Reading Junior Secondary Test (Year 7 and 8)

1 Read the passage and answer Questions 1–3.

When Kestrel Bay Dimmed the Night

Every spring, silver petrels leave burrows on the cliffs above Kestrel Bay and fly towards the ocean. Young birds navigate partly by the brightest horizon, which in an undisturbed landscape is usually moonlight reflecting from the sea. In town, however, white streetlights and illuminated shop signs can pull them in the wrong direction. Volunteers have found exhausted petrels beneath car-park lamps, beside sports fields and, occasionally, on busy roads.

After several severe fledging seasons, the council proposed a six-week lighting trial. Some residents imagined the foreshore would be plunged into darkness. Instead, engineers replaced selected white bulbs with shielded amber lights. A shielded fitting directs most of its beam towards the ground rather than allowing light to spill upwards. The amber bulbs were also chosen because their wavelength is less attractive to many seabirds. Crossings and bus stops remained lit throughout the trial.

Researchers compared the trial with the previous three fledging seasons. The average number of grounded petrels reported to the rescue team fell from 84 to 31. Electricity use on the altered streets dropped by 22 per cent, while electronic pedestrian counters recorded almost no change in the number of people walking after 8 pm. Mira Singh, who owned a late-opening cafe, had opposed the proposal at first. By the fourth week, she said the footpath was easier to see because the new lamps produced less glare.

The figures were promising, but Dr Nila Hart, the project scientist, resisted declaring victory. The trial season was unusually calm, and several nights had a bright moon. Both conditions may have helped the birds reach the sea. Rescue totals also depended on how many volunteers were available to search. Hart called the result "encouraging evidence, not a final answer". In the next trial, researchers plan to tag a sample of fledglings and compare two similar streets, one with altered lighting and one without it.

Kestrel Bay did not protect wildlife by simply turning the town dark. It changed the colour and direction of light while preserving essential visibility. That distinction may explain why the project eventually gained broad support. The trial treated human safety and wildlife protection as parts of the same design problem, rather than as goals that had to defeat one another.

Which statement best expresses the central idea of the passage?

(A) Shop owners convinced researchers to keep white lights at every crossing and bus stop.

(B) A coastal town saved money by switching off most public lights during winter.

(C) Young petrels are unable to navigate unless volunteers carry them directly to the sea.

(D) A lighting trial suggests thoughtful design can protect seabirds without greatly reducing public use, although more evidence is needed.

2 Read the passage and answer Questions 1–3.

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In paragraph 2, the word “shielded” most nearly means

(A) fitted with a cover that controls where the light travels.

(B) hidden behind trees so that pedestrians cannot see it.

(C) strengthened to survive wind and salt from the coast.

(D) powered by a backup system during storms.

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Why does the writer mention the calm weather, the bright moon and the number of available volunteers?

A To prove that changing the streetlights had no effect on the petrels.

B To show that the lighting trial would certainly fail in any other season.

C To identify other factors that may have influenced the reported results.

D To suggest that the rescue team invented the decline in grounded birds.

4 Read the passage and answer Questions 4–6.

The Radio at Table Seven

Leila chose Table Seven because the sign above it read AUDIO REPAIRS, and because no one else had arrived there yet. She placed her grandfather's pocket radio on the rubber mat as carefully as if it were a small animal pretending to sleep. The radio had not worked since the previous summer, but Leila had brought it to the community repair hall for a second reason. At school, she was known as the student who could solder faster than anyone in the electronics club. She wanted the volunteers to notice.

Theo, the grey-haired supervisor, slid a repair log towards her. "First, write down the symptom."

"It doesn't work," Leila said.

"That's a verdict, not an observation."

She felt the sentence land more heavily than it should have. Around the hall, a lamp clicked on, a blender coughed into life and someone cheered over a repaired game controller. The room's small victories sounded like applause meant for somebody else.

Leila removed the radio's back cover. The battery terminals were clean. The speaker cone was unbroken. She replaced a wire that looked slightly dull, even though her meter showed that it still carried current. Nothing changed. She began heating a second joint.

Theo placed one finger on the power switch. "What happened just before it stopped working?"

"I don't know. It belonged to my grandfather."

"Then let the radio answer what it can."

Leila nearly laughed. Machines did not answer. They either obeyed or failed. Still, she set down the soldering iron and turned the tuning dial slowly. At first there was only silence. Then, when she pressed the lower corner of the casing, a thin hiss appeared. She released the pressure and it vanished.

This time, Leila did not reach for a replacement part. She followed the circuit beneath that corner with a magnifying lens. One solder joint had a hairline fracture, so fine that it disappeared when viewed from directly above. Pressing the case bent the board just enough to close the gap.

