



# PAPER A

Practice  
Questions



ICAS International Competitions and Assessments for Schools

**DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.**

**STUDENT'S NAME:**

Read the instructions on the **ANSWER SHEET** and fill in your **NAME, SCHOOL** and **OTHER INFORMATION**.  
Use a 2B or B pencil.  
Do **NOT** use a pen.  
Rub out any mistakes completely.

You **MUST** record your answers on the **ANSWER SHEET**.

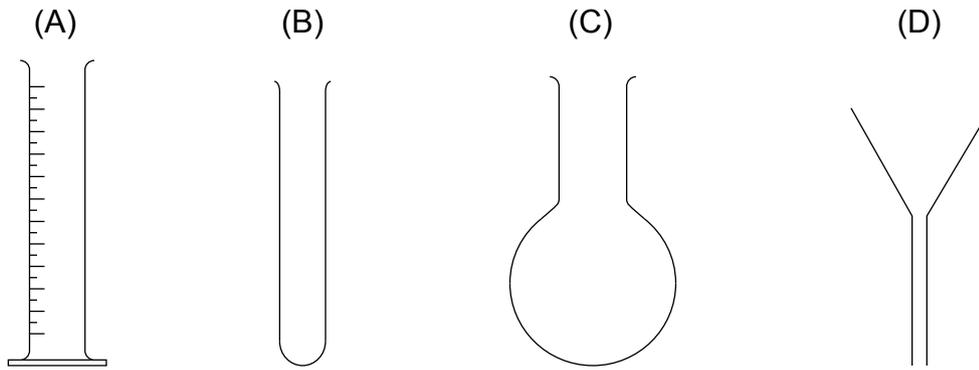
## SCIENCE

Mark only **ONE** answer for each question.  
Your score will be the number of correct answers.  
Marks are **NOT** deducted for incorrect answers.

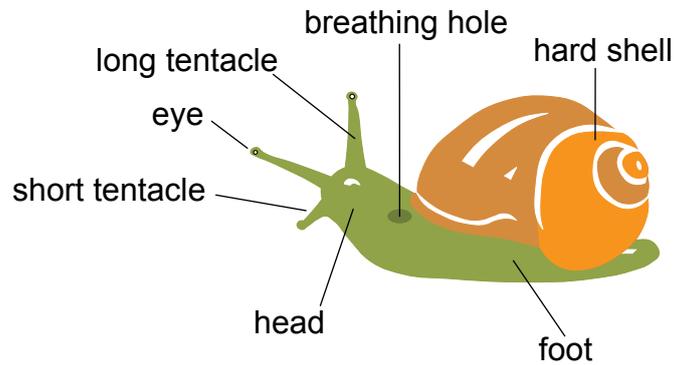
Use the information provided to choose the **BEST** answer from the four possible options.  
On your **ANSWER SHEET** fill in the oval that matches your answer.

You may use a calculator and a ruler.

1. Which glass object shown would be the best to measure an amount of water?



2. The drawing shows the body parts of a snail.

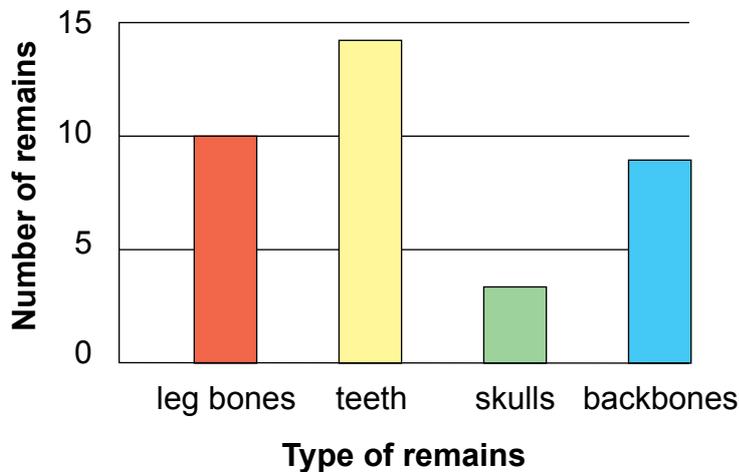


To which part of the snail's body is an eye attached?

- (A) breathing hole
- (B) hard shell
- (C) long tentacle
- (D) short tentacle

3. Scientists found the remains of some animals in a cave.

The graph shows the number and type of the remains.



