UNSW Global
THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY • AUSTRALIA

PAPER B

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

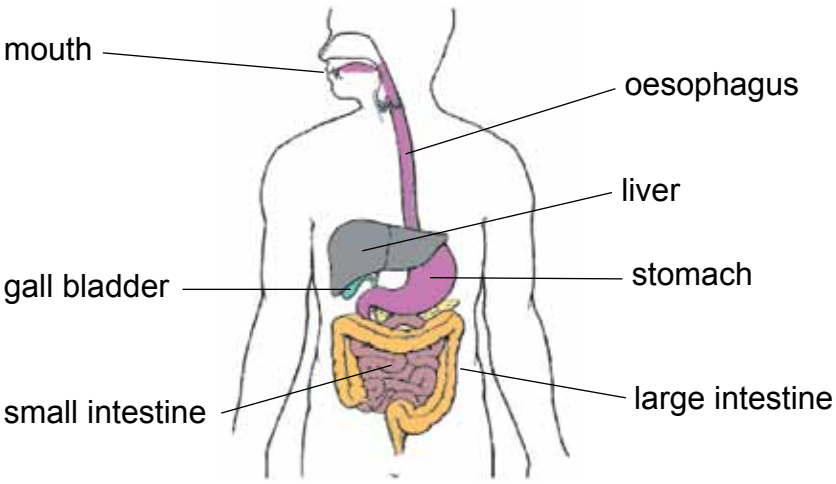
Mark only **ONE** answer for each question.
Your score will be the number of correct answers.
Marks are **NOT** deducted for incorrect answers.

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.

Educational Assessment

1. The drawing shows some parts of the human digestive system.

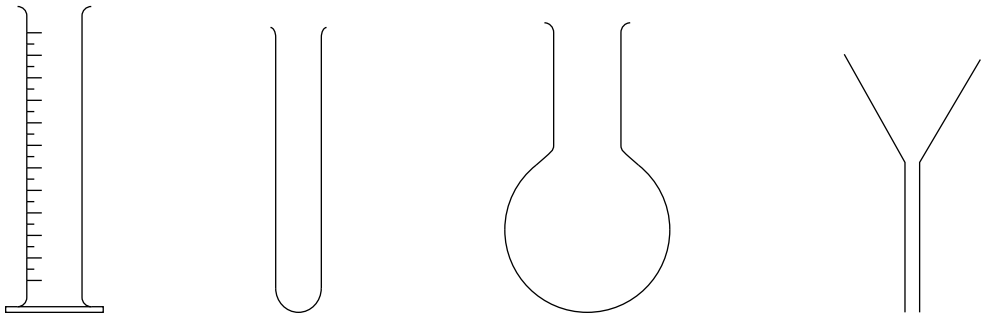


What does food pass through on its way from the mouth to the stomach?

(A) gall bladder
(B) large intestine
(C) oesophagus
(D) small intestine

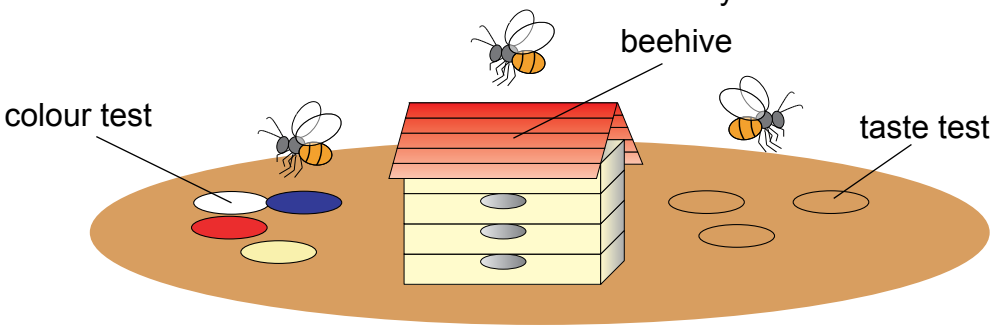
2. Which glass object shown would be the best to measure an amount of water?

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



For questions 3 and 4 use the information below.

Some students wanted to know what attracts honeybees to flowers.



