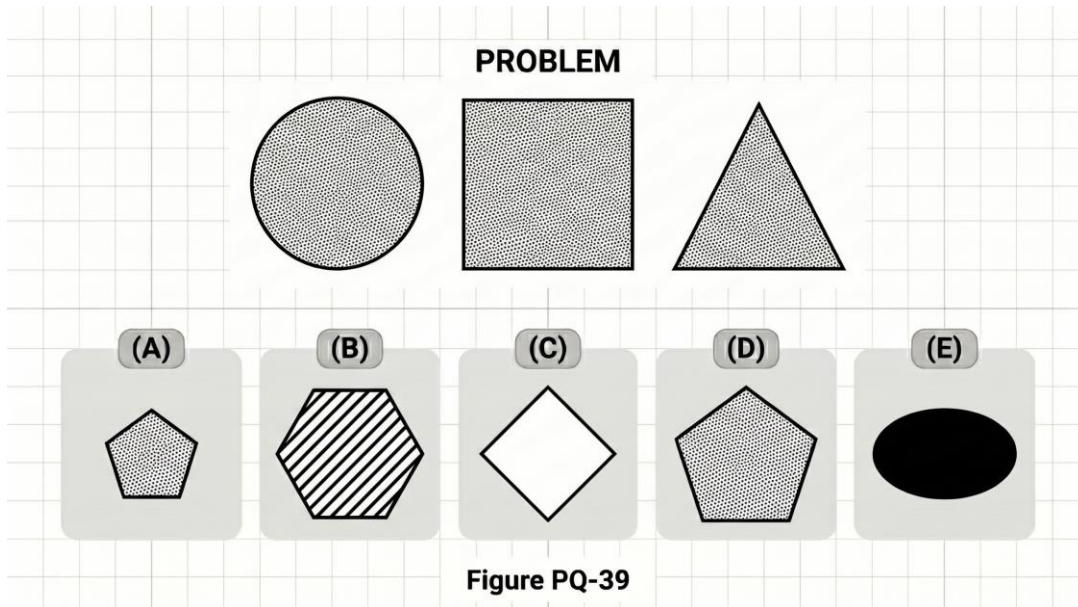


?



- A. a triangle with a diagonal line upper-left to lower-right
- B. a pentagon with a vertical line
- C. a diamond with a horizontal line
- D. an oval with no line
- E. a triangle with a horizontal line

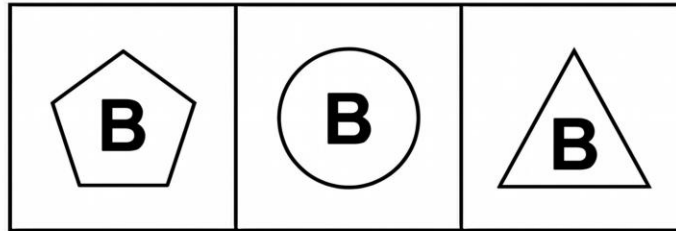
153. The three shapes are: a large dotted circle, a large dotted square, a large dotted triangle.



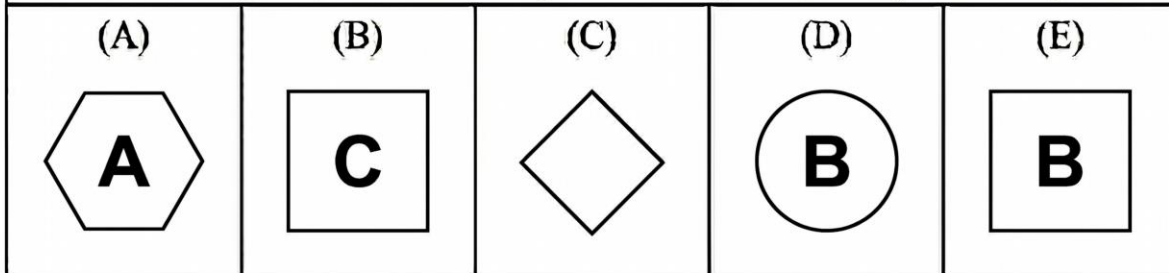
- A. a small dotted pentagon
- B. a large striped hexagon
- C. a large white diamond
- D. a large dotted pentagon
- E. a large black oval

154. The three shapes are: a white-outlined pentagon containing the letter "B", a white-outlined circle containing the letter "B", a white-outlined triangle containing the letter "B."

[Figure PQ-40]



Given these figures, choose the figure that logically completes the pattern:

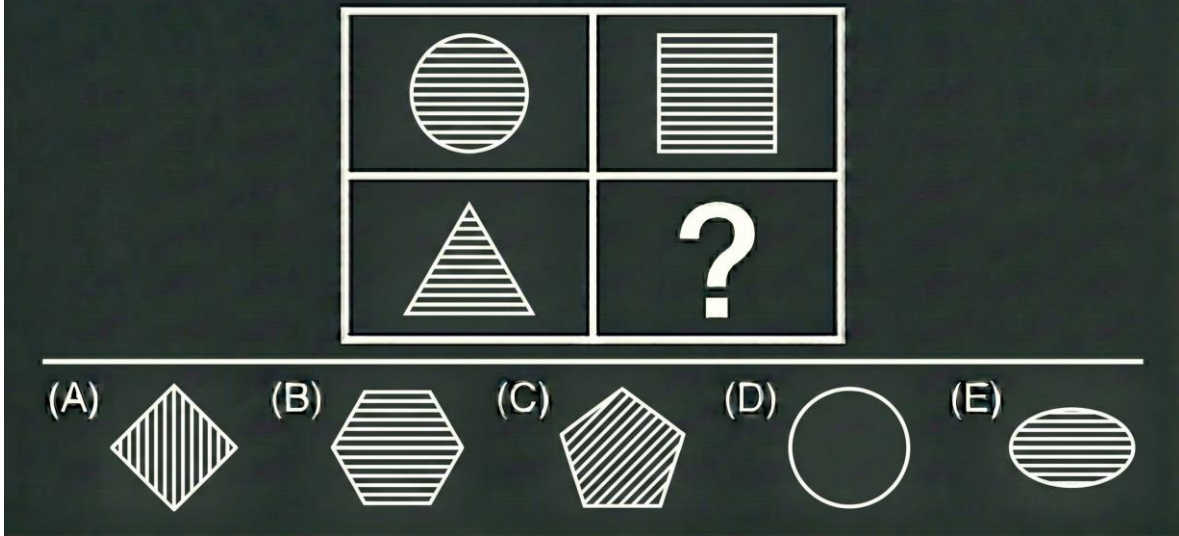


- A. hexagon with "A"
- B. square with "C"
- C. diamond with no letter
- D. circle with "B"
- E. a square with "B" inside

155. The three shapes are: a white-outlined circle with horizontal stripes inside, a white-outlined square with horizontal stripes inside, a white-outlined triangle with horizontal stripes inside.