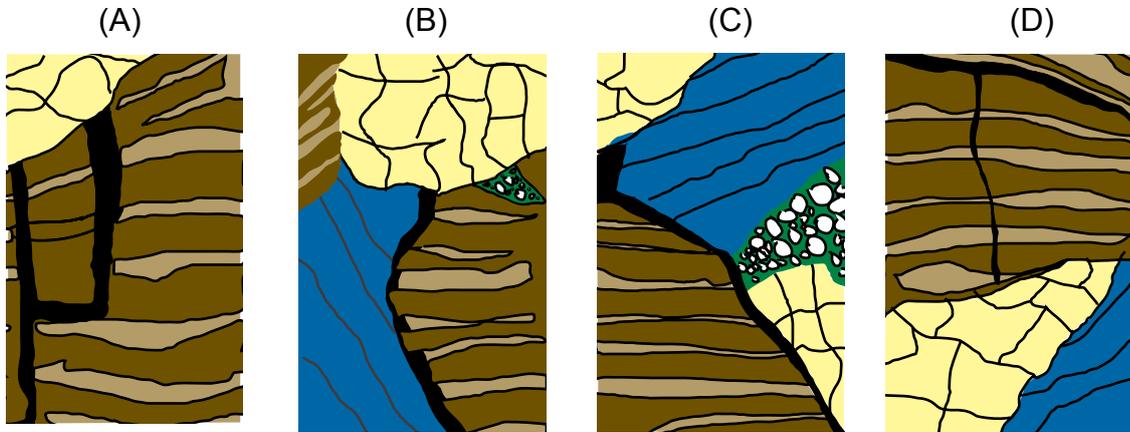
How many backbones were found?

- (A) 3
- (B) 6
- (C) 9
- (D) 10

4. Rocks are made up of one or more different minerals. The block below contains three different minerals.



From which of these large sections of rock was the block cut?

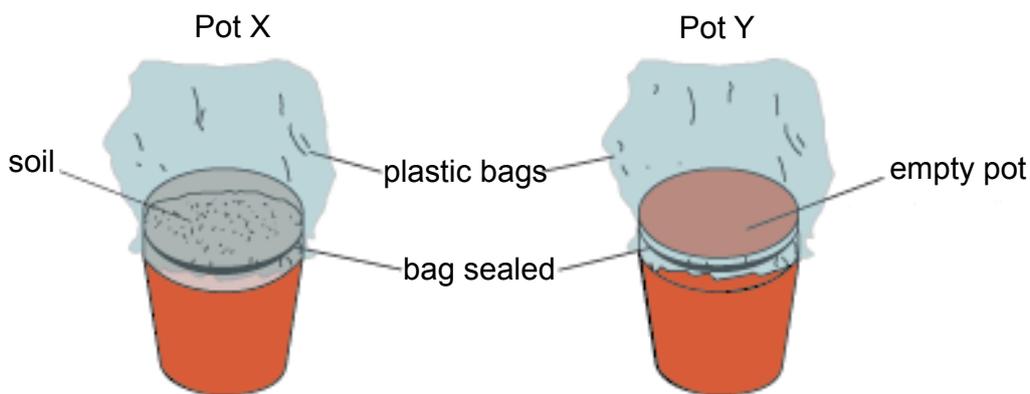
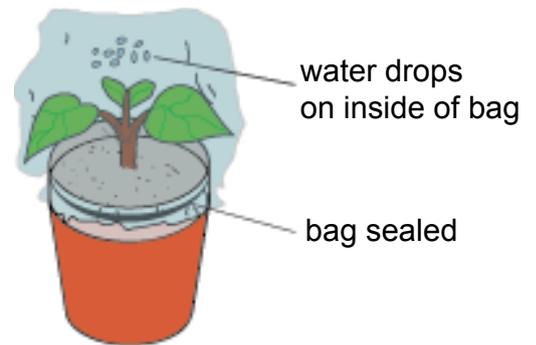


5. Some Year 3 students saw their teacher put a plastic bag over some leaves of a plant on a sunny day. One day later, they saw drops of water on the inside of the plastic bag.

The teacher explained that the water had come from the leaves of the plant.

The students thought this method might also work to find out if soil has water in it.

They set up the pots below and put them in a sunny place.



Their method of testing for water in soil worked positively.

