1. Look at the pictures below.



A - Mushroom



B - Hydrilla

Which is the correct description of organisms A and B?

	A	B
1.	Can make its own food	Cannot make its own food
2.	Flowering	Non-flowering
3.	Has spores	Does not have spores
4.	Poisonous	Poisonous

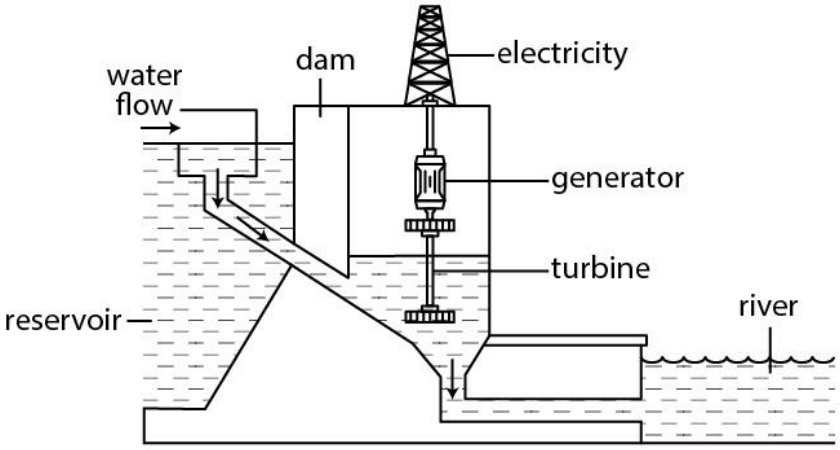
2. Study the classification table below.

Ground	Plants	Animals	Man - made
Rubber	Cotton	Leather	Ceramic
Sand	Silk	Wool	Plastic

Which of the materials is/are incorrectly classified?

1. Rubber only
2. Silk and plastic only
3. Rubber and silk only
4. Rubber, sand and ceramic only

3. The diagram below shows a hydroelectric power plant.



Which of the following statements about the power plant is/are true?

A: Fuels are needed to boil water to turn the turbine.

B: It causes air pollution when electricity is generated.

C: Gravitational potential energy of the water is converted to kinetic energy when water is released from the reservoir.

1. C only
2. A and B only
3. A and C only
4. B and C only

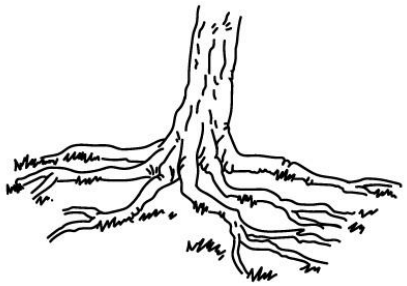
4. Paul grouped some organisms according to two environment (Factor X and Factor Y) that he observed during the day at different habitats.

		Factor X	
Factor Y		Low	High
	Low	Organism P	Organism Q
	High	Organism R	Organism S

If Organism Q is a cactus or a camel, what are the two environmental factors?

	Factor X	Factor Y
1.	Temperature	Amount of light
2.	Temperature	Amount of water
3.	Amount of light	Amount of soil
4.	Amount of water	Temperature

5. During a hike, James tripped over some roots of a tree as shown in the diagram below.



Which of the following explains why roots of some trees grow sideways?

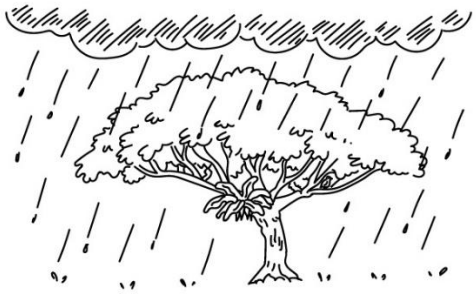
A : To look for more water and mineral salts.

B : To provide better anchorage for the tree.

C : To take in more sunlight to carry out photosynthesis.

