The Swot Shop

Selective Exam Preparation

Year 5 - 6

Sample Lesson with Teacher Instructions

The Swot Shop

This is a sample lesson from the **Selective Exam Preparation Program suited for Year 5 and 6 students.** It includes basic teacher instructions. This lesson runs for 2 hours.

All Swot Shop Programs are developed specifically for bright, gifted and motivated learners.

The Selective Exam Preparation Program is conducted in ability-streamed classes and taught by a qualified and experienced teacher with the assistance of a teaching assistant to provide additional support to individual students.

The program is developed to enrich, enhance and complement the learning that students experience in school settings and provide optimal preparation for the Selective Placement Test.

To learn more please contact us on (02) 9634 2000.

SELECTIVE PREPARATION

Sample Lesson

Alert students to their homework:

VARYING SENTENCE STRUCTURE 2
COMPREHENSION: Frogs
VISUAL THINKING – Cube View
ANGLES – complete all tasks

HOMEWORK REVIEW – Read out and discuss answers. Assistants are to collect homework booklets and mark remaining activities and answer queries on the front of students' booklets.

LOGIC AND DEDUCTION – These questions appear in a different format compared with last week's set. Students should be encouraged to draw diagrams and test the options to assist in arriving at the solution. Discuss and correct in class.

LANGUAGE: *Varying Sentence Structure 1* This is to be completed as a whole class activity with students writing in the responses agreed to by the teacher/class. Alternatives exist and the teacher should pass judgment on their merit. Ensure the students are fully aware that the new sentence must contain all the information provided.

TEST REVIEW: Hand back the tests from last week. Time should be allowed for students to review their errors and ask questions if necessary.

WHICH EXTRACT? – *Sir David Attenborough* These extracts will teach students more about the humanitarian. They should be directed to complete the ones they are confident with and then return and look at the remainder and the options available. Provide answers and discuss evidence found in the extract.

BREAK

SPEED & ACCURACY – Direct the students to turn to this activity. Provide no introduction. All students to begin work on "go" and raise hands when finished. Allow only 2/3 of the class time to complete the activity. Before reading out the answers, revise the meaning of "cube", "prime", "factor", "multiple". No scores are to be recorded. Simply praise those who worked fast with reasonable accuracy.

WRITING TEST: *Review of Adjectives and Adverbs* - Allow a maximum of 20 minutes for the test. Students who may finish early should be encouraged to attempt to improve their answers to Question 5.

VISUAL THINKING – *Shade Cover* – The new Thinking Skills test requires students to be able to manipulate shapes in their heads. For each question they should try mentally to put together the correct combination of shades. Provide answers to this activity.

ANGLES - Before starting this activity have the whole class on their feet following a set of instructions such as "facing front (presumed North), turn clockwise for 135º and state what direction you are now facing" or "Face NE and then turn anticlockwise to face NW; through how many degrees have you turned?" Note that the instructions for Set C of the exercise indicate "smallest angle" to prevent multiple revolutions. Also remind students that it is the size of the angle not its description which is required. As all students finish a section, give the answers. The sheet may be finished for homework if insufficient time remains.

CHALLENGE QUESTIONS – These are aimed at the top students who would like to attempt more difficult questions once a class activity is completed and are waiting to correct and discuss answers. They are not compulsory and the worked solutions will follow each set. Students should not require assistance from the teacher with these.

Logic and Deduction

Answer the following questions using a diagram to organise your information or to test the options.

1. A bag contains red, blue, and green marbles. You know:

   - There are twice as many red marbles as green.
   - There are 5 more blue marbles than red.

   If there are 10 green marbles, how many marbles are there in total?

   a) 25 b) 45 c) 50 d) 55

2. Three boxes weigh a total of 30kg.
   - Box A and Box B together weigh 18kg.
   - Box B and Box C together weigh 22kg.
   - Box A and Box C together weigh 20kg.