She reheated the joint for three seconds. The radio crackled, then caught a station giving the afternoon tide times. Her grandfather had listened to the same report before taking his small boat beyond the harbour wall. For a moment, Leila could almost see him leaning over the kitchen bench, one hand around a mug, waiting for the wind forecast.

Theo did not congratulate her speed. "What did it tell you?"

Leila looked at the log. In the box labelled SYMPTOM, she wrote: Signal returns when pressure is applied to lower casing. Beneath it, in smaller letters, she added: Start with the evidence, not the solution.

What is the main effect of the sentence "The room's small victories sounded like applause meant for somebody else"?

A It shows that Leila is delighted by the other repairs and has forgotten her own task.

B It suggests that the hall is too noisy for anyone to test a radio accurately.

C It proves that the volunteers are competing against one another for a prize.

D It shows that Leila feels excluded and increasingly self-conscious as others succeed.

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Why does Leila work so quickly at the beginning of the story?

A She hopes to prove her reputation for skill and impress the volunteers.

B She wants to repair the radio before her grandfather hears about it.

C She believes Theo will refuse to help if she asks a question.

D She is worried that other students will damage the radio.

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Which theme is best developed through Leila's experience?

A Expensive equipment is more dependable than old objects.

B Speed matters most when solving difficult technical problems.

C Personal memories prevent people from thinking logically.

D Careful observation can reveal what confidence and quick action overlook.

7 Read the passage and answer Questions 7–10.

Greenvale Pocket Forest Pilot: 12-Week Review

Greenvale Secondary College planted four dense groups of native trees and shrubs in unused parts of the campus. Each pocket forest occupied less than 250 square metres. The trial aimed to cool paved areas, increase insect and bird activity, and provide a pleasant outdoor study space.

Measurements were taken during the same one-hour period on clear days. Surface temperature was compared with nearby unplanted paving, while pollinators were counted for ten minutes each week. A student survey allowed respondents to select two priorities.

The figures show early patterns only. Different soil, rainfall and existing shade may have influenced results, and twelve weeks is too short to establish a permanent biodiversity change. The council can fund one larger expansion next year.

Which statement is supported by the temperature chart?

A Site D reduced the temperature by 1.8°C more than Site B.

B Site C reduced the temperature by 0.3°C more than Site B.

C Site B reduced the temperature by exactly twice as much as Site A.

D Sites A and D produced the same temperature reduction.

8 Read the passage and answer Questions 7–10.

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The council requires a study site to be within 60 metres of the main classroom block, have moderate or moist soil, and receive more than 250 pedestrians each day. Which site meets all three conditions?

A Site A

B Site B

C Site D

D Site C

9 Read the passage and answer Questions 7–10.

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Which conclusion is most reasonable from the pollinator graph and the data note?

A Pollinator numbers at both locations stayed almost unchanged for twelve weeks.

B Pollinator counts at Site C rose much more than at the control area, but other influences cannot be ruled out.

C The pocket forest definitely caused every increase in pollinator numbers.

D The control area eventually attracted more pollinators than Site C.

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Which recommendation is most defensible when all the visual evidence is considered?

A. Expand Site C and stop collecting data because the twelve-week pollinator rise proves a permanent biodiversity gain.

B. Expand Site A because it is far from busy areas, even though students ranked closeness to classes highly.

C. Expand Site B and continue wildlife monitoring because it combines near-highest cooling, close access, suitable soil and the highest foot traffic.

D. Expand Site D because its zone is large, despite its waterlogged soil and low daily use.

Mathematical Reasoning Test

Generate questions for your resources within seconds.

1 Mia has four different coloured beads: red, blue, green and yellow. She will place all four beads in a row, using each bead exactly once. Her friend tries to guess the exact order of the beads.

What is the probability that her friend guesses the correct arrangement, and which reasoning is correct?