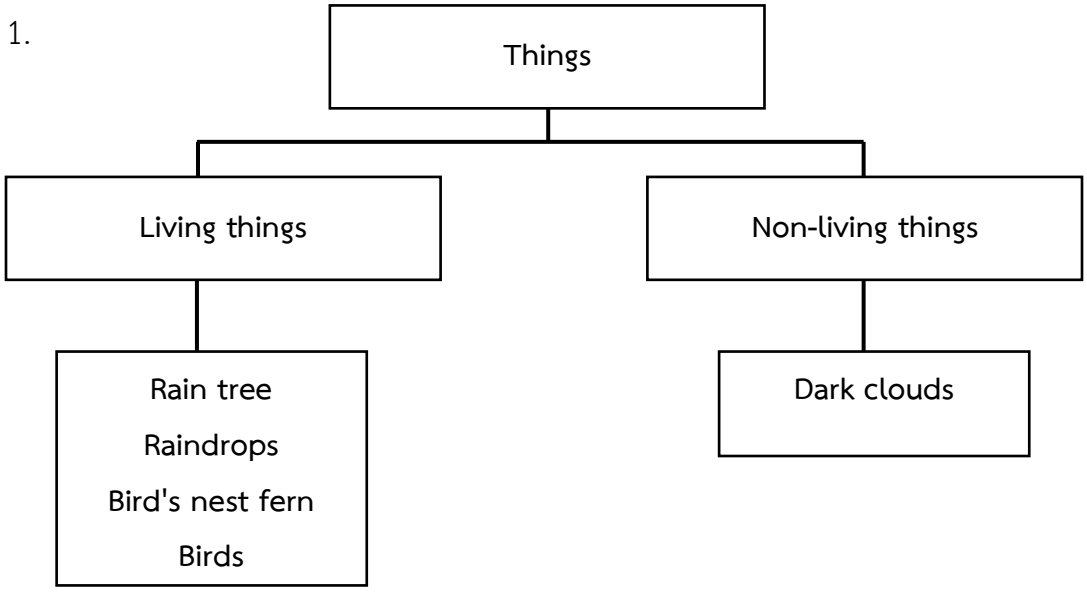
1. A only
2. A and B only
3. A and C only
4. A, B and C

6. Study the diagram below.

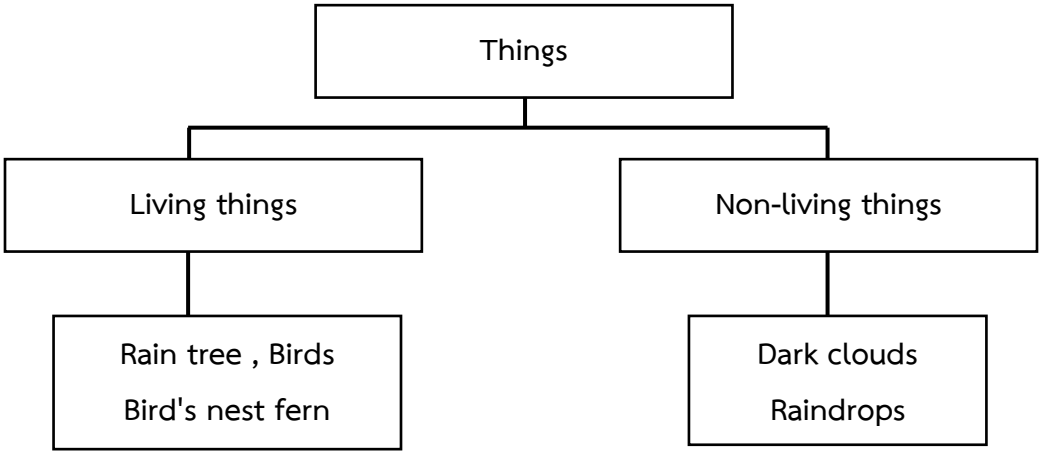


Which of the following charts below correctly classifies the things in the diagram above?

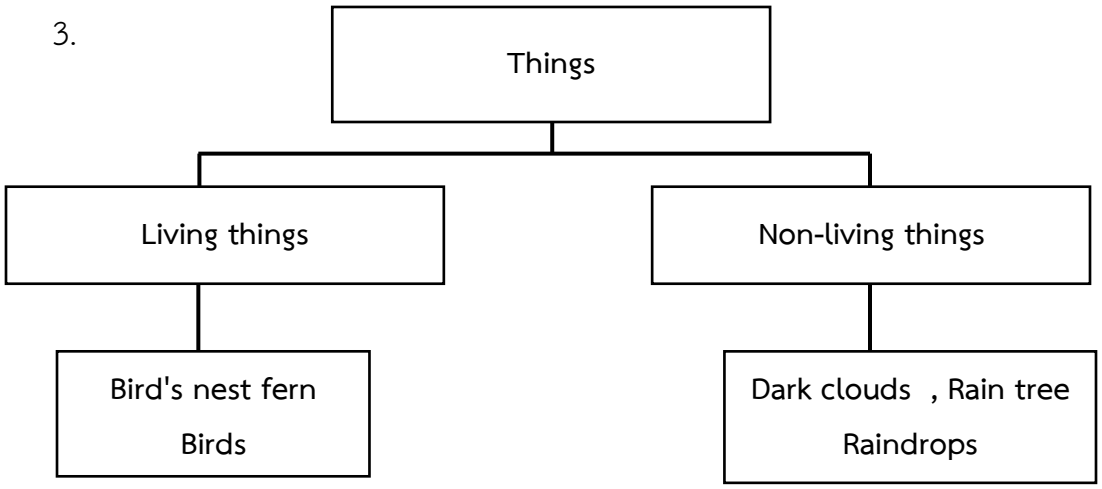
1.