   What is the weight of Box B?

   a) 10kg b) 12kg c) 8kg d) 14kg

3. Three sisters – Emily, Nora, and Sophie – have ages that add up to 30.
   - Emily is twice as old as Nora.
   - Sophie is 2 years younger than Emily.

   How old is Nora?

   a) 6 b) 5 c) 4 d) 8

4. A mystery number is:
   - A three-digit number
   - The sum of its digits is 15
   - The hundreds digit is twice the units digit
   - The number is divisible by 9
   - The tens digit is greater than the units digit

   Which of the following is the number?

   a) 396
   b) 531
   c) 723
   d) 468

5. Three boxes — A, B, and C — have unknown weights.
   You are given:
   - Box A and Box B weigh 25kg together.
   - Box B and Box C weigh 30kg together.
   - Box A and Box C weigh 28kg together.
   - The heaviest box is 6kg heavier than the lightest.

   What is the weight of Box B?
   a) 13kg
   b) 14kg
   c) 15kg
   d) 16kg

6. Three siblings — Adam, Beth, and Claire — have ages that add up to 36 years.
   Adam is twice as old as Beth.
   Claire is 4 years younger than the average age of the three.

   How old is Beth?
   a) 6
   b) 8
   c) 9
   d) 10

7. Find the 3-digit number that satisfies all the following:
   The digits add up to 18.
   The hundreds digit is one less than the units digit.
   The tens digit is double the hundreds digit.
   The number is divisible by 3 and 9.

   What is the number?
   a) 693
   b) 582
   c) 351
   d) 864

Varying Sentence Structure 1

Rewrite the sentences using the word(s) in italics. Your answer must be in one sentence. You must not change the meaning of sentence(s) given or omit any details.

1. Ben plays the piano. Mark plays the piano too.

Both _____

2. Tom finished his homework. Then he watched his favourite cartoon.

After _____

3. Emma didn't go to the park. She was feeling unwell.

_____ *because* _____

_____

4. "Please bring your raincoat. It might rain," said Mum to her son.

Mum reminded her son _____

_____

5. He joined the football team last term. He has been attending training sessions.

_____ *since* _____

_____

6. Tommy fed the cat. He also gave it fresh water.

Not only _____

_____

Sir David Attenborough – Comprehension Extracts

Extract A

David Attenborough was born on May 8, 1926, in London, England. He grew up in the city of Leicester with his two brothers. From a young age, David showed a great interest in the natural world. He would spend hours collecting fossils, rocks, and plants. His favourite activity was exploring nearby fields and woods, looking for interesting creatures. By the time he was ten, he had built a small "museum" at home to display his growing collection. He also loved reading books about animals and science and dreamed of one day seeing wild animals in their natural habitats.

Extract B

In 1952, Attenborough joined the BBC and began working in television. At first, he worked behind the scenes, helping to plan and produce educational programmes. A few years later, he began presenting on camera, becoming the face of a new show called *Zoo Quest*. In the series, Attenborough travelled to faraway countries to film animals in the wild. This was a rare and exciting thing at the time, because most people had only seen wild animals in zoos. His calm voice and clear explanations helped viewers learn more about animals and the places they lived.

Extract C

In recent years, Sir David has become one of the world's most important voices speaking out about climate change and the environment. Through speeches, interviews, and television series, he has explained how human activity is harming the Earth. He talks about deforestation, pollution, and the dangers of plastic waste in the oceans. In his documentary *A Life on Our Planet*, he shares what he has seen over his lifetime and warns that nature is disappearing quickly. He says people need to act now to protect the Earth before it's too late.

Extract D

Over his long career, Sir David Attenborough has received many awards and honours, including being knighted by the Queen. He has written several books and made famous documentaries such as *Planet Earth*, *The Blue Planet*, and *Our Planet*. These series show beautiful scenes of wildlife and teach people about nature. Even though he is now in his 90s, Sir David continues to work, travel, and speak about protecting the environment. He inspires young people all over the world to care for nature and make a difference.