Figure PQ-41:

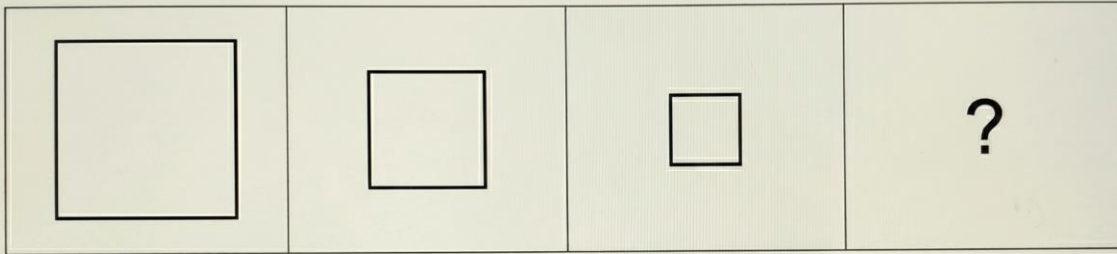
Question:



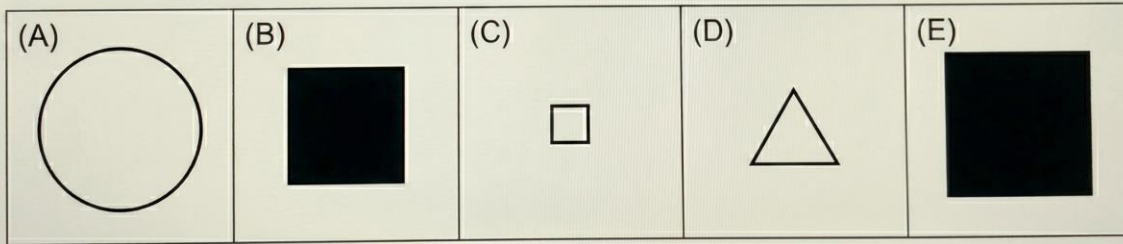
- A. diamond with vertical stripes
- B. a hexagon with horizontal stripes inside
- C. pentagon with diagonal stripes
- D. circle with no stripes
- E. oval with horizontal stripes

156. The three shapes are: a large white-outlined square, a medium white-outlined square, a small white-outlined square — same shape, decreasing size.

Figure PQ-42:

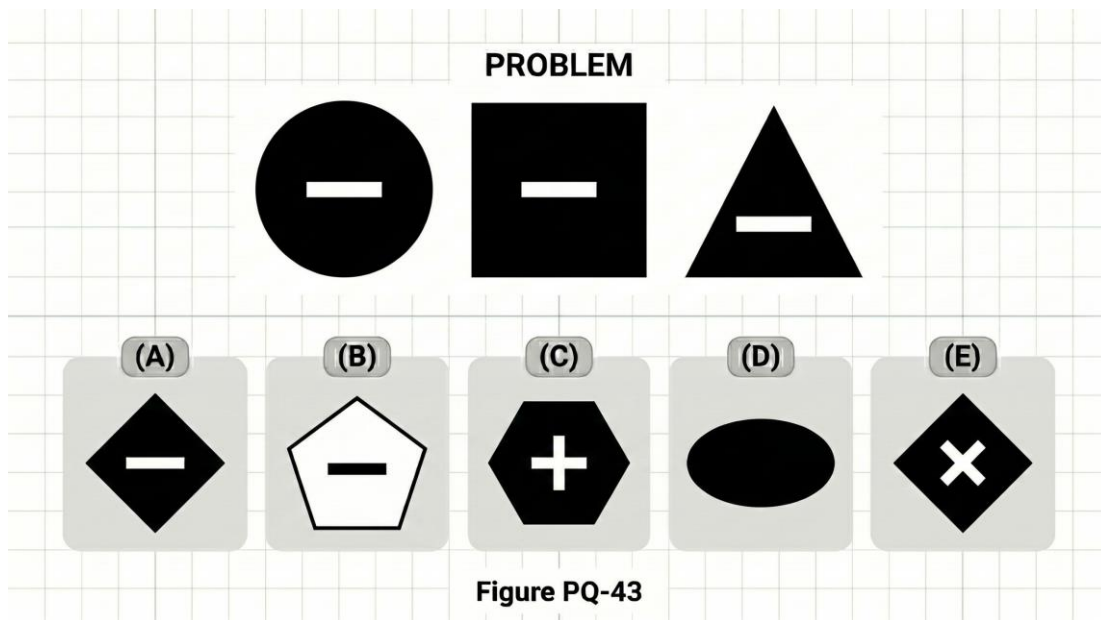


Select the shape that follows the pattern:



- A. a large white circle
- B. a medium black square
- C. a tiny white-outlined square
- D. a small white triangle
- E. a large black square

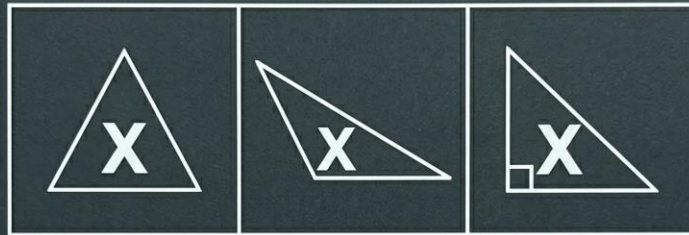
157. The three shapes are: a black-filled circle with a white minus sign (–) inside, a black-filled square with a white minus sign inside, a black-filled triangle with a white minus sign inside.