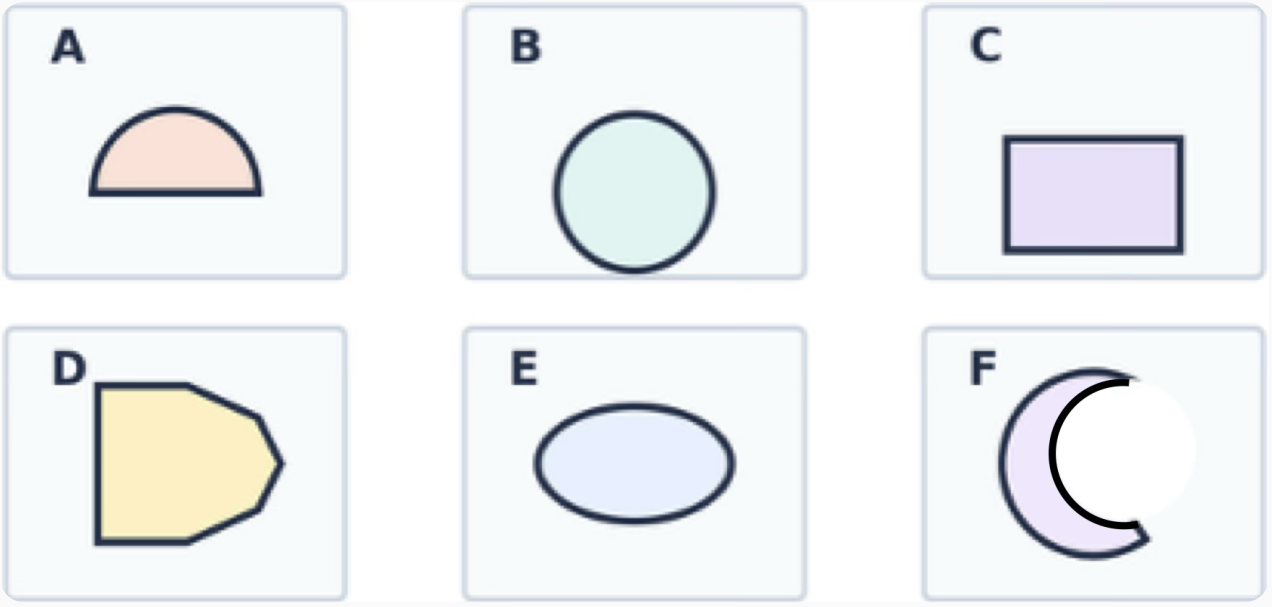
A $\frac{1}{4}$, because there are four bead colours to choose from.

B $\frac{1}{16}$, because each position could be one of four colours.

C $\frac{1}{24}$, because there are $4 \times 3 \times 2 \times 1$ possible arrangements.

D $\frac{1}{12}$, because only the first two bead positions matter.

2 Which pair of tiles contains a shape with exactly one line of symmetry and with both straight and curved edges?



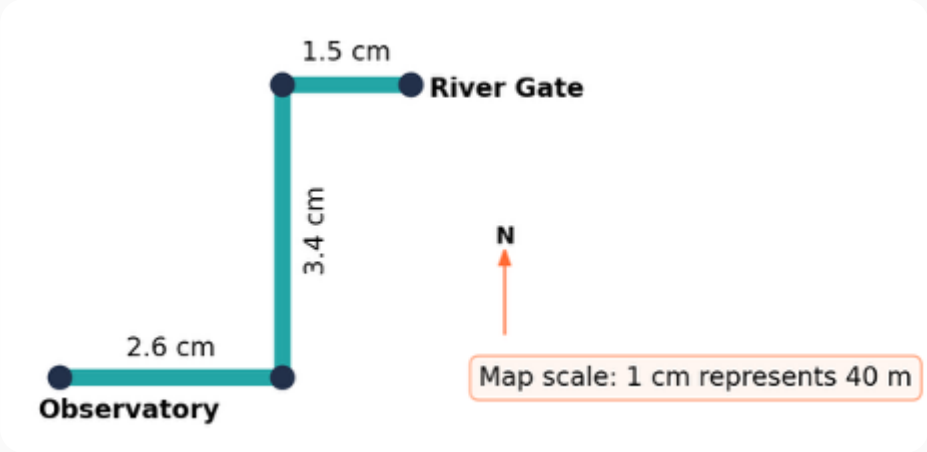
A A and B only

B C and D only

C B and E only

D A and D

3 A route on the map is made of the three labelled segments.



What is the actual length of the route from the Observatory to the River Gate?