Comprehension Questions

1. Which extract tells us most about Attenborough's childhood and early interests? _____
2. Which extract tells us about how he started working in television? _____
3. Which extract shows that he uses his voice to warn about climate change? _____
4. Which extract tells us that Attenborough is still working in his 90s? _____
5. Which extract describes how he first began filming animals in the wild? _____
6. Which extract shows that Attenborough was interested in science and nature books as a boy? _____
7. Which extract mentions his famous documentaries like *Planet Earth* and *Blue Planet*? _____
8. Which extract tells us that he has been knighted and received many awards? _____

SPEED AND ACCURACY

Follow the instructions carefully:

1. Draw a circle around the prime numbers:

12 17 8 3 22 19 6 11 4 9 14 5

---

2. Draw a line under the multiples of 5:

20 13 30 4 55 12 75 2 15 33 40 81

---

3. Draw a cross on top of the cube numbers:

7 8 12 27 36 64 81 100 125 10 5 9

---

4. Draw a square around the composite numbers:

1 2 4 9 11 15 17 18 21 23 25 29

---

5. Draw a line through the factors of 20:

20 13 4 25 3 2 8 1 15 10 6 5

---

6. Place a tick beside the numbers containing the digit 3:

1 34 8 23 42 13 7 53 60 93 28 11

Writing Test: Review of Adjectives and Adverbs

FULL NAME: _____

CLASS: _____(day) _____ (level)

1. Choose the most appropriate adjective from the list below to complete the sentences. Use each word once only.

fleecy, injured, thick, strenuous, jagged, refreshing, dense, deep, invigorating, steep, turbulent, several, waiting

a) _____, _____ clouds of mist filled the

_____ valley.

b) After a _____ game of tennis, David found the shower most

_____ and _____.

c) Standing on the edge of the _____ precipice we were deafened

by the _____ waves which dashed mercilessly against the

_____ rocks.

d) The _____ child had to be carried _____

kilometres through _____ scrub to the _____ plane.

2. Choose the most appropriate adjectives from the list below to complete the sentences. Each word is to be used once only.

public, visiting, elaborate, early, informative, brisk, colourful, spring, great, enjoyable, precious

a) The _____ gardens were most _____, with _____ _____ blossoms.

b) We listened with _____ interest to the _____ lecture given by the _____ scientist.

c) After an _____ meal, we set out for a _____ walk along the shore.

d) Many _____ jewels glistened in the museum's _____ cup.

3. Match each verb or sentence with an appropriate adverb

Choose one adverb from the list above for each sentence or verb phrase. Use each adverb once only.

cautiously, early, skilfully, rarely, neatly, loudly, quickly, often

Verb or Sentence	**Adverb**
writes	_____
drives	_____
gymnast moved	_____
children arrived	_____
dog barked	_____
he answered	_____
they travel abroad	_____
she forgets her keys	_____

4. Match each adverb to the most appropriate verb or action

Match each adverb to the verb or action it best describes. Each verb should only be used once.

speaks, falls, listens, replies, waits, shouts, leaves, cries, surprises, forgets

Adverb	**Verb/Action**	**Adverb**	**Verb/Action**
silently	_____	angrily	_____
gracefully	_____	unexpectedly	_____
immediately	_____	rarely	_____
carelessly	_____	always	_____
gently	_____	patiently	_____

5. Improve this paragraph by adding effective adjectives.

On Sunday afternoon I visited the beach. I saw _____

children building sandcastles with their _____ hands

and _____ families relaxing on towels. The waves crashed

as a _____ dog ran past, wagging its _____ tail.