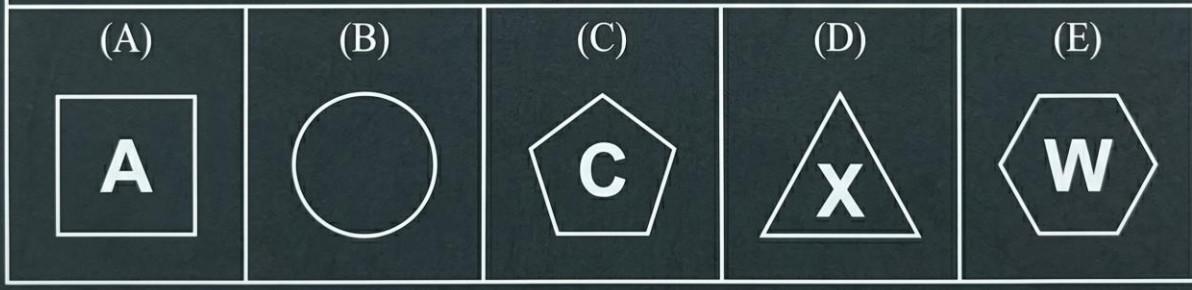
- A. a black diamond with a white "-" inside
- B. white pentagon with black "-"
- C. black hexagon with white "+"
- D. black oval with no symbol
- E. black diamond with white "x"

158. The three shapes are: a white-outlined acute triangle, a white-outlined obtuse triangle, a white-outlined right triangle — all types of triangles.

[Figure PQ-44]



Given these figures, choose the figure that logically completes the pattern:



- A. a square
- B. a circle
- C. a pentagon
- D. an equilateral triangle
- E. a hexagon

Section 9: Paper Folding (Questions 159–176)

Directions: In each question below, a square piece of paper is folded and then one or more holes are punched through it. Choose the answer that shows what the paper looks like when it is completely unfolded.

159. A square piece of paper is folded in half from top to bottom along a horizontal centre line. A single hole is punched near the right side of the folded paper, midway between the top edge and the fold. What does the paper look like when unfolded?

- A. one dot in the upper-right area only
- B. two dots — one in upper-right, one in lower-right, symmetric around horizontal centre
- C. two dots — one upper-right, one upper-left

- D. one dot centre-right
- E. two dots — both in the lower-right area

160. A square piece of paper is folded in half from left to right along a vertical centre line. A single hole is punched near the top-left corner of the folded paper. What does the paper look like when unfolded?

- A. one dot near the top-left corner only
- B. two dots — both in the top-left area
- C. one dot near the top centre
- D. two dots — one near top-left, one near top-right, symmetric around vertical centre
- E. two dots — one top-left, one bottom-left

161. A square piece of paper is folded in half from right to left along a vertical centre line. A single hole is punched exactly on the fold edge, near the centre (midway vertically). What does the paper look like when unfolded?

- A. two dots — one on the left, one on the right of centre
- B. one dot in the centre-left
- C. two dots — both on the fold line
- D. one dot in the centre-right
- E. one dot on the vertical centre line at the midpoint of the paper

162. A square piece of paper is folded diagonally from the top-left corner to the bottom-right corner, forming a triangle. A single hole is punched near the centre of the folded triangle. What does the paper look like when unfolded?

- A. one dot in the centre of the paper
- B. two dots — both near the top
- C. two dots — one in upper-right area, one in lower-left area, symmetric around the diagonal
- D. two dots — one in upper-left, one in lower-right
- E. one dot on the diagonal

163. A square piece of paper is folded in half from top to bottom, then folded again from right to left. A single hole is punched near the top-left corner of the small folded square. What does the paper look like when unfolded?

- A. four dots — one near each corner of the paper
- B. two dots — top-left and top-right
- C. one dot near the top-left corner only
- D. four dots — all in the left half
- E. two dots — top-left and bottom-left

164. A square piece of paper is folded in half from bottom to top along a horizontal centre line. A single hole is punched near the left side of the folded paper, very close to the fold edge. What does the paper look like when unfolded?

- A. two dots — one in upper-left, one in lower-left
- B. one dot in the centre-left area
- C. two dots — upper-left and upper-right
- D. two dots — both centre-left, one just above and one just below horizontal centre, very close together
- E. one dot on the fold line on the left side

165. A square piece of paper is folded in half from right to left, then folded again from top to bottom. A single hole is punched in the centre of the small folded square. What does the paper look like when unfolded?

- A. one dot in the centre
- B. four dots — one near the centre of each quadrant, symmetric around both fold lines
- C. two dots — left-centre and right-centre
- D. four dots — one near each corner
- E. two dots — upper-centre and lower-centre

166. A square piece of paper is folded in half from left to right along a vertical centre line. A single hole is punched near the bottom of the folded paper, slightly to the left of the folded rectangle's centre. What does the paper look like when unfolded?

- A. one dot near the bottom-left

- B. two dots — both in the bottom-left area
- C. one dot near the bottom centre
- D. two dots — one upper-left, one upper-right
- E. two dots — one near bottom-left, one near bottom-right, symmetric around vertical centre

167. A square piece of paper is folded in half from top to bottom along a horizontal centre line. A single hole is punched near the top-right corner of the folded paper. What does the paper look like when unfolded?

- A. one dot upper-right only
- B. two dots — upper-right and upper-left
- C. two dots — one upper-right, one lower-right, symmetric around horizontal centre
- D. one dot centre-right
- E. two dots — both in the lower half

168. A square piece of paper is folded in half from bottom to top, then folded again from left to right. A single hole is punched near the bottom-right corner of the small folded square. What does the paper look like when unfolded?

- A. four dots — one near each corner of the paper
- B. two dots — bottom-left and bottom-right
- C. one dot near the bottom-right corner
- D. four dots — all in the right half
- E. two dots — top-right and bottom-right

169. A square piece of paper is folded in half from right to left along a vertical centre line. A single hole is punched near the upper-right area of the folded paper (right of centre, near the top). What does the paper look like when unfolded?

- A. one dot near the upper-right area only
- B. two dots — both near the upper-right area
- C. one dot near upper-centre
- D. two dots — one near upper-left, one near upper-right, symmetric around vertical centre

E. two dots — one upper-right, one lower-right

170. A square piece of paper is folded diagonally from the bottom-left corner to the top-right corner, forming a triangle. A single hole is punched near the right vertex of the triangle (which corresponds to the top-right corner of the original square). What does the paper look like when unfolded?