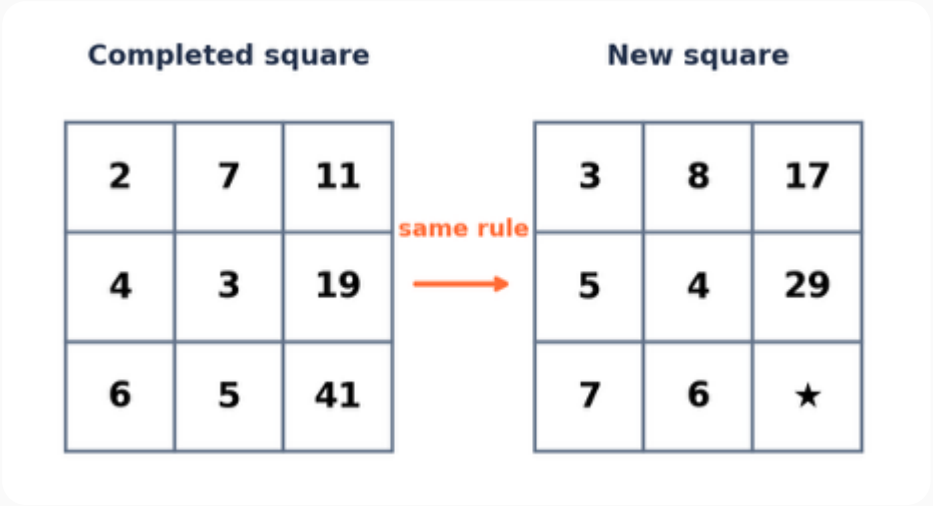
A 240 m

B 300 m

C 340 m

D 750 m

4 Every row in both squares follows the same rule.



What number does ★ represent?

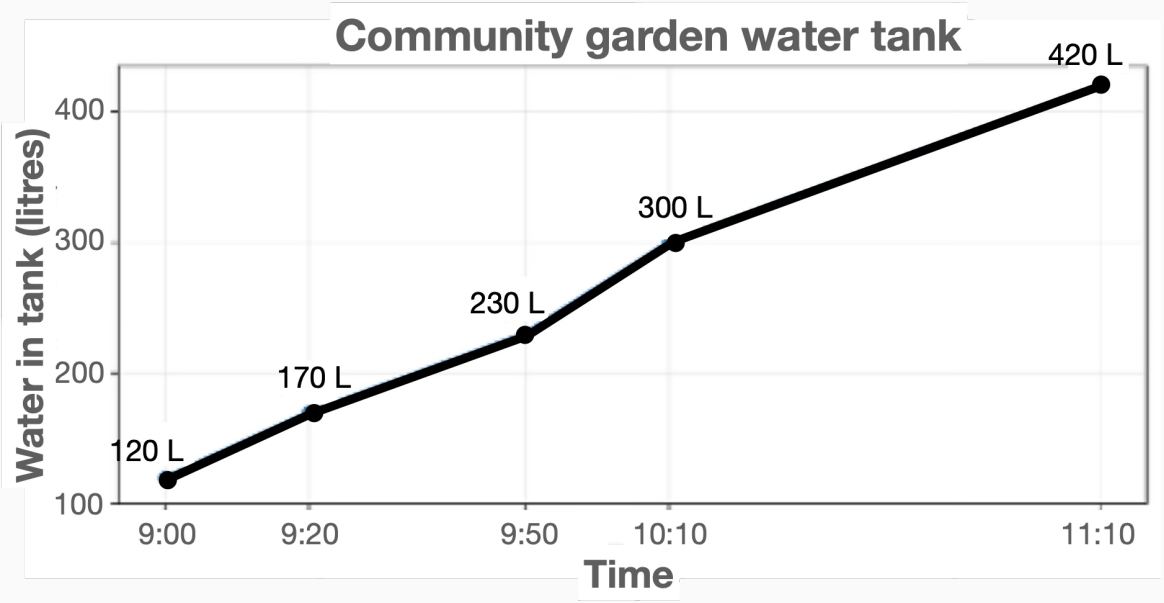
A 49

B 55

C 43

D 91

5 During which interval did the amount of water increase at the fastest average rate?



A 9:50 to 10:10

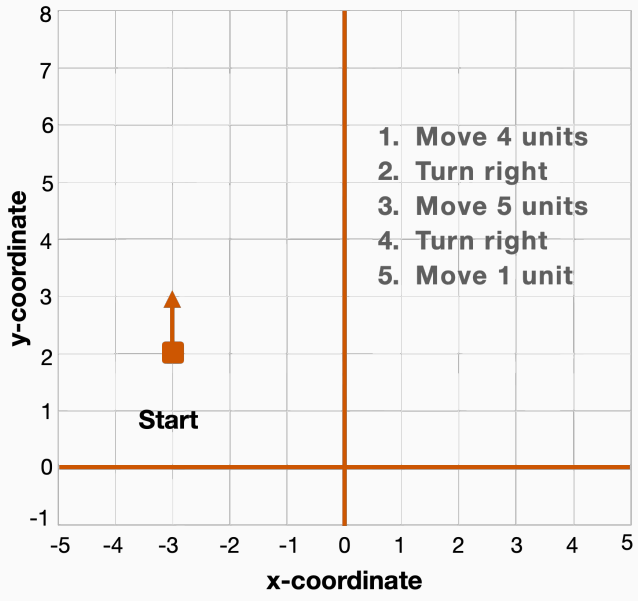
B 9:20 to 9:50

C 9:00 to 9:20

D 10:10 to 11:10

6 The robot follows the command list exactly.

At which coordinate does it finish, and which direction is it facing?