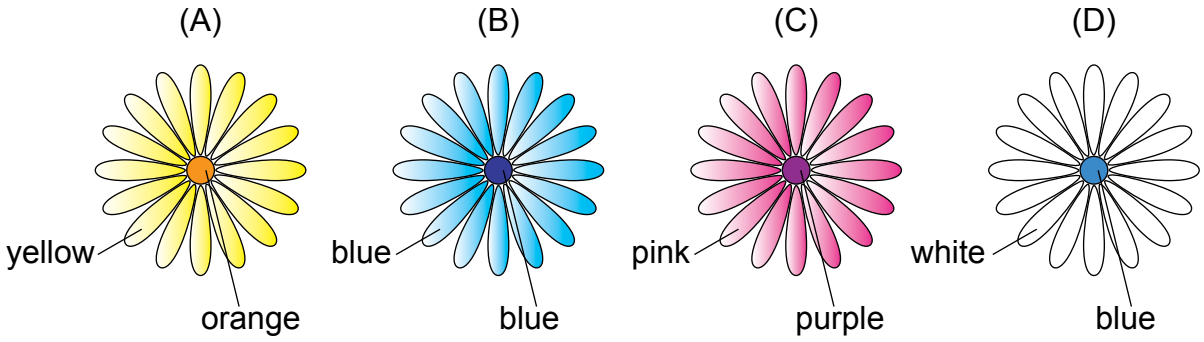
The students placed circles of coloured paper and circles of brown paper soaked in different solutions (salty, sweet and sour) around a beehive. All the circles were the same size. The number of bees that visited each paper circle is shown in the table.

Type of paper	Number of bees attracted
blue	80
green	10
orange	7
pink	8
purple	75
red	6
white	120
yellow	50
salty (salt and water)	2
sweet (sugar and water)	12
sour (lemon juice)	5

3. What could the children conclude from their experiment? The honey bees were mainly attracted to an object by its

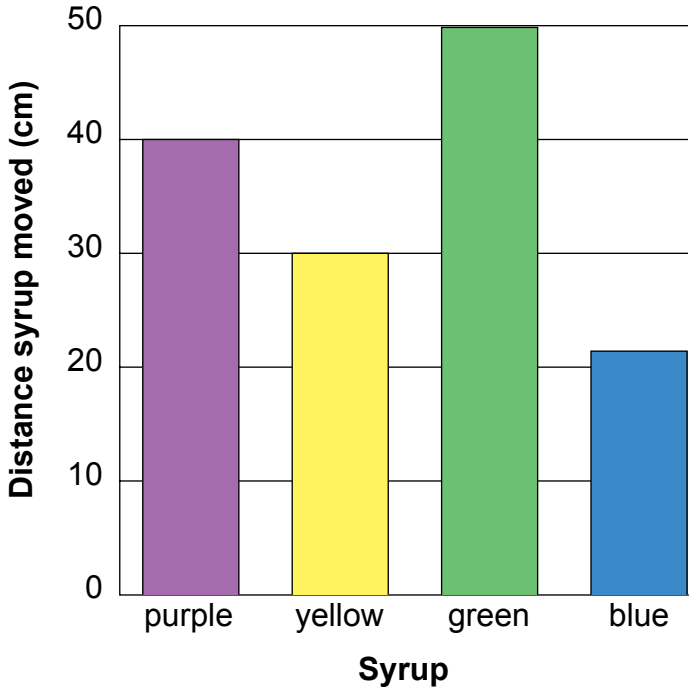
(A) smell. (B) colour. (C) shape. (D) taste.

4. Which flower would be likely to attract the most bees?



5. Syrups are thick, sticky liquids. The thicker the syrup, the slower it will mo slope.

The graph shows the distance 4 different syrups moved down a slope in one mi



Which syrup is the thickest?

(A) blue
(B) green
(C) yellow
(D) purple

6. The table shows the weather and type of birds seen in the school playgrou one week.

Day	Weather				Cockatoos visit	Seagulls visit
	Hot	Cold	Windy	Calm		
Monday	✔			✔	✔	
Tuesday	✔		✔			✔
Wednesday	✔		✔			✔
Thursday		✔		✔	✔	
Friday		✔	✔			✔

Cockatoos are most likely to visit the school playground on a day that is

(A) hot. (B) cold. (C) windy. (D) calm.

7. An ant is shown at its actual size and as it appeared through a magnifying glass.

How many times larger did the ant appear through the magnifying glass?

(A) half as large
(B) one and a half times as large
(C) twice as large
(D) two and a half times as large