A. one dot near the top-right corner only

B. two dots — one near top-right, one near bottom-left, symmetric around the diagonal

C. two dots — top-right and top-left

D. one dot in the centre of the paper

E. two dots — both near the right side

171. A square piece of paper is folded in half from left to right, then folded again from bottom to top. A single hole is punched near the top-left corner of the small folded square. What does the paper look like when unfolded?

A. two dots — top-left and top-right

B. one dot near the top-left

C. four dots — all in the upper half

D. four dots — one near each corner

E. four dots — one near each corner of the paper

172. A square piece of paper is folded in half from top to bottom along a horizontal centre line. Two holes are punched — one near the left side and one near the right side of the folded paper, both midway between the top edge and the fold. What does the paper look like when unfolded?

A. two dots — one left, one right (both in upper half only)

B. four dots — one near each corner of the paper

C. four dots — two on the left (upper and lower) and two on the right (upper and lower), all symmetric around horizontal centre

D. two dots — both in the centre

E. three dots — one left, one centre, one right

173. A square piece of paper is folded in half from right to left, then folded again from top to bottom. A single hole is punched near the top-right corner of the small folded square. What does the paper look like when unfolded?

- A. four dots — one near each corner of the paper
- B. two dots — top-left and top-right
- C. one dot near the top-right
- D. four dots — all in the top half
- E. two dots — top-right and bottom-right

174. A square piece of paper is folded in half from left to right along a vertical centre line. A single hole is punched near the centre of the folded paper, slightly above the midpoint. What does the paper look like when unfolded?

- A. one dot slightly above centre
- B. two dots — both in the upper-left area
- C. one dot in the left-centre area
- D. two dots — one in left half, one in right half, both slightly above horizontal centre, symmetric around vertical line
- E. two dots — one above centre, one below centre

175. A square piece of paper is folded in half from bottom to top along a horizontal centre line. A single hole is punched exactly on the fold edge, near the left side. What does the paper look like when unfolded?

- A. two dots — one upper-left, one lower-left
- B. one dot on the horizontal centre line near the left side
- C. one dot in the lower-left area
- D. two dots — both on the fold line
- E. one dot in the upper-left area

176. A square piece of paper is folded in half from top to bottom, then folded again from left to right. Two holes are punched — one near the top-left corner and one near the bottom-right corner of the small folded square. What does the paper look like when unfolded?

- A. four dots — one near each corner

- B. two dots — top-left and bottom-right only
- C. four dots — all near the centre
- D. six dots — three pairs
- E. eight dots — two near each corner, symmetric around both centre lines

Practice Exam 3: Answer Key and Explanations

Verbal Analogies (Questions 1–24)

1. D — Soft and hard are opposites. Weak and strong are opposites in the same way. The relationship is antonyms describing contrasting physical qualities.
2. A — A baker is the person who makes bread. A pharmacist is the person who prepares and dispenses medicine. The relationship is a product to the professional who produces or provides it.
3. E — A leaf is a part that grows on a tree. A feather is a part that grows on a bird. The relationship is a small natural covering to the living thing it belongs to.
4. B — A piano is played using keys. A guitar is played using strings. The relationship is a musical instrument to the component used to produce its sound.
5. C — A minute is a smaller unit within an hour. A day is a smaller unit within a week. The relationship is a shorter time period to the longer period it belongs to.
6. A — A roof is the top covering of a house. A lid is the top covering of a jar. The relationship is a covering to the container it seals.
7. D — Teeth are used to chew. Legs are used to walk. The relationship is a body part to the primary action it performs.
8. E — A map guides a navigator. A recipe guides a cook. The relationship is a set of instructions to the person who follows them.
9. B — Shy and outgoing are opposites. Generous and selfish are opposites. The relationship is antonyms describing contrasting personality traits.
10. C — A helmet protects the head. A shield protects the body. The relationship is a piece of protective equipment to the body area it covers.
11. D — A flame produces heat. Ice produces cold. The relationship is a source to the temperature condition it creates.

12. A — A forest is a large group of trees. A flock is a large group of birds. The relationship is a collective noun to the individual items it contains.

13. E — A camera produces a photograph. An oven produces a meal. The relationship is a device to the finished product it creates.

14. B — A whale is classified as a mammal. A snake is classified as a reptile. The relationship is a specific animal to the scientific class it belongs to.

15. A — Young and old are opposites. Ancient and modern are opposites. The relationship is antonyms describing contrasting time periods.

16. C — A blanket makes you warm. A fan makes you cool. The relationship is an object to the temperature effect it produces.

17. E — A caterpillar transforms into a butterfly. A tadpole transforms into a frog. The relationship is a juvenile form to the adult organism it becomes.

18. D — A shovel is used to dig. A saw is used to cut. The relationship is a tool to the primary action it performs.

19. B — A desert is characterised by being dry. A jungle is characterised by being humid. The relationship is an environment to its defining climate quality.

20. A — A wheel is the part of a bicycle that contacts the ground and enables movement. A runner is the part of a sled that contacts the ground and enables sliding. The relationship is the gliding or rolling component to the vehicle it belongs to.

21. C — A thermometer measures temperature. A scale measures weight. The relationship is a measuring instrument to the quantity it measures.

22. E — An acorn grows into an oak tree. A seed grows into a flower. The relationship is the starting form of a plant to the mature plant it becomes.

23. D — A student's primary activity is to learn. An athlete's primary activity is to train. The relationship is a person to their defining daily activity.

24. B — A frown is a facial expression that shows sadness. A smile is a facial expression that shows happiness. The relationship is a facial expression to the emotion it communicates.

Sentence Completion (Questions 25–44)

25. E — A magic trick that fooled even adults must have been very believable and persuasive. Convincing means so realistic that people could not detect the deception.