A group of _____ surfers paddled out into the _____ sea,

while a _____ woman read a book under her _____

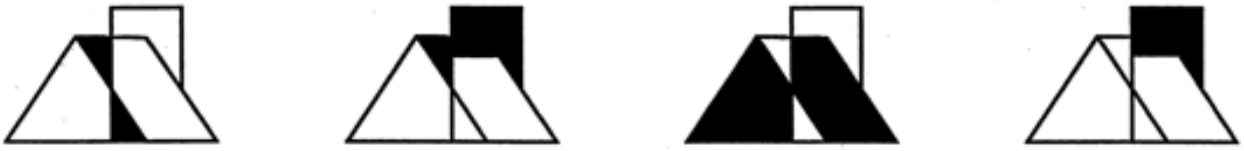
umbrella.

SHADE COVER

Put a ring around the three figures in each problem that, when overlaid, will shade the entire figure with no duplicate shading.

1.

2.



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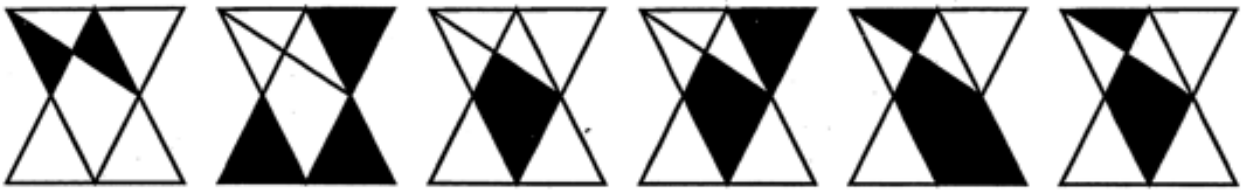

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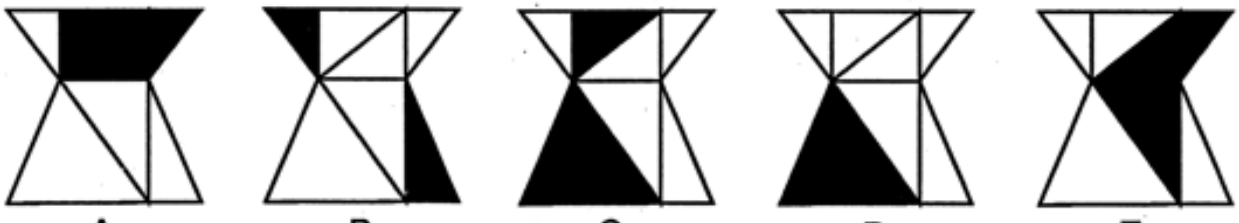

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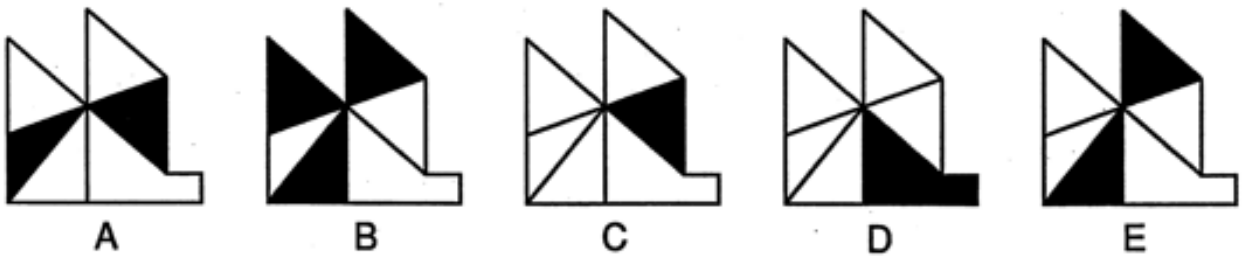
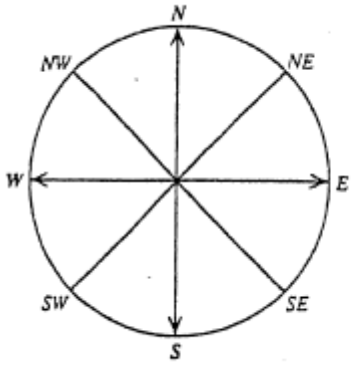
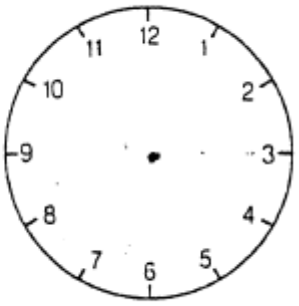