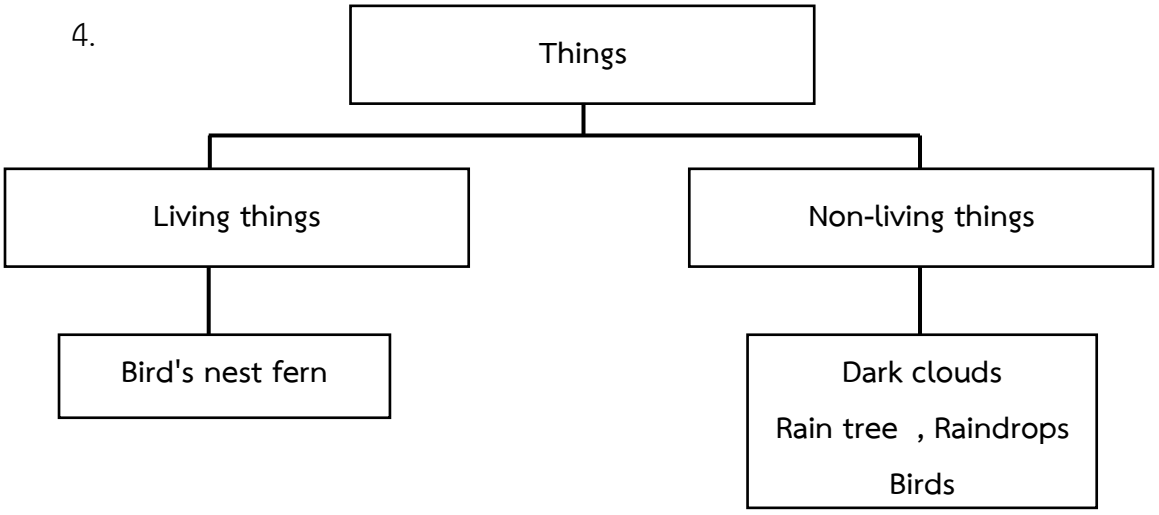
2.



3.


Things
Living things
Non-living things
Bird's nest fern
Birds
Dark clouds , Rain tree
Raindrops

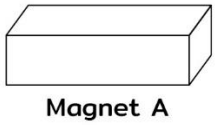
4.


Things
Living things
Non-living things
Bird's nest fern
Dark clouds
Rain tree , Raindrops
Birds

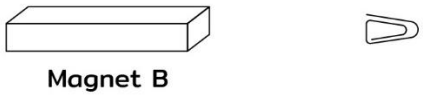
7. Which one of the following gases is wrongly described?

	Gas	Description
1.	Nitrogen	Bacteria in the soil can change this gas into a form useful for plants.
2.	Carbon dioxide	This gas does not support burning.
3.	Water vapour	This gas makes up four-fifths of the air.
4.	Oxygen	Our body can use this gas to break down food and produce energy.

8. The diagrams below show how near to the magnets A and B a steel paper clip must be placed for it to be attracted.



Magnet A



Magnet B

The experiment above can be used to _____.

1. compare the strengths of magnets
2. find out if steel is a magnetic material
3. prove whether a magnet is permanent
4. confirm which pole of a magnet is facing the paper clip

9. A swimmer in a race started before the starting signal. She was called back by a loud, low-pitched sound from a loudspeaker positioned just at water level.
Which statement about the sound is true?

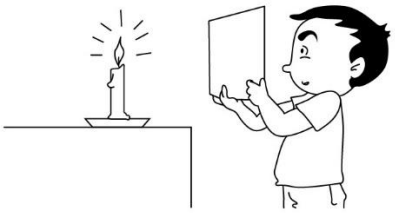
1. The swimmer could hear the sound in air but not in water
2. The time taken by sound to travel through water is longer than that through air.
3. The time taken by sound to travel through water is shorter than that through air.
4. The time taken by sound to travel through water is the same as that through air

10. A fluorescent lamp is a broad source of light. Which of the following statements about the fluorescent lamp are correct?

A. Forms umbra and penumbra when an object blocks the path of light
B. Forms umbra only when an object blocks the path of light
C. Normally used in offices
D. Normally used in lasers

1. A and C only
2. A and D only
3. B and C only
4. B and D only

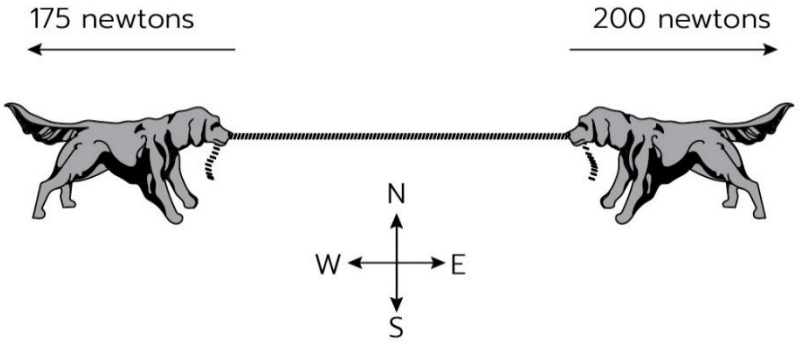
11. Ninja looked at a candle flame through sheets of different materials. The diagram below shows what he did.