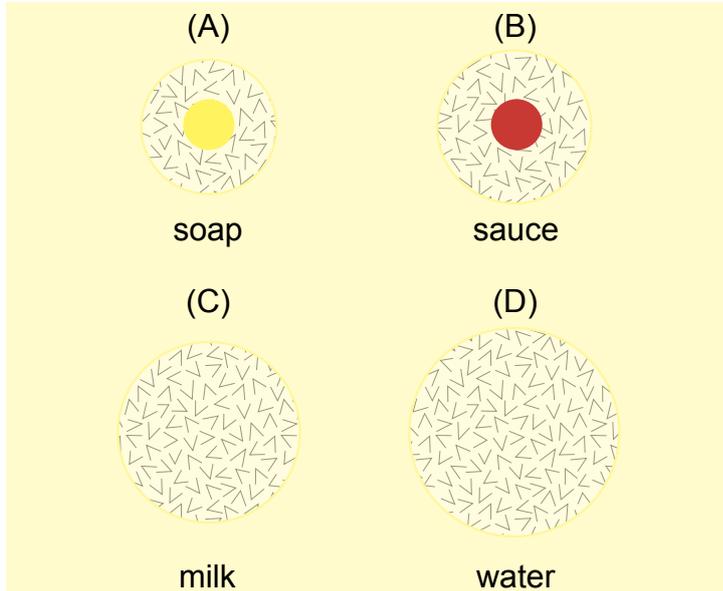
What must the students have observed in the experiment?

- (A) Water formed on the inside of the plastic bag over pot X only.
- (B) Water formed on the inside of the plastic bag over pot Y only.
- (C) Water formed on the inside of neither plastic bag.

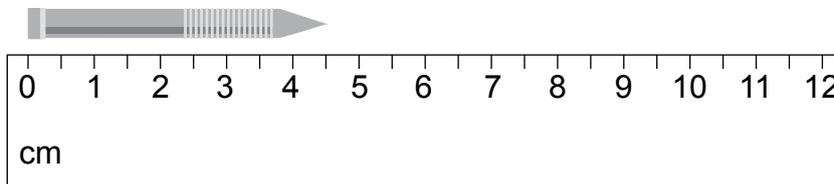
6. Liquids that spread quickly through a paper towel are absorbed better than those that spread more slowly.

Some children put one measured drop of four different liquids on a piece of paper towel. The drawing shows their results after one minute.

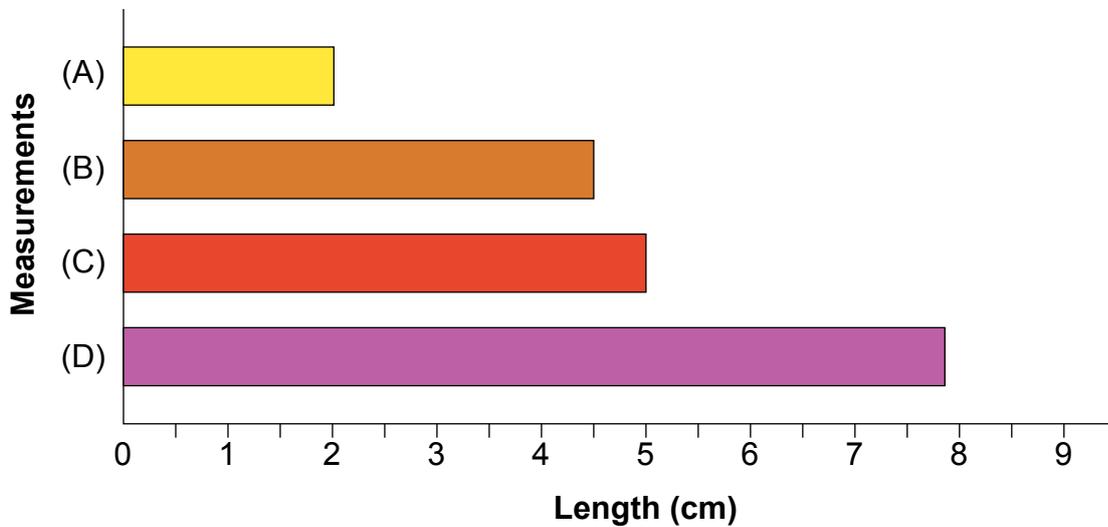
Which liquid was best absorbed by the paper towel?