ANGLES





SET A

What is the minimum angle through which I turn if I turn between:

a) East and North
b) South and East
c) North and South
d) West and South-East
e) East and South-West
f) North-East and South-East
g) South and North-West

SET B

In what direction will I be facing if I begin facing:

h) East then turn 90° clockwise
i) North then turn 180° clockwise
j) West then turn 90° anticlockwise
k) South then turn 270° clockwise
l) North then turn 270° anticlockwise
m) South-West then turn 405° anticlockwise

SET C

What is the minimum angle through which I turn if I turn:

a) clockwise from E to S
b) anticlockwise from N to W
c) Clockwise from W to N
d) Anti-clockwise from S to E
e) Clockwise from NE to SW
f) Anti-clockwise from SE to NW
g) Clockwise from NW to E

SET D

Two students begin facing North. Will they end up facing the same or different directions if:

a) One turns 90 degrees clockwise and the other turns 90 degrees anticlockwise
b) One turns 180 degrees clockwise and the other turns 180 degrees anticlockwise
c) One turns 270 degrees clockwise and the other turns 270 degrees anticlockwise
d) One turns 90 degrees clockwise and the other turns 270 degrees anticlockwise
e) One turns 135 degrees clockwise and the other turns 225 degrees anticlockwise
f) One turns 225 degrees clockwise and the other turns 135 degrees anticlockwise
g) One turns 450 degrees clockwise and the other turns 720 degrees anticlockwise

SET E

In what direction will you be facing finally if you begin by facing

a) N, then turn 90° clockwise followed by 45° anticlockwise?
b) S, then turn 180° clockwise followed by 90° anticlockwise?
c) W, then turn 270° clockwise followed by 135° anticlockwise?
d) SE, then turn 225° clockwise followed by 180° anticlockwise?
e) NE, then turn 315° clockwise followed by 540° anticlockwise?
f) SW, then turn 405° clockwise followed by 450° anticlockwise followed by 360° clockwise?
g) N, then turn 450° clockwise followed by 540° anticlockwise followed by 495° clockwise?

SET F

Through what angle has the minute hand of the clock moved between:

a) 3:00 and 3:30
b) 6:00 and 6:45
c) 9:00 and 9:15
d) 2:30 and 5:00
e) 10:00 and 11:30
f) 4:00 and 6:45

SET G

What is the minimum angle between the hands of the clock at

a) 6:00
b) 2:30
c) 4:10
d) 5:20
e) 7:25
f) 8:40
g) 11:50
h) 12:55

Varying Sentence Structure 2

Rewrite the sentences using the word(s) in italics. Your answer must be in one sentence. You must not change the meaning of sentence(s) given or omit any details.

1. Lucy didn't go swimming. The weather was too cold.

_____ *because* _____

_____

2. "Don't forget to feed the dog," said Dad to Ben.

Dad reminded Ben _____

_____

3. Sarah asked Tom, "Did you finish your homework already?"

Sarah asked Tom whether _____

_____

4. Lena enjoys watching cartoons. She enjoys reading books more.

_____ *prefers* _____

_____

5. He lost the wallet. It belonged to his brother.

_____ *which* _____

_____

6. The students are planting trees around the school.

_____ *by the students.*

The Fascinating World of Frogs

Frogs are one of the most diverse and unique groups of animals on Earth, with over 7,000 species found around the world. These amphibians, known for their smooth, slimy skin, can be found in a variety of habitats, ranging from tropical rainforests to temperate woodlands and even arid deserts. Although frogs are often associated with water, some species have adapted to dry conditions and only return to water to breed.