Which question Ninja was most likely to be exploring?

1. Which material gives off the most light?
2. Which material produces the clearest reflection?
3. Which material can produce the longest shadow?
4. Which material allows most light to pass through?

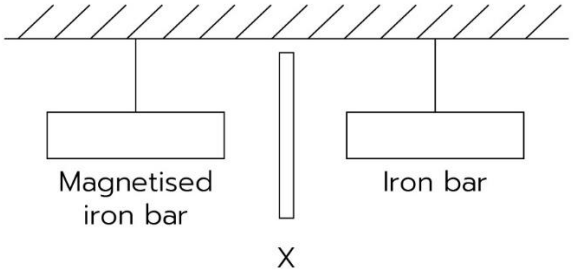
12. The diagram below shows two dogs pulling on a rope with constant but unequal forces.



In which compass direction will both dogs most likely move?

1. east
2. west
3. north
4. South

13. Study the diagram below. When a thin sheet made of material X was placed between two bars, the magnetized iron bar was attracted to material X but the iron bar was not.



Which of the following statements is/are correct about material X based on the diagram above?

A. Material X is a magnet.
B. Material X may be made of steel.
C. Material X is a ferromagnetic material.
D. Material X is a non-magnetic material.

1. A only
2. B and C only
3. A, B and C only
4. A, B and D only

14. Which of the following can be the consequences of the factory emissions?

A: Air pollution
B: Global warming
C: Increasing greenhouse effect
D: Corrosion of statues and buildings made of metals

1. A and C only
2. B and D only
3. A, B and C only
4. A, B, C and D

15. In what ways are a lion, a platypus and a monkey similar?

		
Lion	**Platypus**	**Monkey**

A. They suckle their young.

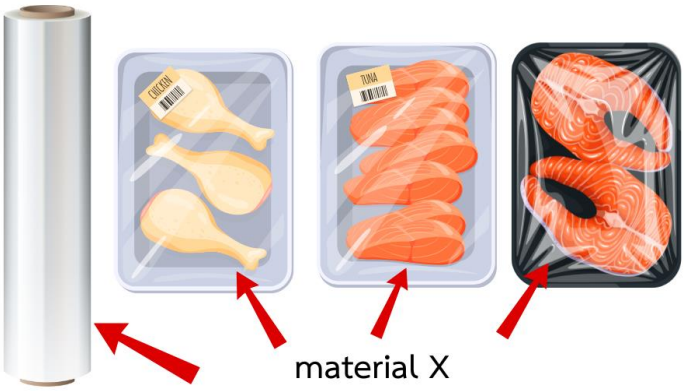
B. They give birth to their young alive.

C. They have an outer body covering of hair.

D. They start their life cycles as a fertilized egg.

1. A and C only
2. A, B and C only
3. A, C and D only
4. A, B, C and D

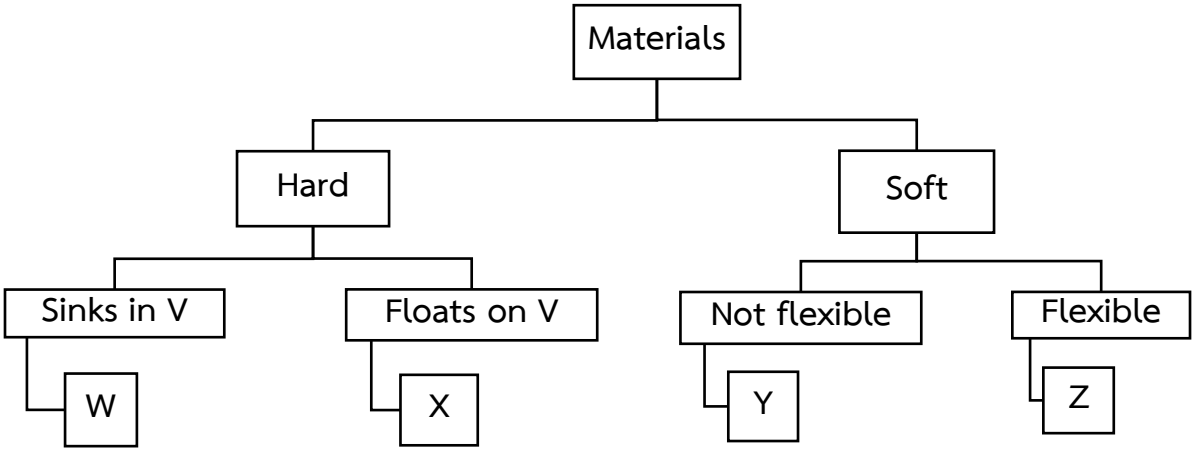
16. Material X is used to cover some leftover food.



Which of the following properties of material X is used in the above situation?