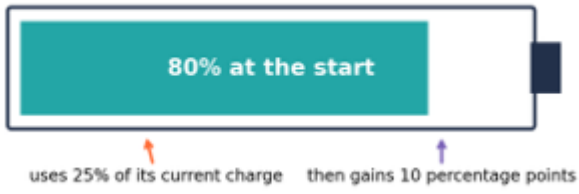
A (2, 5), facing east

B (2, 7), facing north

C (2, 5), facing south

D (-2, 6), facing east

7 What percentage charge does the battery have after both changes?



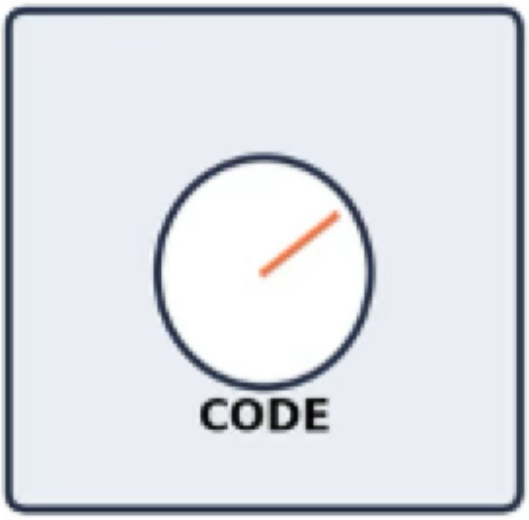
A 70%

B 75%

C 60%

D 65%

8 Which number can be the safe code?



- ✓ **between 20 and 40**
- ✓ even number
- ✓ remainder 2 when ÷ 5
- ✓ remainder 1 when ÷ 3

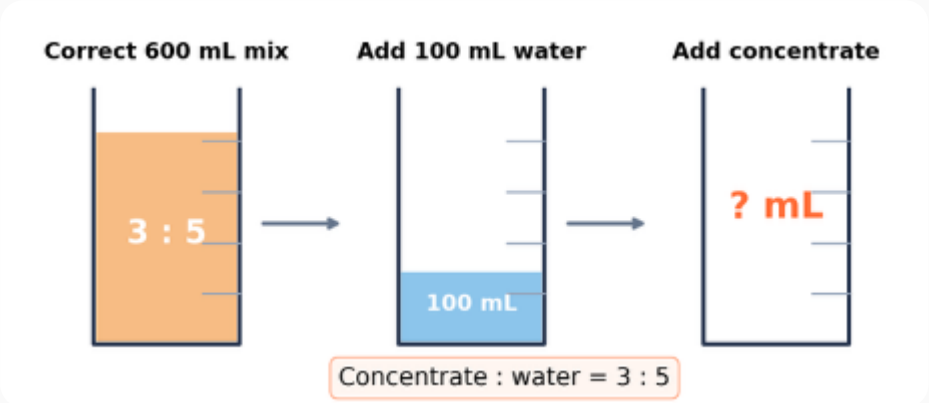
A 27

B 22

C 32

D 34

9 The original 600 mL drink has the correct concentrate-to-water ratio. After 100 mL of water is added, how much concentrate must be added to restore the 3 : 5 ratio?