7. Rick measured a nail as shown in the diagram.



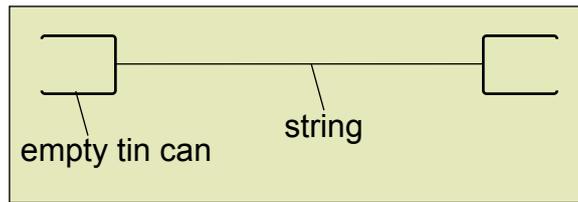
Which bar on the graph represents Rick's measurement?



For questions 8 and 9 use the information below.

Some students made phones from a ball of string and empty tin cans as shown.

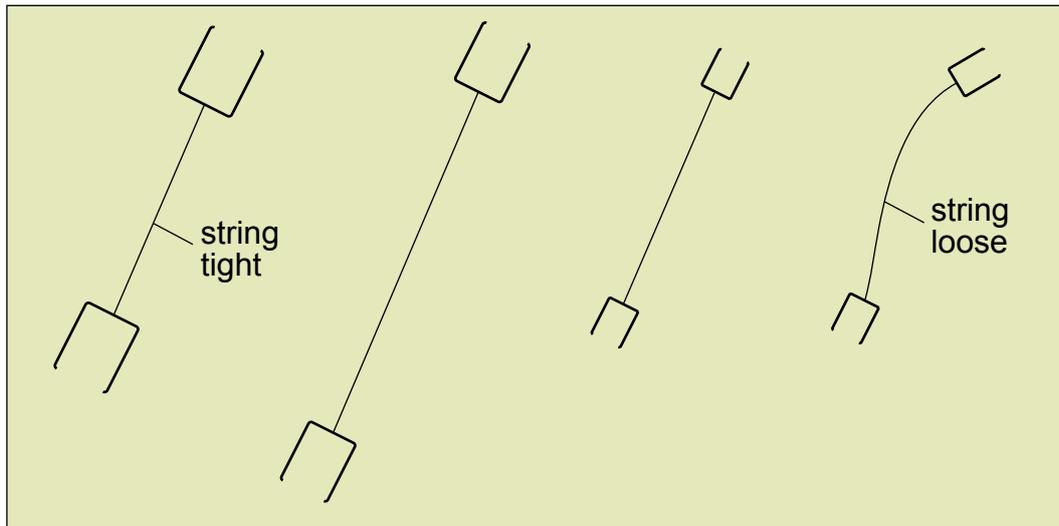
One student listened with her ear against this end.



One student spoke with her mouth against this end.

They tested which string phone worked best by comparing the loudness of the voice heard at the listening end. They showed the phones in order from best phone to worst phone.

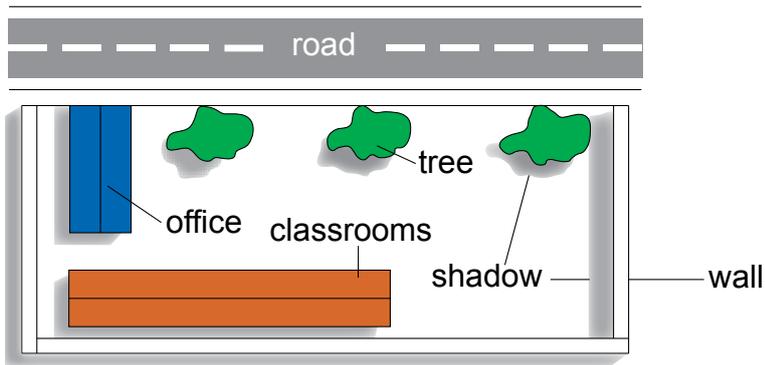
best phone ← → worst phone



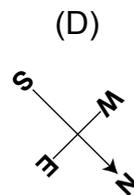
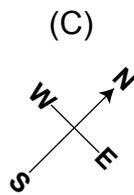
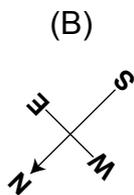
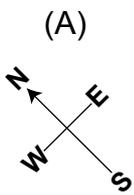
8. Which description matches the best string phone?
- (A) short, loose string with small cans
  - (B) short, tight string with large cans
  - (C) long, tight string with large cans
  - (D) short, tight string with small cans
9. Which condition was necessary to make this a fair test?
- (A) the tin cans were all the same size
  - (B) the strings between the cans were kept tight
  - (C) the strings between the cans were kept the same length
  - (D) the same student listened and the same student spoke on each phone

10. The Sun rises in the east and sets in the west.

The drawing shows a view from above of a schoolyard early in the morning.