1. Flexible and Transparent
2. Soft and light
3. Sink in water and Non color
4. Floats on water and Flexible

17. Study the flow chart below.



Which of the following could be the materials of V, W, X, Y and Z?

	V	W	X	Y	Z
1.	Oil	Metal	Plastic	Wood	Rubber
2.	Oil	Rubber	Wood	Metal	Plastic
3.	Water	Rubber	Metal	Wood	Plastic
4.	Water	Rubber	Plastic	Metal	Wood

18. A group of pupils tested the strength of magnets X, Y and Z. Each magnet was placed at the same height above an identical paper clip at first. The magnets were slowly lowered until they can attract the paper clip. Diagram 1 shows the start of the experiment. Diagram 2 shows the results.

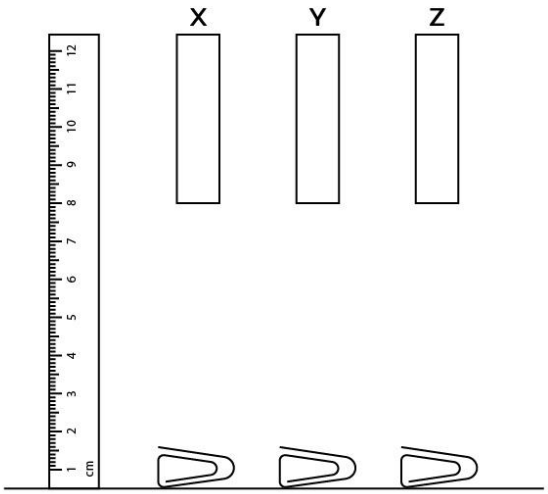


Diagram 1

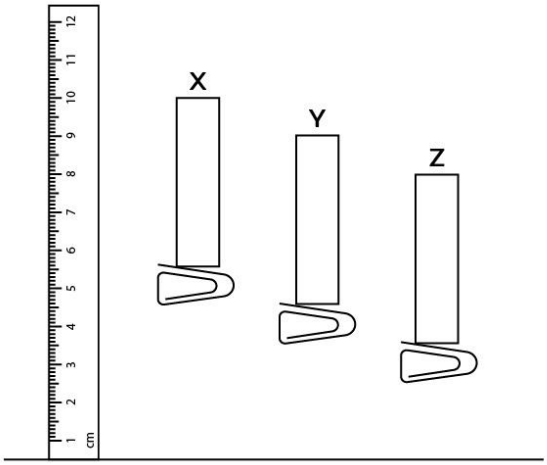
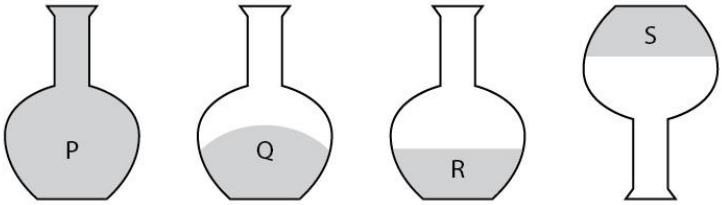


Diagram 2

The pupils deduced that magnet X is the strongest. In this experiment, the strength of the magnet is measured by _____.

1. the size of the magnet
2. the number of paper clips the magnets can attract
3. the duration the paper clip remains attracted to the magnet
4. the distance from which the magnet can attract the paper clip

19. Look at the four objects in the following flasks. Note that the flask containing object S is inverted.



Based only on what you can see, which of the following conclusions are correctly drawn?

A : Object S is a solid.

B : Object P can be compressed.

C : Object Q has a definite shape.

D : Object R has a definite volume and a definite shape.

1. A and C only
2. B and D only
3. B, C and D only
4. A, B, C and D

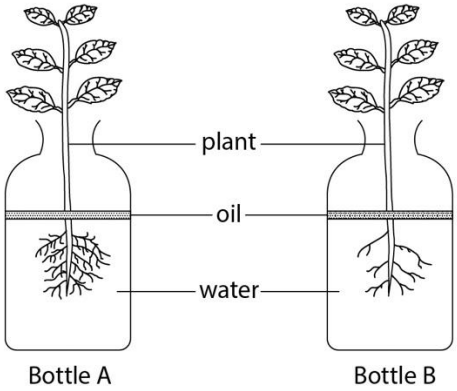
20. During a thunderstorm, thunder and lightning are produced at the same time. A boy at home is some distance away from the storm. He sees the lightning before hearing the thunder and made the following measurements.

Time from start of storm (min)	0	2	4	5	6
Time between seeing lightning and hearing thunder (s)	3.6	2.4	1.6	2.4	3.5

How many minutes after the start of the storm does it reach the closest point to the boy's home?

A. 2 min
B. 4 min
C. 5 min
D. 8 min

21. Amy placed two different plants in two identical bottles A and B. Each bottle was half-filled with water. She also poured a layer of oil into each bottle as shown below.