The life cycle of a frog is an extraordinary example of metamorphosis. Starting as tiny eggs laid in water, they hatch into tadpoles, which are fully aquatic. These tadpoles have gills and tails, allowing them to swim efficiently. Over time, they undergo a process called metamorphosis, gradually developing legs, losing their tails, and growing lungs to live on land. This dramatic transformation highlights the incredible adaptability of frogs and their ability to thrive in different environments.

Frogs also play a crucial role in ecosystems. They are both predators and prey, controlling insect populations by feeding on mosquitoes, flies, and other pests. In turn, they provide food for many larger animals, including birds, snakes, and even larger mammals. Unfortunately, frog populations are facing numerous threats, including habitat destruction, pollution, and climate change. Many species are now endangered or even extinct due to these pressures, which underscores the importance of protecting the natural habitats that sustain them.

Despite these challenges, frogs are incredibly resilient creatures. Some species can survive in extreme environments, such as the high-altitude Andes or the dry deserts of Africa. Their ability to adapt to different climates and habitats is a testament to their evolutionary success. However, their reliance on both aquatic and terrestrial environments makes them highly sensitive to changes in their ecosystems, which is why they are often considered indicators of the health of the environment.

Frogs' fascinating biology and vital role in ecosystems make them essential to the health of the planet. As we continue to learn more about these remarkable creatures, it's crucial to recognise the importance of protecting them and their habitats to ensure the balance of nature remains intact for future generations.

1. What is the main difference between a tadpole and an adult frog?
   a) Tadpoles have legs and lungs, while adult frogs have gills and tails.
   b) Tadpoles live on land, while adult frogs live in water.
   c) Tadpoles have gills and tails, while adult frogs develop legs and lungs.
   d) Tadpoles are fully terrestrial, while adult frogs are fully aquatic.

2. Why are frogs considered important to ecosystems?
   a) They are only important because they eat insects.
   b) They control insect populations and provide food for larger animals.
   c) They pollinate flowers and produce oxygen.
   d) They only act as prey and have no significant role as predators.

3. How have frogs adapted to different environments?
   a) Frogs cannot live in dry climates and only thrive in wet conditions.
   b) Some frogs have evolved to live on land and return to water only to breed.
   c) All frogs are confined to tropical rainforests.
   d) Frogs have no special adaptations to different environments.

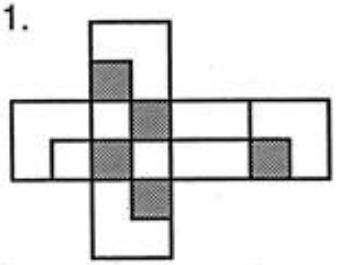
4. What are the main threats to frog populations mentioned in the passage?
   a) Overpopulation and hunting.
   b) Habitat destruction, pollution, and climate change.
   c) Natural predators and disease.
   d) The introduction of new species into their habitats.

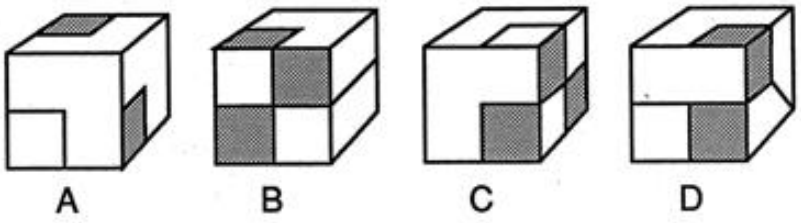
5. Do you think protecting frogs' natural habitats is essential for maintaining biodiversity?
   a) No, frogs are not important to biodiversity.
   b) Yes, because frogs play a crucial role in controlling insect populations and serve as food for other animals.
   c) No, frogs can adapt to any environment, and their habitats don't matter.
   d) Yes, but only because they are interesting to study in science.

CUBE VIEW

If the flat pattern on the left is folded, which cubes does it form? Draw a ring around the cubes made from the folded pattern in the four sections below.

1.