- 26. C** — Heavy snowfall that makes roads impassable has obstructed them. Blocked means prevented passage through, which describes snow piling up and closing roads.
- 27. A** — An essay that is well-organised and easy to follow must be expressed in an understandable way. Clear means easy to understand and free of confusion.
- 28. D** — A bridge that can no longer support traffic and needs to be replaced must first be torn down. Demolish means to destroy or tear down a structure completely.
- 29. B** — Hikers who finally reach a summit after seven exhausting hours would feel excited and overjoyed. Thrilled means extremely pleased and excited about an achievement.
- 30. E** — Thick fog making a familiar path look strange describes it appearing as though they had never seen it before. Unfamiliar means not recognised or seeming new and strange.
- 31. C** — An invention that changed communication fundamentally altered how people connect. Transformed means changed completely in form or character.
- 32. A** — A student who checks every answer twice, unlike a rushing brother, is careful and complete in her work. Thorough means doing something with great attention to detail and completeness.
- 33. D** — A beaver dam described as a remarkable piece of natural engineering is being praised. Impressive means inspiring admiration through quality or skill.
- 34. B** — A sailor using stars to find his way across the ocean is steering a course. Navigate means to find one's way using instruments or natural reference points.
- 35. E** — An old map with faded markings that can no longer be read has deteriorated from age and use. Worn means damaged or deteriorated through long use.
- 36. C** — A chameleon changing colour to match the surrounding leaves is mixing in with its environment. Blend means to merge or mix so as to become indistinguishable from the surroundings.
- 37. D** — Firefighters entering an unstable building with collapsing floors must exercise extreme care and wariness. Caution means careful attention to avoiding danger.
- 38. A** — A community garden that brings people from different backgrounds together to work side by side has joined them. United means brought together for a common purpose.
- 39. E** — A white coat against snow that helps hide the fox from predators provides concealment. Camouflage means a natural colouring or covering that helps an animal blend into its surroundings.
- 40. B** — Playing a piece without a single mistake means performing it perfectly. Flawlessly means without any errors or imperfections.

41. D — An ecosystem with thousands of species depending on one another is intricate and multifaceted. Complex means consisting of many interconnected parts that work together.

42. C — A bridge designed to survive earthquakes using flexible materials must endure the forces. Withstand means to remain undamaged or unaffected by a force or event.

43. A — A discovery made while digging for an entirely different reason was unplanned and unintended. Accidental means happening by chance rather than by design.

44. E — Enormous numbers of birds filling a quiet marsh with flapping wings and loud calls create disorder and commotion. Chaotic means in a state of complete confusion and disorder.

Verbal Classification (Questions 45–60)

45. B — Whale, dolphin, and seal are all marine mammals. A walrus is also a marine mammal. Fish, ocean, flipper, and swim are related to marine life but are not marine mammals.

46. E — Guitar, piano, and flute are all musical instruments. A trumpet is also a musical instrument. Song, concert, musician, and note are related to music but are not instruments.

47. C — Square, hexagon, and octagon are all closed polygons (shapes with straight sides). A triangle is also a closed polygon. Angle, line, circle, and ruler are geometric concepts but not polygons in the same category.

48. A — Oxygen, carbon, and iron are all chemical elements. Element is the category they all belong to. Gas, metal, periodic, and science describe properties or fields related to elements but are not elements themselves.

49. D — Evaporation, condensation, and precipitation are all stages in the water cycle. Water cycle stage is the category that unites them. Cloud, science, temperature, and rain are related but are not stages of the cycle in the same way.

50. B — Hurricane, tornado, and blizzard are all severe weather events or natural disasters involving atmospheric conditions. An earthquake is also a natural disaster. Rain, wind, damage, and cloud are related to storms but are not specific disaster events.

51. E — Mars, Jupiter, and Saturn are all planets in our solar system. Neptune is also a planet. Star, moon, space, and telescope are related to astronomy but are not planets.

52. C — Ontario, Quebec, and Alberta are all Canadian provinces. British Columbia is also a Canadian province. Country, city, Ottawa (a city), and maple are related to Canada but are not provinces.

53. A — Biography, autobiography, and memoir are all types of nonfiction narratives about a person's life. Nonfiction narrative is the category they share. Fiction, novel, poem, and play are different literary forms.

54. D — Simmer, boil, and fry are all methods of cooking food. Cooking method is the category they share. Food, kitchen, recipe, and oven are related to cooking but are not cooking methods.

55. E — Granite, limestone, and marble are all types of rock. Rock is the category they belong to. Mineral, building, heavy, and cave are related to rocks but are not rocks themselves.

56. B — Democracy, monarchy, and dictatorship are all forms of government. Government type is the category they share. Country, president, election, and law are related to governance but are not forms of government.

57. A — Sonnet, haiku, and limerick are all specific types of poems. Poem type is the category they share. Writing, rhyme, book, and literature are broader literary concepts.

58. C — Microscope, telescope, and binoculars are all instruments that use lenses to magnify or view objects. Optical instrument is the category they share. Glass, scientist, lens, and eye are related but are not complete instruments.

59. D — Latitude, longitude, and equator are all terms used in geography to describe positions on Earth. Geographic term is the category they share. Map, travel, compass, and ocean are related to geography but are not geographic reference terms.

60. E — Watt, joule, and ampere are all standard units of measurement used in science and engineering. Unit of measurement is the category they share. Science, electricity, number, and math are related fields but are not units.

Number Analogies (Questions 61–78)

61. A — The rule is multiply by 3: $4 \times 3 = 12$, and $6 \times 3 = 18$. Applying the same rule to 9: $9 \times 3 = 27$.

62. C — The rule is divide by 2: $20 \div 2 = 10$, and $16 \div 2 = 8$. Applying the same rule to 12: $12 \div 2 = 6$.

63. E — The rule is multiply by 2 then add 1: $2 \times 2 + 1 = 5$, and $6 \times 2 + 1 = 13$. Applying the same rule to 4: $4 \times 2 + 1 = 9$.

64. B — The rule is square the number: $3 \times 3 = 9$, and $5 \times 5 = 25$. Applying the same rule to 6: $6 \times 6 = 36$.

65. D — The rule is subtract 5: $14 - 5 = 9$, and $22 - 5 = 17$. Applying the same rule to 30: $30 - 5 = 25$.

66. A — The rule is multiply by 4: $7 \times 4 = 28$, and $3 \times 4 = 12$. Applying the same rule to 8: $8 \times 4 = 32$.

67. C — The rule is multiply by 2: $1 \times 2 = 2$, and $4 \times 2 = 8$. Applying the same rule to 9: $9 \times 2 = 18$.

68. E — The rule is divide by 5: $40 \div 5 = 8$, and $25 \div 5 = 5$. Applying the same rule to 35: $35 \div 5 = 7$.

69. D — The rule is multiply by 2 then add 1: $5 \times 2 + 1 = 11$, and $8 \times 2 + 1 = 17$. Applying the same rule to 3: $3 \times 2 + 1 = 7$.