She recorded the initial height of the water level in each bottle. After three days, she measured the height of the water level again. The table below recorded the readings.

Bottle	Initial height of water level (cm)	Height of water three days later (cm)
A	15.0	12.0
B	15.0	13.5

Which of the following is an correct conclusion?

1. The roots of the plants absorbed some water.
2. Some water in the bottle evaporated.
3. Plants with roots absorb more water than plants without roots.
4. Plants with smaller leaves absorb more water.

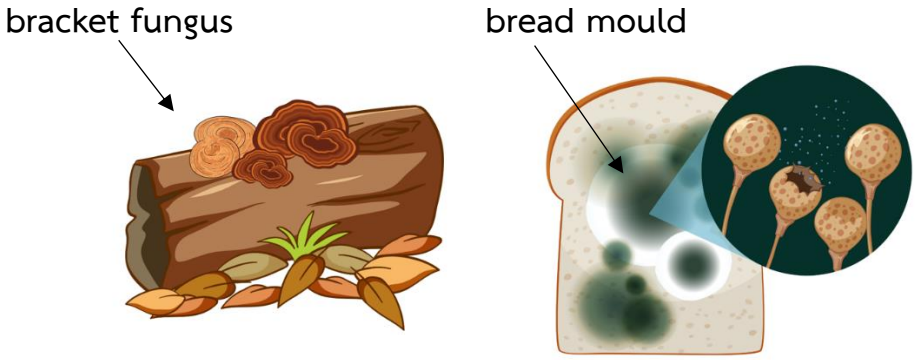
22. May plucked four leaves from a plant. She dipped the leaves in hot boiling water and observed bubbles coming out from the upper and lower surfaces of the leaves. May's observations are shown in the table below.

Leaf surfaces	**Number of bubbles appearing on the leaf surfaces**			
	Leaf 1	Leaf 2	Leaf 3	Leaf 4
Lower	More	More	More	More
Upper	Less	Less	Less	Less

From the observations, May cluded that _____.

1. some leaves have more stomata than others
2. different leaves have different number of stomata
3. smaller leaves have fewer stomata than larger leaves
4. more stomata are found on the lower surfaces of the leaves

23. A bracket fungus and some bread mould are shown below.



Which of the following statements is/are true about the bracket fungus and bread mould?

A. Both are eatable.

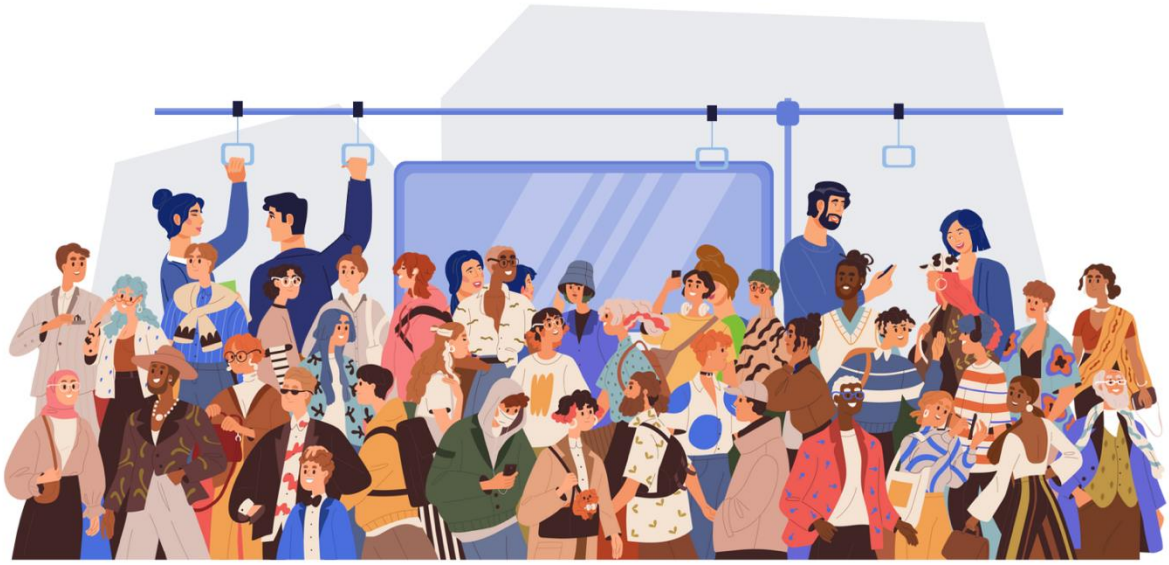
B. Both are micro-organisms.

C. Both reproduce through spores.

D. Both take in food from the things that they grow on.

1. A only
2. B only
3. C and D only
4. A, C and D only

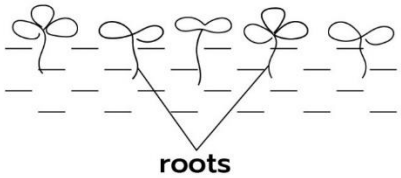
24. During a BTS breakdown, many commuters were trapp the cabin with very little ventilation as shown in the diagram below.