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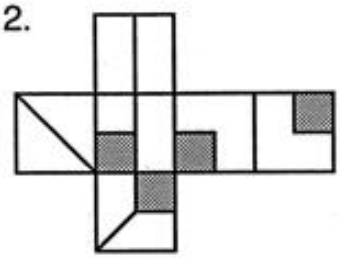

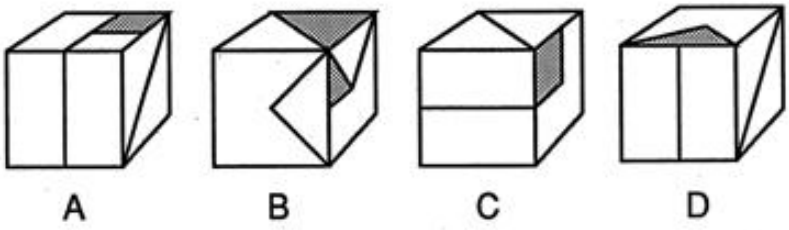

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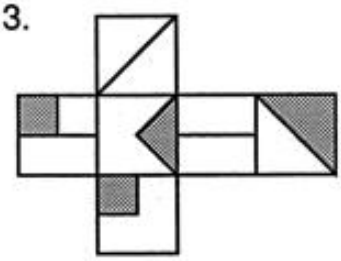

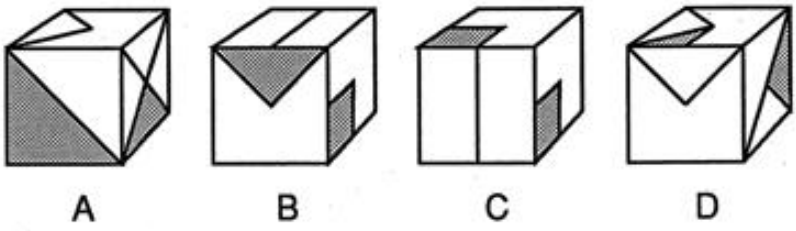

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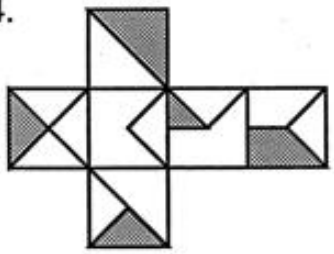

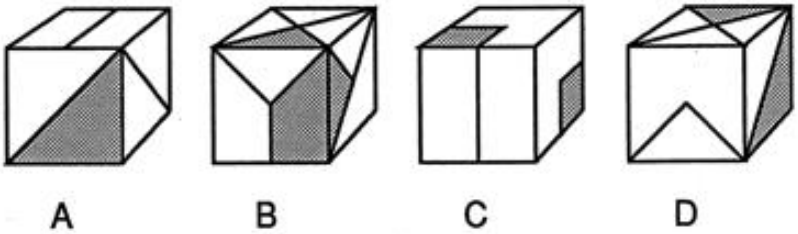

Challenge Questions

LOGIC AND DEDUCTION

Answer the following questions using a diagram to organise your information or to test the options.

1. Three boxes of flour, rice and cans have weights in kg.

- the flour and rice boxes together weigh 4.5kg
- the boxes of rice and cans together weigh 5.0kg
- the flour and cans boxes together weigh 4.7kg
- the difference between the heaviest and lightest box is half a kilogram.

What is the weight of the box of rice?
a) 2.2kg b) 2.3kg c) 2.4kg d) 2.5kg

2. Find a 3-digit number that satisfies:

- The sum of its digits is 16
- The hundreds digit is 1 more than the tens digit
- The units digit is half of the tens digit
- The number is divisible by 7

What is the number?
a) 871 b) 984 c) 420 d) 763

ANGLES

Through what angle has the **hour** hand of the clock moved (of the same day) between:

a) 3:00am and 3:30am
b) 6:00am and 6:45am
c) 9:00pm and 9:15pm
d) 2:30am and 5:00pm
e) 10:00am and 11:30pm
f) 4:00am and 6:45pm