70. B — The rule is add 1: $6 + 1 = 7$, and $10 + 1 = 11$. Applying the same rule to 25: $25 + 1 = 26$.

71. A — The rule is multiply by 5: $2 \times 5 = 10$, and $4 \times 5 = 20$. Applying the same rule to 7: $7 \times 5 = 35$.

72. E — The rule is multiply by 2 then add 2: $3 \times 2 + 2 = 8$, and $7 \times 2 + 2 = 16$. Applying the same rule to 10: $10 \times 2 + 2 = 22$.

73. C — The rule is take the square root: $\sqrt{36} = 6$, and $\sqrt{49} = 7$. Applying the same rule to 64: $\sqrt{64} = 8$.

74. D — The rule is multiply by 3: $5 \times 3 = 15$, and $9 \times 3 = 27$. Applying the same rule to 4: $4 \times 3 = 12$.

75. B — The rule is subtract 5: $11 - 5 = 6$, and $18 - 5 = 13$. Applying the same rule to 24: $24 - 5 = 19$.

76. A — The rule is multiply by 3 then add 1: $1 \times 3 + 1 = 4$, and $2 \times 3 + 1 = 7$. Applying the same rule to 3: $3 \times 3 + 1 = 10$.

77. E — The rule is square the number: $8 \times 8 = 64$, and $5 \times 5 = 25$. Applying the same rule to 10: $10 \times 10 = 100$.

78. C — The rule is divide by 2 then subtract 1: $12 \div 2 - 1 = 5$, and $20 \div 2 - 1 = 9$. Applying the same rule to 16: $16 \div 2 - 1 = 7$.

Number Series (Questions 79–96)

79. D — The pattern adds 4 each time: 4, 8, 12, 16. The next term is $16 + 4 = 20$.

80. B — The pattern multiplies by 3 each time: 2, 6, 18, 54. The next term is $54 \times 3 = 162$.

81. E — The pattern subtracts 10 each time: 90, 80, 70, 60. The next term is $60 - 10 = 50$.

82. A — The gaps increase by 1 each time: +2, +3, +4, +5. The next gap is +6, so $15 + 6 = 21$. This is the triangular number sequence.

83. C — The pattern doubles each time: 5, 10, 20, 40. The next term is $40 \times 2 = 80$.

84. D — The pattern adds 9 each time: 9, 18, 27, 36. The next term is $36 + 9 = 45$.

85. B — This is the Fibonacci sequence where each term is the sum of the two before it: $8 + 13 = 21$. The next term is 21.

86. E — The pattern divides by 2 each time: 256, 128, 64, 32. The next term is $32 \div 2 = 16$.

87. A — The pattern adds 4 each time: 3, 7, 11, 15. The next term is $15 + 4 = 19$.

88. C — The gaps increase by 2 each time: +3, +5, +7, +9. The next gap is +11, so $26 + 11 = 37$.
89. D — The pattern divides by 2 each time: 500, 250, 125. The next term is $125 \div 2 = 62.5$.
90. B — The pattern follows perfect squares: $1^2, 2^2, 3^2, 4^2, 5^2, 6^2$. The next term is $7^2 = 49$.
91. E — The pattern adds 12 each time: 12, 24, 36, 48. The next term is $48 + 12 = 60$.
92. A — The pattern doubles each time: 1, 2, 4, 8, 16, 32. The next term is $32 \times 2 = 64$.
93. C — The pattern subtracts 9 each time: 81, 72, 63, 54. The next term is $54 - 9 = 45$.
94. D — The gaps increase by 1 each time: +1, +2, +3, +4, +5. The next gap is +6, so $18 + 6 = 24$.
95. B — The pattern multiplies by 3 each time: 10, 30, 90, 270. The next term is $270 \times 3 = 810$.
96. A — The pattern is factorials: $1! = 1, 2! = 2, 3! = 6, 4! = 24, 5! = 120$. The next term is $6! = 720$.

Number Puzzles (Questions 97–114)

97. E — To find the missing number: $23 - 9 = 14$. Checking: $9 + 14 = 23$. The missing value is 14.
98. C — To find the missing number: $56 \div 8 = 7$. Checking: $7 \times 8 = 56$. The missing value is 7.
99. A — To find the missing number: $34 - 19 = 15$. Checking: $34 - 15 = 19$. The missing value is 15.
100. D — To find the missing number: $72 \div 8 = 9$. Checking: $72 \div 9 = 8$. The missing value is 9.
101. B — To find the missing number: $35 - 19 = 16$. Checking: $16 + 19 = 35$. The missing value is 16.
102. E — To find the missing number: $54 \div 6 = 9$. Checking: $6 \times 9 = 54$. The missing value is 9.
103. A — Solve step by step: $5 \times ? - 7 = 18$. First, $18 + 7 = 25$. Then $25 \div 5 = 5$. Checking: $5 \times 5 - 7 = 18$.
104. C — To find the missing number: $33 + 17 = 50$. Checking: $50 - 17 = 33$. The missing value is 50.
105. D — First compute the left side: $9 \times 6 = 54$. Then solve $54 = ? + 14$, so $? = 54 - 14 = 40$.
106. B — Five identical values sum to 40: $40 \div 5 = 8$. Checking: $8 + 8 + 8 + 8 + 8 = 40$. The triangle symbol equals 8.
107. E — To find the missing number: $96 \div 12 = 8$. Checking: $96 \div 8 = 12$. The missing value is 8.
108. A — Solve step by step: $4 \times ? + 6 = 30$. First, $30 - 6 = 24$. Then $24 \div 4 = 6$. Checking: $4 \times 6 + 6 = 30$.

109. D — Two identical values plus 7 equal 25: $25 - 7 = 18$, then $18 \div 2 = 9$. Checking: $9 + 9 + 7 = 25$. The missing symbol equals 9.

110. C — First compute the left side: $64 \div 8 = 8$. Then solve $8 = ? - 5$, so $? = 8 + 5 = 13$.

111. B — First solve for the star: $\star + \star = 20$, so $\star = 10$. Then $\star - 3 = 10 - 3 = 7$. The answer is 7.