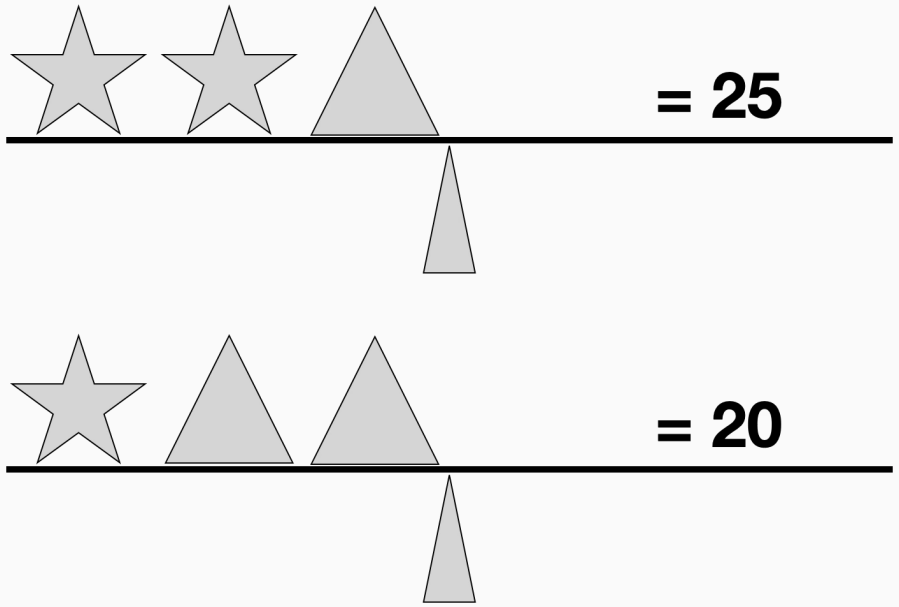
A 40 mL

B 60 mL

C 75 mL

D 100 mL

10 Using the two balanced equations, what is the value of three stars minus one triangle?



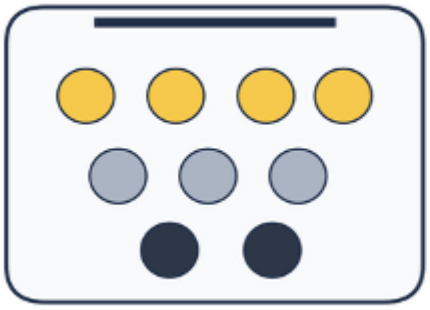
A 25

B 20

C 35

D 15

11 Two counters are drawn at random without replacement.



4 gold

3 silver

2 black

Draw 2 without replacement

What is the probability that the two counters are the same colour?

A 5/18

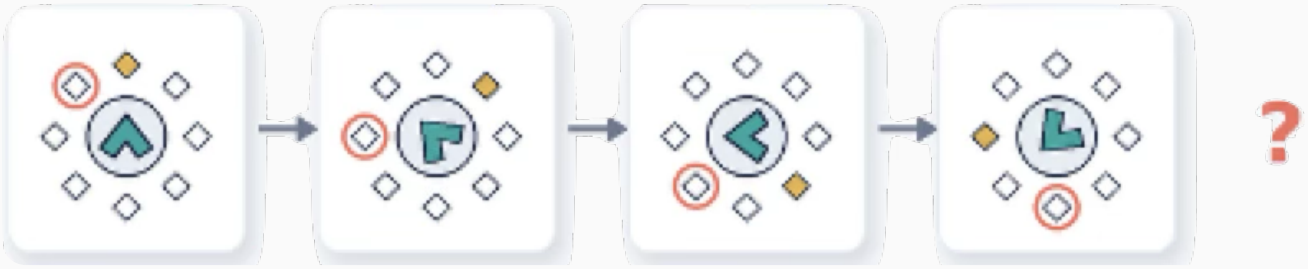
B 5/9

C 2/9

D 1/3

Abstract Reasoning Junior Secondary Test (Year 7 and 8)

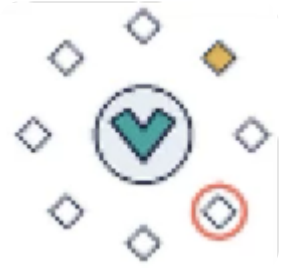
1 Choose the answer option that shows which figure comes next in the sequence.