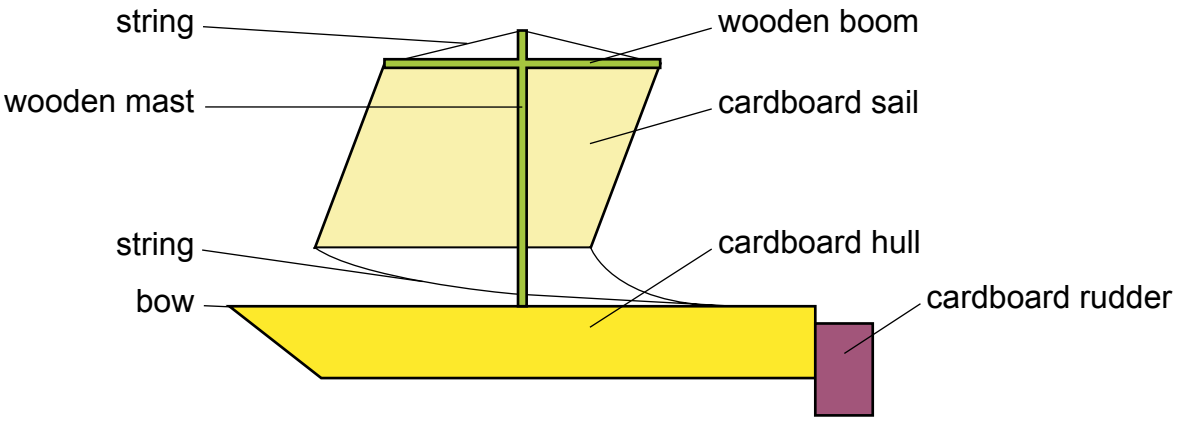
magnified ant

actual size ant

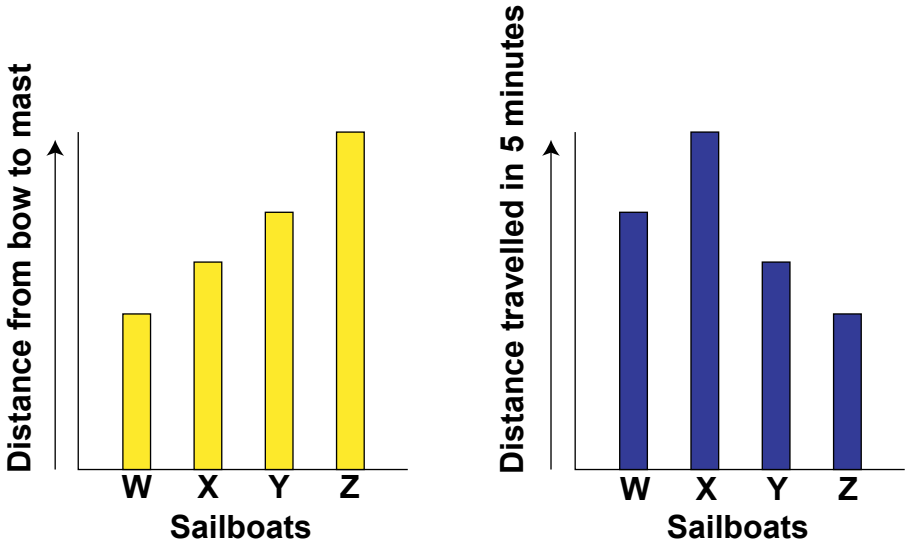
For questions 8 and 9 use the information below.

Some students wanted to know what effect the position of the mast had on the s
sailboat.

They made four model sailboats (W, X, Y and Z) using the design shown. The sailboats were the same except for the positions of their masts. Each mast was placed a different distance from the bow.



The graphs show the distances from the bow to the mast for each of the boats and the distances each boat travelled in 5 minutes.



8. Which sailboat was the slowest?

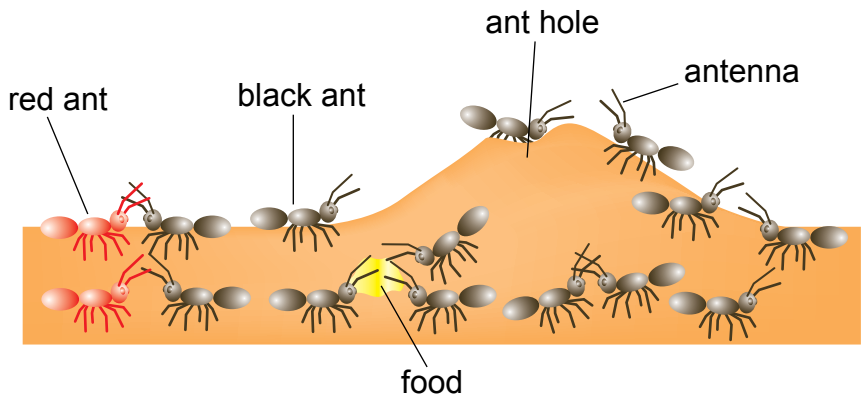
(A) W (B) X (C) Y (D) Z

9. The students' test of the effects of mast position on boat speed was a fair one.

What must the students have done to ensure the test was fair?

(A) make all the sails the same size
(B) make sails from different types of cardboard
(C) put the mast the same distance from the bow in each boat
(D) put the wooden boom at the bottom of the sail in boats X and Y

10. The picture shows what students observed as they watched a colony of bl



The students thought that the ants used their antennas to identify:

1. colony ants and other ants
2. the trail they followed to their hole
3. food

Which idea(s) listed above are supported by the observations the students made?