112. E — First compute the right side: $6 \times 5 = 30$. Then solve $17 + ? = 30$, so $? = 30 - 17 = 13$.

113. A — Solve step by step: $(? + 4) \times 5 = 45$. First, $45 \div 5 = 9$. Then $9 - 4 = 5$. Checking: $(5 + 4) \times 5 = 45$.

114. D — First compute the left side: $90 \div 10 = 9$. Then solve $9 = ? + 3$, so $? = 9 - 3 = 6$.

Figure Matrices (Questions 115–136)

115. C — The rule across the top row adds a dot to the centre of the shape. The rule down the left column changes the shape from triangle to diamond. Applying both: the missing shape is a diamond with a small dot in its centre.

116. E — The rule across the top row reduces the size from large to small. The rule down the left column changes the shape from square to circle while keeping the fill black. Applying both: the missing shape is a small black-filled circle.

117. A — The rule across the top row changes the internal line from horizontal to vertical. The rule down the left column changes the outer shape from square to triangle. Applying both: the missing shape is a triangle with a vertical line through its centre.

118. D — The rule across the top row is horizontal reflection (right-pointing becomes left-pointing). The rule down the left column changes the shape from arrow to letter "F." Applying the reflection to the normal "F": it becomes a mirror-reflected "F" (backwards, facing left).

119. B — The rule across the top row doubles the quantity from two to four (a 2×2 grid). The rule down the left column changes the shape from circles to squares. Applying both: the missing shape is four small black squares in a 2×2 grid.

120. C — The rule across the top row changes the fill from striped to black-filled. The rule down the left column changes the shape from triangle to hexagon. Applying both: the missing shape is a black-filled hexagon.

121. E — The rule across the top row adds a small square inside the shape. The rule down the left column changes the outer shape from circle to pentagon. Applying both: the missing shape is a pentagon with a small square inside.

122. A — The rule across the top row changes the fill from white-outlined to black-filled. The rule down the left column changes the shape from rectangle to oval. Applying both: the missing shape is a black-filled oval oriented horizontally.

123. D — The rule across the top row increases the size from small to large. The rule down the left column changes the shape from star to heart. Applying both: the missing shape is a large white-outlined heart.

124. B — The rule across the top row rotates the shape 90° clockwise (up becomes right). The rule down the left column changes the shape from triangle to pentagon. Applying the rotation to the upward-pointing pentagon: it becomes a pentagon rotated 90° clockwise (one vertex pointing right).

125. E — The rule across the top row shifts the shaded half from the left side to the right side. The rule down the left column changes the shape from circle to square. Applying both: the missing shape is a square with its right half shaded black.

126. C — The rule across the top row increases the number of concentric shapes from one to two. The rule down the left column changes the shape from circle to square. Applying both: the missing shape is two concentric squares (a square within a square).

127. A — The rule across the top row doubles the number inside the shape (3 becomes 6). The rule down the left column changes the outer shape from hexagon to circle. Applying both: the missing shape is a circle containing "6."

128. D — The rule across the top row changes the internal symbol from a plus sign (+) to a minus sign (-). The rule down the left column changes the outer shape from circle to square. Applying both: the missing shape is a black-filled square with a white minus sign inside.

129. B — The rule across the top row removes the small triangle sitting on top of the shape. The rule down the left column changes the base shape from square to diamond. Applying both: the missing shape is a diamond with no shape on top.

130. E — The rule across the top row increases the number of sides by 2 (triangle 3 \rightarrow pentagon 5). The rule down the left column also increases the number of sides by 1 (triangle 3 \rightarrow square 4). The bottom-right shape must have sides from both progressions: $4 + 2 = 6$ sides. The missing shape is a hexagon.

131. C — The rule across the top row removes the dot pattern (dotted becomes plain white-outlined). The rule down the left column changes the shape from circle to square. Applying both: the missing shape is a white-outlined square with no dots.

132. A — The rule across the top row increases the number of internal dots from one to three. The rule down the left column changes the outer shape from diamond to oval. Applying both: the missing shape is an oval with three small dots inside.

133. D — The rule across the top row increases the size from small to medium. The rule down the left column changes the shape from circle to hexagon. Applying both: the missing shape is a medium white-outlined hexagon.

134. E — The rule across the top row changes the fill from black-filled to white-outlined. The rule down the left column changes the shape from right-pointing arrow to upward-pointing arrow. Applying both: the missing shape is a white-outlined upward-pointing arrow.

135. B — The rule across the top row changes the internal shape (the shape inside the outer shape changes from circle to triangle). The rule down the left column changes the outer shape from square to circle. Applying both: the missing shape is a circle containing a triangle.

136. C — The rule across the top row shifts the shading from the bottom half to the top half. The rule down the left column changes the shape from pentagon to circle. Applying both: the missing shape is a circle with its top half shaded black.

Figure Classification (Questions 137–158)

137. A — All three given shapes are white-outlined and contain a small "X" in the centre. A white-outlined pentagon with an "X" in the centre matches both attributes. The other options have wrong symbols, wrong fill, or no symbol.

138. D — All three given shapes are small and filled with horizontal stripes. A small striped diamond matches both size and fill attributes. The other options fail on size (large) or fill (white, black, dotted).

139. B — All three given shapes are large and black-filled. A large black-filled diamond matches both attributes. The other options fail on size (small) or fill (white, striped).

140. E — All three given shapes are white-outlined and contain exactly three dots inside. A white-outlined triangle with three dots inside matches both attributes. The other options have wrong dot counts or wrong fill.

141. C — All three given shapes are white-outlined arrows pointing in different directions. A white-outlined arrow pointing left is also a white-outlined arrow. The other options are black-filled, triangles instead of arrows, chevrons, or striped.

142. A — All three given shapes are divided vertically with left half black and right half white. A diamond with the same left-black, right-white division matches this attribute. The other options are fully filled, have horizontal divisions, or reversed halves.

143. D — All three given shapes are large white-outlined shapes containing a small black-filled triangle inside. A large white-outlined diamond with a small black-filled triangle inside matches this pattern. The other options have wrong internal shapes or wrong fill.

144. B — The three shapes increase in number of sides: triangle (3), square (4), pentagon (5). A regular hexagon (6 sides) continues this consecutive polygon progression.

145. E — All three given shapes are drawn with dashed lines. A dashed-line diamond matches this attribute. The other options use solid lines or dotted lines.