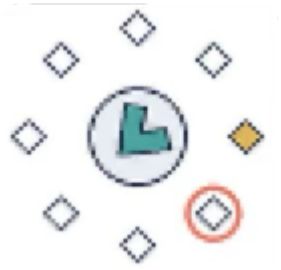
A



B



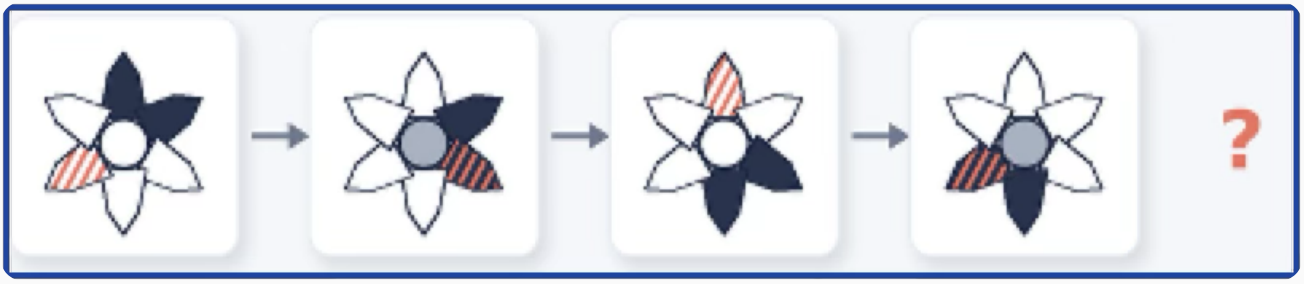
C



D



2 Choose the answer option that shows which figure comes next in the sequence.



A



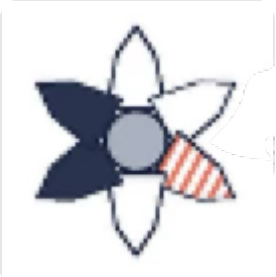
B



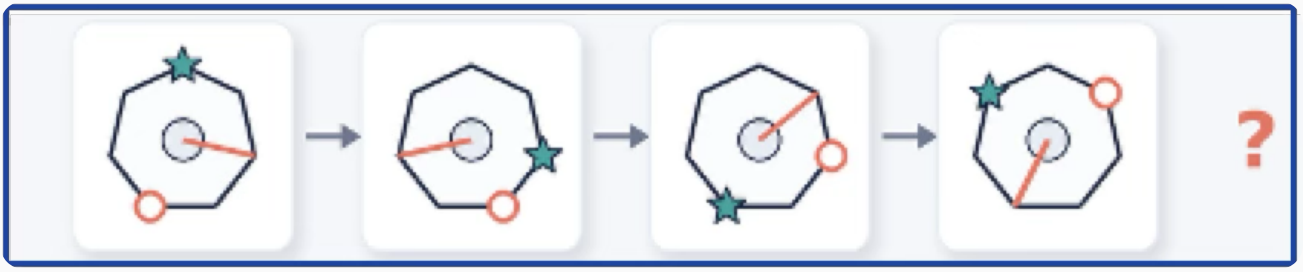
C



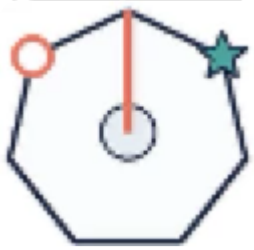
D



3 Choose the answer option that shows which figure comes next in the sequence.



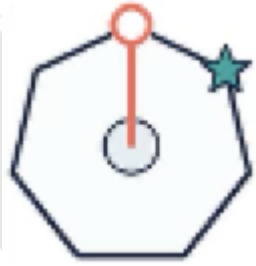
A



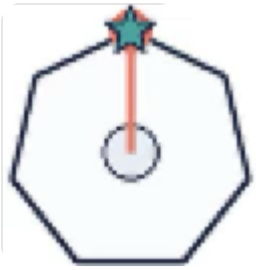
B



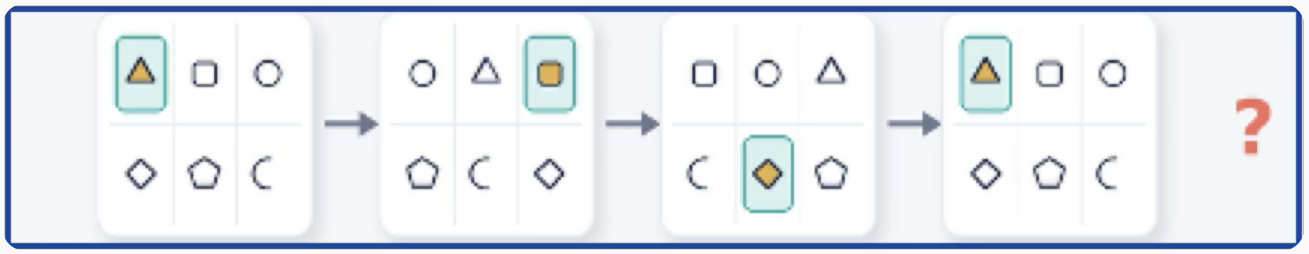
C



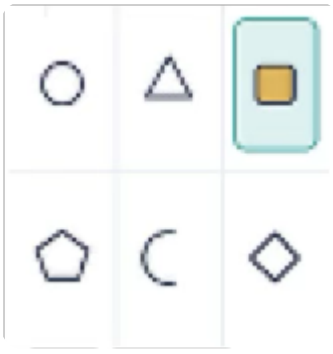
D



4 Choose the answer option that shows which figure comes next in the sequence.



A



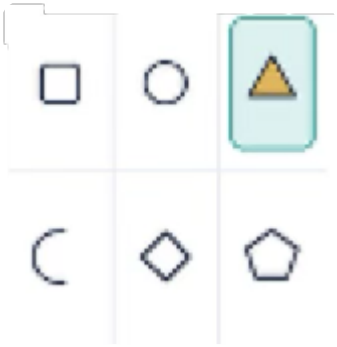
B



C



D



5 Arrange the five frames logically, then choose the option in the middle of the sequence.