Which of the following best describes the composition gases present in the cabin after some time?

	Increase	Decrease
1.	Carbon dioxide, oxygen	Water vapour
2.	Carbon dioxide, water vapour	Oxygen
3.	Oxygen, water vapour	Carbon dioxide
4.	Carbon dioxide	Water vapour and Oxygen

25. What are the roots of duckweeds for?



A. The roots store food for reproduction.

B. The roots trap light from their surroundings.

C. The roots hold the plants firmly to the ground.

D. The roots take in water and dissolved mineral salts from their surroundings.

1. D only
2. C and D only
3. A, C and D only
4. B, C and D only

26. Glass must be handled with care as it is brittle. However, why is glass used to make things like spectacle lenses, light bulbs, fish tanks and window panes?



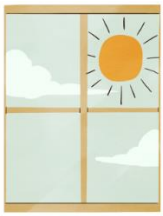
spectacle lenses



light bulbs



fish tanks

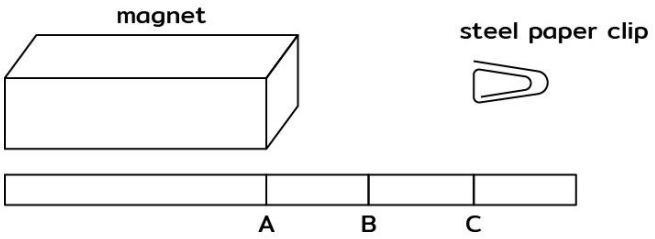


window panes.

1. It is transparent.
2. It cannot be bent.
3. It is not able to float on water.
4. It can support heavy loads without breaking.

27. Karuna carried out the following experiments.

First experiment

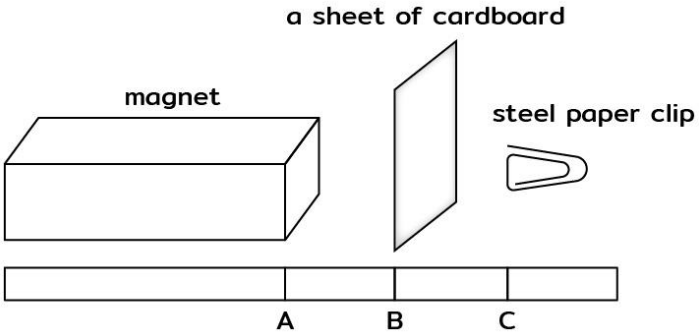


What she did:

1. Place one end of the magnet at position A.
2. Place a steel paper clip at position C.

What she observed: Steel paper clip moved towards the magnet.

Second experiment

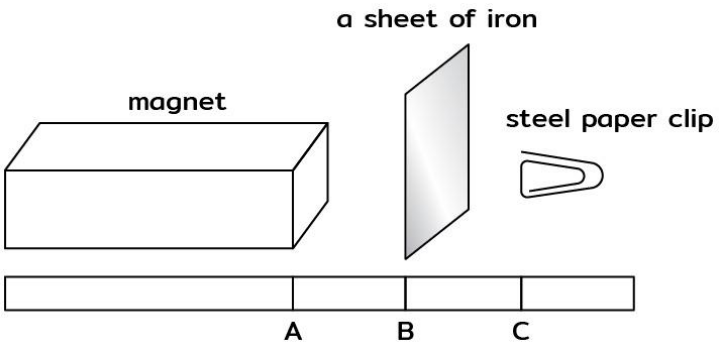


What she did:

1. Place one end of the magnet at position A.
2. Place a sheet of cardboard at position B.
3. Place steel paper clip at position C.

What she observed: Steel paper clip moved towards the magnet.

Third experiment



What she did:

1. Place one end of the magnet at position A.
2. Place a sheet of iron at B.
3. Place steel paper clip at position C.

What she observed: Steel paper clip did not change position.

Karuna's experiment is testing whether magnetic forces can _____.

1. attract a paper clip
2. attract different materials
3. pass through different materials
4. pull through different materials

28. Objects that do not block light will show the highest reading. The table below shows the result when light was shone on four objects, P, Q, R and S.

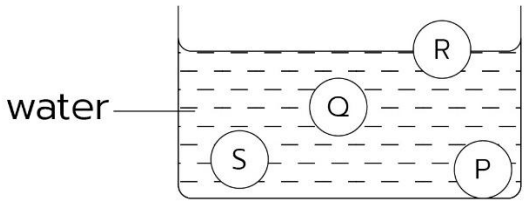
Object	Reading on the light sensor
P	3
Q	0
R	10
S	7

Which object(s) belong(s) to group Y in the following classification table?

Group X	Group Y	Group Z
Frosted glass	Mirror	Measuring cylinder

1. Q only
2. R only
3. P and S only
4. P, R and S only

29. Four balls P, Q, R and S made of different materials, are placed in a container of water as shown below. The volumes of the balls are the same.