- 146. C** — All three given shapes are medium-sized and white-outlined. A medium white-outlined diamond matches both size and fill attributes. The other options fail on size (large, small) or fill (black, striped).
- 147. A** — All three given shapes contain a vertical line through their centres. A triangle with a vertical line through its centre matches this attribute. The other options have horizontal lines, diagonal lines, or no lines.
- 148. D** — All three given shapes are large black-filled shapes with a small white circle cut out of the centre. A large black-filled hexagon with a small white circle cut out matches this pattern. The other options have wrong colours, wrong cutout shapes, or no cutout.
- 149. E** — All three given shapes are different types of triangles (right, scalene, isosceles). An equilateral triangle is also a type of triangle. Square, pentagon, circle, and diamond are not triangles.
- 150. B** — All three given shapes are small and black-filled. A small black-filled lightning bolt matches both size and fill attributes. The other options fail on size (large, medium) or fill (white, striped).
- 151. C** — All three given shapes are large white-outlined shapes containing a small white-outlined circle inside. A large white-outlined hexagon with a small white-outlined circle inside matches this pattern. The other options have wrong internal shapes or no internal shape.
- 152. A** — All three given shapes contain a diagonal line from upper-left to lower-right. A triangle with a diagonal line from upper-left to lower-right matches this attribute. The other options have vertical lines, horizontal lines, or no lines.
- 153. D** — All three given shapes are large and filled with a dot/stipple pattern. A large dotted pentagon matches both size and fill attributes. The other options fail on size (small) or fill (striped, white, black).
- 154. E** — All three given shapes contain the letter "B" inside. A square with "B" inside matches this attribute. The other options contain different letters or no letter.
- 155. B** — All three given shapes contain horizontal stripes inside. A hexagon with horizontal stripes inside matches this attribute. The other options have vertical stripes, diagonal stripes, or no stripes.
- 156. C** — All three given shapes are white-outlined squares of decreasing size. A tiny white-outlined square (smaller than the small one) continues the same shape, same fill, decreasing size pattern.
- 157. A** — All three given shapes are black-filled with a white minus sign (−) inside. A black-filled diamond with a white minus sign inside matches this pattern. The other options have wrong symbols or wrong fill.
- 158. D** — All three given shapes are different types of triangles (acute, obtuse, right). An equilateral triangle is also a type of triangle. Square, circle, pentagon, and hexagon are not triangles.

Paper Folding (Questions 159–176)

- 159. B** — The paper folds top onto bottom along a horizontal centre line. A hole near the right side, midway between top and fold, punches through both layers. When unfolded, two holes appear: one in the upper-right and one in the lower-right, symmetric around the horizontal centre line.
- 160. D** — The paper folds left onto right along a vertical centre line. A hole near the top-left corner punches through both layers. When unfolded, two holes appear: one near the top-left and one near the top-right, symmetric around the vertical centre line.
- 161. E** — The paper folds right onto left along a vertical centre line. A hole punched exactly on the fold edge near the centre sits directly on the line of symmetry. When unfolded, only one hole appears on the vertical centre line at the midpoint of the paper.
- 162. C** — The paper folds diagonally from top-left to bottom-right. A hole near the centre of the folded triangle punches through both layers. When unfolded, two holes appear: one in the upper-right area and one in the lower-left area, symmetric around the diagonal fold line.
- 163. A** — Two folds create four layers: first top to bottom, then right to left. A hole near the top-left corner of the small square punches through all four layers. When fully unfolded, four holes appear — one near each corner of the paper.
- 164. D** — The paper folds bottom onto top along a horizontal centre line. A hole near the left side, very close to the fold edge, punches through both layers. When unfolded, two holes appear very close together on the left side, one just above and one just below the horizontal centre line, symmetric around it.
- 165. B** — Two folds create four layers: first right to left, then top to bottom. A hole in the centre of the small square punches through all four layers. When fully unfolded, four holes appear — one near the centre of each quadrant, symmetric around both fold lines.
- 166. E** — The paper folds left onto right along a vertical centre line. A hole near the bottom, slightly left of the folded rectangle's centre, punches through both layers. When unfolded, two holes appear: one near the bottom-left and one near the bottom-right, symmetric around the vertical centre line.
- 167. C** — The paper folds top onto bottom along a horizontal centre line. A hole near the top-right corner punches through both layers. When unfolded, two holes appear: one in the upper-right and one in the lower-right, symmetric around the horizontal centre line.
- 168. A** — Two folds create four layers: first bottom to top, then left to right. A hole near the bottom-right corner of the small square punches through all four layers. When fully unfolded, four holes appear — one near each corner of the paper.
- 169. D** — The paper folds right onto left along a vertical centre line. A hole near the upper-right area punches through both layers. When unfolded, two holes appear: one near the upper-left and one near the upper-right, symmetric around the vertical centre line.

170. B — The paper folds diagonally from bottom-left to top-right. A hole near the right vertex (corresponding to the top-right corner) punches through both layers. When unfolded, two holes appear: one near the top-right and one near the bottom-left, symmetric around the diagonal fold line.

171. E — Two folds create four layers: first left to right, then bottom to top. A hole near the top-left corner of the small square punches through all four layers. When fully unfolded, four holes appear — one near each corner of the paper.

172. C — The paper folds top onto bottom along a horizontal centre line. Two holes are punched — one near the left and one near the right. Each passes through both layers. When unfolded, four holes appear: two on the left (upper and lower, symmetric) and two on the right (upper and lower, symmetric), all arranged around the horizontal centre line.

173. A — Two folds create four layers: first right to left, then top to bottom. A hole near the top-right corner of the small square punches through all four layers. When fully unfolded, four holes appear — one near each corner of the paper.

174. D — The paper folds left onto right along a vertical centre line. A hole slightly above the midpoint punches through both layers. When unfolded, two holes appear: one in the left half and one in the right half, both slightly above the horizontal centre, symmetric around the vertical fold line.

175. B — The paper folds bottom onto top along a horizontal centre line. A hole punched exactly on the fold edge near the left side sits directly on the line of symmetry. When unfolded, only one hole appears on the horizontal centre line near the left side.

176. E — Two folds create four layers: first top to bottom, then left to right. Two holes are punched — one near the top-left and one near the bottom-right of the small square. Each passes through all four layers, producing four holes each — eight holes total. When fully unfolded, eight dots appear: two near each corner, symmetric around both centre lines.