Which pointer is correctly showing north for this view of the schoolyard?



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Hong Kong	Primary 3
Indonesia	Year 4
Malaysia	Standard 3
New Zealand	Year 4
Pacific	Year 3
Singapore	Primary 2
South Africa	Grade 3



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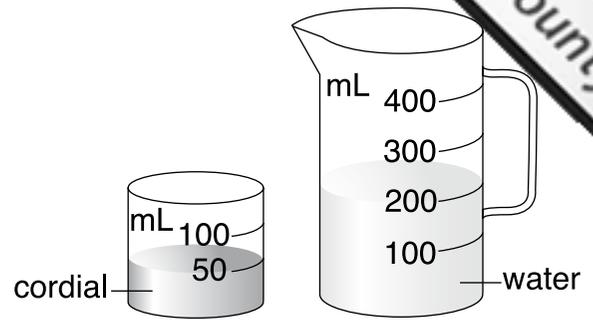
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TO ANSWER THE QUESTIONS

**Example:** Ari added cordial to water to make a jug of drink.  
What will be the volume of the drink in the jug?

- (A) 50 mL
- (B) 150 mL
- (C) 200 mL
- (D) 250 mL



The answer is 250 mL, so you would fill in the oval , as shown.

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



START

- 1  (A)  (B)  (C)  (D)
- 2  (A)  (B)  (C)  (D)
- 3  (A)  (B)  (C)  (D)
- 4  (A)  (B)  (C)  (D)
- 5  (A)  (B)  (C)  (D)
- 6  (A)  (B)  (C)  (D)
- 7  (A)  (B)  (C)  (D)
- 8  (A)  (B)  (C)  (D)
- 9  (A)  (B)  (C)  (D)
- 10  (A)  (B)  (C)  (D)

QUESTION	KEY	KEY REASONING	LEVEL OF DIFFICULTY
1	A	Four glass objects are shown: a measuring cylinder, a test tube, a round bottom flask and a funnel. Graduations (marks), which are only on the measuring cylinder, allow different amounts of water to be measured accurately.	Easy
2	C	Observe the diagram carefully: the eyes are at the end of the long tentacles.	Easy
3	C	The column (bar) graph that represents the number of backbones is a little under 10, so (C) is the best answer.	Easy
4	D	Options B, C and D all contain the three coloured minerals showing in the block, but only option (D) has the black line crossing the layers of the brown mineral and the three minerals in the correct sequence.	Medium
5	A	The teacher explained that when a plastic bag was placed over a plant, the water that formed on the inside of the plastic bag had come from the plant. For the test to show that water came from the soil in the same manner, the water must form inside the plastic bag over the pot with soil in it (pot X), and water must not form inside the plastic bag over the pot with no soil in it (pot Y).	Medium
6	D	As all drops were the same measured size, the fastest spreading liquid would wet the biggest area of paper. This would be the liquid that was best absorbed by the paper. Water has the biggest wet area.	Medium
7	B	Note that there are two scales, one for the nail and another for the graph. The nail is 4.5 cm long. The end of column A is in line with the end of the nail but the graph scale indicates that the column is only 2 cm long, and so column A is wrong. Column C is 5 cm long and column D is almost 8 cm long, so they are both wrong.	Medium
8	B	There are four string phones. From the diagram, the far left phone is the best phone. It is short, it has a tight string and large cans.	Medium/Hard
9	D	The students tested which phone worked best by changing the length of the string, the tightness of the string and the size of the cans. Options A, B and C describe the variables that the student changed in the test(s). Option D describes the variable that needed to stay the same.	Medium/Hard
10	A	As the shadows of the trees, buildings and walls are toward the bottom left hand corner, the Sun must be toward the top right hand corner. As this is early morning and the Sun rises in the east, the top right hand corner must be east.	Hard

## LEGEND

Level of difficulty refers to the expected level of difficulty for the question.

<b>Easy</b>	more than 70% of candidates will choose the correct option.
<b>Medium</b>	about 50–70% of candidates will choose the correct option.
<b>Medium/Hard</b>	about 30–50% of candidates will choose the correct option.
<b>Hard</b>	less than 30% of candidates will choose the correct option.