A D

B E

C B

D A

E C

6 Arrange the five frames logically, then choose the option in the middle of the sequence.



A C

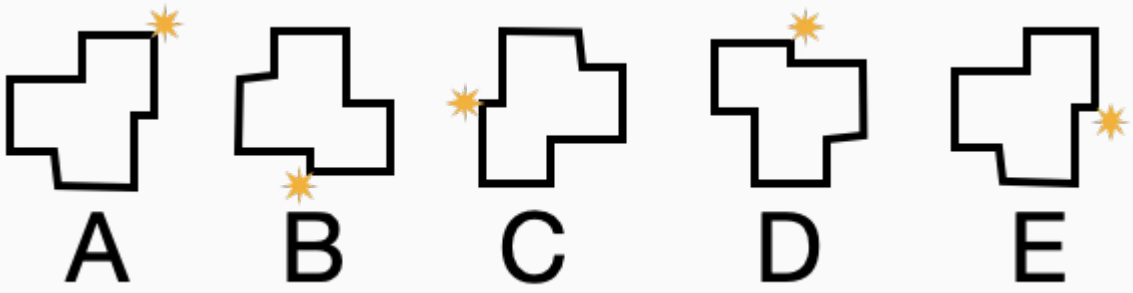
B B

C E

D D

E A

7 Arrange the five frames logically, then choose the option in the middle of the sequence.



(A) C

(B) A

(C) E

(D) D

(E) B

8 Arrange the five frames logically, then choose the option in the middle of the sequence.



A E

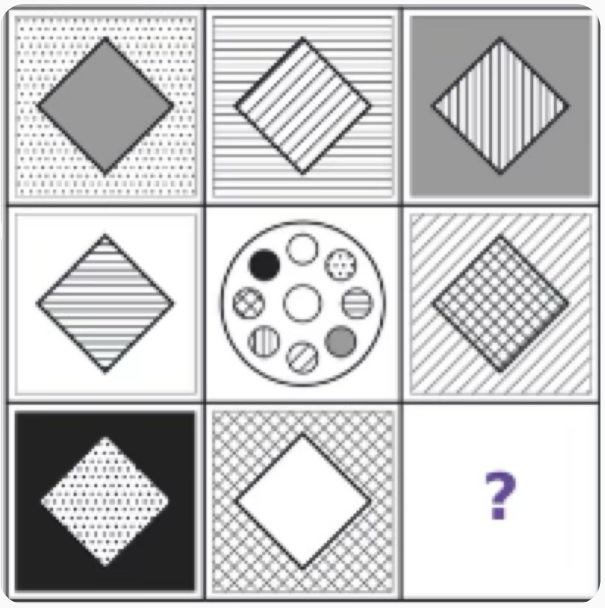
B A

C C

D D

E B

9 Choose the answer option that correctly completes the logical pattern.



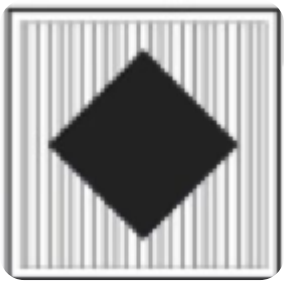
A



B



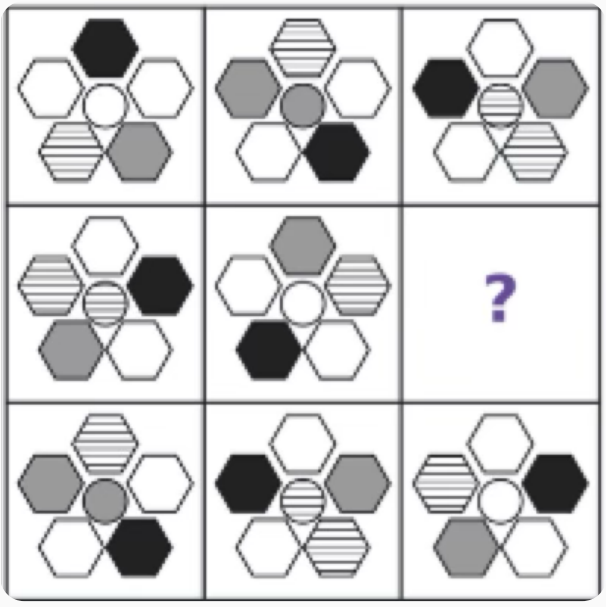
C



D



10 Arrange the five frames logically, then choose the option in the middle of the sequence.



A



B



C



D

