ARIS ACADEMY · NSW SELECTIVE TEST PRACTICE

Thinking Skills

Centre sample · 6 questions with worked answers

This sample contains 6 questions from the Thinking Skills section of an Aris practice paper, with full worked answers at the back. In the NSW Selective Test, Thinking Skills has 40 questions in 40 minutes. Allow about 7 minutes for this sample.

Instructions: Choose the best answer for each question and circle the letter. Read every option before deciding.

Question 1

The children Brian, Lee, Zara, Eric and Anita are all in one family.
Brian is 9 years old. Lee is 4 years younger than Brian. Zara is 5 years older than Brian. Eric is 5 years younger than Brian. Anita is 3 years older than Lee.

Only one of these sentences is true. Which is it?

A. Eric is the youngest.

B. Lee is 7 years older than Brian.

C. Brian is 10.

D. Lee is the oldest.

Question 2

A school selected students for the Gifted Creative Writing Program.
As well as considering published work in a school newspaper or magazine, the school set all students a creative writing test and a reading comprehension test.
If a student had published work in a school newspaper or magazine, they only had to achieve an outstanding result in the creative writing test.
If they did not have published work, they had to achieve an outstanding result in the creative writing test and score highly in the reading comprehension test.
Every student who met these rules was selected.
Zara is a published school journalist but was not selected for the course.

What must have been the reason?

A. Zara did not score highly in the reading comprehension test.

B. Zara did not achieve an outstanding result in the creative writing test.

C. Zara failed the creative writing test.

D. Zara did badly in both tests.

Question 3

Schools are deciding whether to focus resources on team sports like soccer and basketball, or individual sports like swimming and tennis.
Some people claim: **"Playing team sports helps children develop better social skills than individual sports."**

Which of the following, if true, would most **strengthen** this argument?

A. Some children prefer individual sports because they can practise on their own schedule without needing to coordinate with teammates or attend set practice times.

B. Team sports have become more popular in schools over the past five years, with increasing numbers of students joining soccer, basketball and netball programs.

C. In a study, children assigned to team sports improved more in classroom cooperation and communication than children assigned to individual sports.

D. Children who compete in individual sports often form close friendships with other athletes at competitions and develop strong peer relationships.

Question 4

In a survey about indoor hobbies, everyone who liked chess also liked board games. Everyone who liked board games also liked puzzles, but no one who liked board games liked card games. Ruby, Kai, Mia and Sam all took part in the survey.
Which of the following must be true?

A. If Mia does not like chess, then Mia does not like board games.

B. If Mia likes board games, then Mia must also like chess.

C. If Mia likes puzzles, then Mia must also like board games.

D. If Mia likes chess, then Mia does not like card games.

Question 5

An advertisement for a plant food claimed: **"SUPER-GROW always makes plants grow taller."**
Four plants were tested, and two questions were recorded in each case:

Plant	Was SUPER-GROW used?	Did the plant grow taller?
1	yes	(a)
2	(b)	no
3	no	(c)
4	(d)	yes

Which two missing answers must be known to check whether any of these results contradict the claim?

A. a and d

B. a and b

C. a and c

D. c and d

Question 6

"To qualify for the school camp, a student must have both a signed permission form and a completed health check."
If this is true, which one of these sentences must also be true?

A. If Liam did not have a completed health check, he cannot have qualified for the school camp.

B. If Liam had a signed permission form but not a completed health check, he might still have qualified for the school camp.

C. If Liam had both a signed permission form and a completed health check, he must have qualified for the school camp.

D. If Liam did not have a signed permission form, he cannot have had a completed health check.

Worked answers (for tutors)

Question 1

Five children, five clues. Only one statement is true.

Work out each age from the clues:

Brian = 9 (given)
Lee = 9 – 4 = 5
Zara = 9 + 5 = 14
Eric = 9 – 5 = 4
Anita = 5 + 3 = 8

Now test each statement:

- **A. "Eric is the youngest."** Eric is 4, younger than every other child. TRUE.
- **B.** Lee is 5, which is younger than Brian (9), not 7 years older.
- **C.** Brian is 9, not 10.
- **D.** Lee is 5. Zara is 14, so Lee is not the oldest.

Answer: A

Question 2

Zara is a published school journalist but was not selected. Why?

There are two admission paths:

- With published work: only an outstanding creative writing result is needed.
- Without published work: an outstanding creative writing result and a high reading comprehension score are both needed.

Zara is a published school journalist, so the first path applies. The only requirement left was an outstanding result in the creative writing test. Since Zara was not selected, that must be the requirement she did not meet.

- **A.** The reading comprehension score only matters for students without published work.
- **B. Correct.** It is the single requirement on Zara's path, so it must be the one she missed.
- **C.** Too strong. The bar is "outstanding", not "pass". Zara could have passed without reaching outstanding.
- **D.** Only the creative writing test matters on Zara's path; nothing can be concluded about the reading test.

Answer: B

Worked answers (continued)

Question 3

Which option most strengthens the claim about team sports and social skills?

The claim is that team sports develop better social skills than individual sports. To strengthen it, look for direct evidence that team sport players show better social skills.

- **A.** About convenience and preference, not social skills. Irrelevant.
- **B.** Popularity does not show whether team sports build social skills. Irrelevant.
- **C. Correct.** This compares improvements in both groups. The greater improvement in the team-sports group supports the claim, without proving it for every child.
- **D.** This shows that individual sports can involve friendships, but it does not compare the two groups or support the claim that team sports are better.

Answer: C

Question 4

Chess → board games → puzzles, and board games exclude card games.

Map the chain:

- Everyone who liked chess also liked board games (chess → board games).
- Everyone who liked board games also liked puzzles (board games → puzzles).
- No one who liked board games liked card games (the two exclude each other).

Test each option against the chain:

- **A.** The chain runs from chess to board games, not back. Someone can like board games without liking chess.
- **B.** Same reversal: liking board games does not force liking chess.
- **C.** Board games → puzzles does not mean puzzles → board games.
- **D. Correct.** Chess forces board games, and board games exclude card games, so liking chess means not liking card games.

Answer: D

Worked answers (continued)

Question 5

Which two missing answers could reveal a result that contradicts the claim?

The claim is that SUPER-GROW always works. One case where it was used and the plant did not grow taller would prove it false. So the test needs:

- (a) the outcome for plant 1, where SUPER-GROW was used. If (a) is "no", the claim is false.
- (b) whether SUPER-GROW was used on plant 2, which did not grow taller. If (b) is "yes", the claim is false.

- **A (a and d).** Plant 4 grew taller, so (d) cannot reveal a failure. This choice misses the possible failure in plant 2.
- **B (a and b). Correct.** These are exactly the two cases that could show SUPER-GROW being used and failing.
- **C (a and c).** Plant 3 did not receive SUPER-GROW, so (c) says nothing about whether the product works.
- **D (c and d).** Neither involves a case where the product was used and could have failed.

Finding no counterexample among these four plants would not prove that the product always works.

Answer: B

Question 6

Camp requires both a permission form and a health check. What must also be true?

Both conditions are necessary. Missing either one means the student cannot have qualified. But having both does not guarantee qualifying, since other requirements could exist.

- **A. Correct.** Missing the health check means one necessary condition is absent, so Liam cannot have qualified.
- **B.** Both conditions are required. Having only one is never enough.
- **C.** The statement says what is necessary, not what is sufficient. Other requirements might still block qualification.
- **D.** The two conditions are independent. Lacking one does not prevent having the other.

Answer: A

Answer key: Q1 A · Q2 B · Q3 C · Q4 D · Q5 B · Q6 A

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