(A) 1 only
(B) 1 and 2 only
(C) 1 and 3 only
(D) 3 only

Acknowledgment

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The following year levels should sit THIS Paper:

Australia	Year 4
Brunei	Primary 4
Hong Kong	Primary 4
Indonesia	Year 5
Malaysia	Standard 4
New Zealand	Year 5
Pacific	Year 4
Singapore	Primary 3
South Africa	Grade 4

PAPER **B**

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PAPER **B** | **SC**

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HOW TO FILL OUT THIS SHEET:

USE 2B OR B PENCIL

- Rub out all mistakes completely.
- Print your details clearly in the boxes provided.
- Make sure you fill in only one oval in each column.

EXAMPLE 1: Debbie Bach

FIRST NAME	LAST NAME
DEBBIE	BACH

EXAMPLE 2: Chan Ai Beng

FIRST NAME	LAST NAME
CHAN	AI BENG

EXAMPLE 3: Jamal bin Abas

FIRST NAME	LAST NAME
JAMAL BIN	ABAS

FIRST NAME to appear on certificate

LAST NAME to appear on certificate

Are you male or female?

○ Male ○ Female

Does anyone in your home usually speak a language other than English?

○ Yes ○ No

School name: _____

DATE OF BIRTH

Day	Month	Year
0 1 2 3	0 1	0 1 2 3 4 5 6

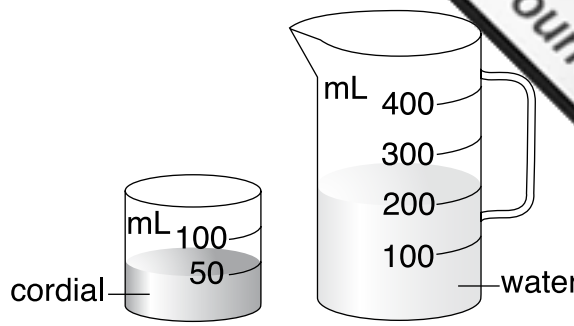
CLASS (optional)

A B C D E F G H I J K L M N O P Q

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 (D),
as shown.

(A) (B) (C) ●

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)

PAPER

QUESTION	KEY	KEY REASONING	EL OF CULTY
1	C	The upper part of the human digestive tract is made up of the mouth, oesophagus and stomach. The gall bladder, large intestine and small intestine make up the lower part of the digestive tract, hence, A, B and D are wrong. The oesophagus is between the mouth and the stomach.	Easy
2	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
3	B	Most bees visited white (120), then blue (80), then purple (75) and then yellow (50) paper. The most visited taste was sweet (12) and then sour (5). All the objects were the same shape, so C is wrong. There is no information about smell, therefore, the children cannot conclude that honey bees were attracted to an object by its smell, so A is wrong. Only a small number of bees visited circles with taste, so D is wrong.	Easy
4	D	Most bees visited the colour white, with blue the second most visited colour. A white and blue flower is likely to attract the most bees, based on this evidence.	Easy
5	A	The thickest syrup would be the slowest to move down a slope. This means that the thickest syrup would travel the least distance in one minute down the same slope. From the column (bar) graph, the blue syrup travelled the smallest distance, so the thickest syrup is the blue. The least thick (runniest) syrup would travel the fastest down the slope, and so in one minute would travel the greatest distance down the slope, so B (green) is incorrect.	Medium
6	D	The ticks in the table show some of the weather conditions and the type of bird visiting the playground during one week. The cockatoos visited when it was hot and calm, and when it was cold and calm, but not when it was windy. Therefore they were most likely to visit when it was calm.	Medium
7	C	The length of the magnified ant's body is about 12 mm while its actual length is about 6 mm. This makes the magnified ant $\left(\frac{12}{6} = 2\right)$ twice as large. (Note that when printing out these questions, some printers may distort the size of the image.)	Medium
8	D	The speed of the boats is determined by the distance they travelled in 5 minutes, so we must use the second (blue) graph. The slowest boat travelled the smallest distance in 5 minutes, so the correct answer is D.	Medium
9	A	To test the effect of the position of the mast on the boat speed we must change the position of the mast, so answer C is wrong. For the test to be fair all other things must be kept the same, so answers B and D are wrong.	Medium
10	C	An observation is something we detect with one (or more) of our senses, e.g. sight. We can observe two black ants with their antenna touching and one black with one red ant with their antenna touching, so idea 1 is supported. This makes answer D wrong. We can observe three black ants around a piece of food touching it with their antennas, so idea 3 is supported. This makes answer A wrong	Medium/Hard

LEGEND

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

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