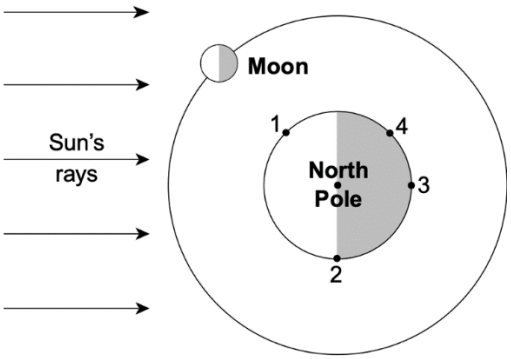
The table below shows the masses of the four balls.

Ball	Mass
P	68 g
Q	55 g
R	A
S	B

Which of the following shows the possible values of A and B?

	A	B
1.	30 g	40 g
2.	40 g	30 g
3.	50 g	60 g
4.	60 g	50 g

30. The diagram below represents the Moon at one position in its orbit around Earth. The numbers represent locations on Earth's surface.



(Not drawn to scale)

At which numbered location would high tide be occurring when the Moon is in the location shown in the diagram?

1. location 1
2. Location 2
3. location 3
4. Location 4

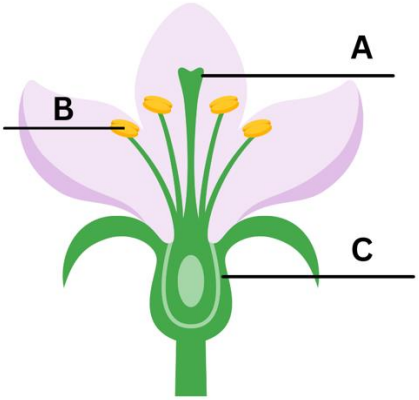
31. Four different set-ups are described in the table below. Each set-up consists of a seed placed in a dish containing some cotton wool. Each set-up is then placed in a different location.

Set-up	Cotton wool	Air	Sunlight	Temperature
W	Dry	Yes	No	10°C
X	Dry	No	Yes	30°C
Y	Moist	Yes	No	30°C
Z	Moist	No	Yes	10°C

In which set-up will a seed germinate first?

1. W
2. X
3. Y
4. Z

32. The diagram shows the flower of a plant. Which of the following rows has the parts of the flower labelled correctly?



	A	B	C
1.	anther	stigma	ovary
2.	stigma	anther	ovule
3.	ovary	stigma	anther
4.	stigma	filament	anther

33. Study the diagram below.



What are the poles marked X and Y?

	X	Y
1.	North pole	North pole
2.	North pole	South pole
3.	South pole	North pole
4.	South pole	South pole

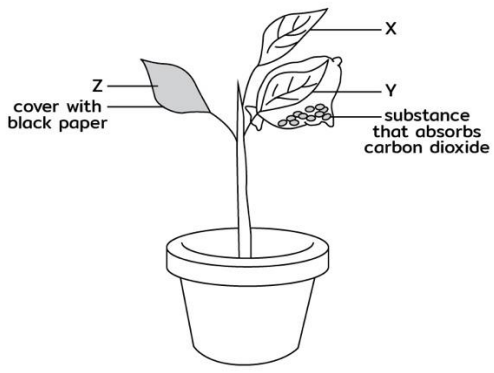
34. The table below shows the dates of peak activity of four meteor showers for five different years. Meteor showers are named for the constellations in which they appear to originate, as observed from Earth.

Name of Meteor Shower	Date of Peak Activity				
	2007	2008	2009	2014	2015
Quadrantids	January 3	January 4	January 3, 4	January 3, 4	January 3, 4
Lyrids	April 22	April 21, 22	April 21, 22	April 21, 22	April 21, 22
Perseids	August 13	August 12	August 12, 13	August 12, 13	August 12, 13
Orionids	October 21, 22	October 21	October 21, 22	October 21, 22	October 21, 22

Based on the data, the dates of these meteor showers appear to depend on the

1. turning of Earth on its axis
2. position of Earth in its orbit
3. phase of the Moon during the month
4. movement of meteors in their orbits

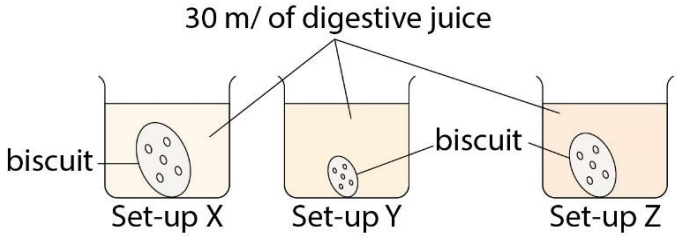
35. Lala carried out an experiment on three leaves, X, Y and Z, of a pot of plant. The rest of the leaves of the plant were removed. She placed the pot of plant in the dark for 48 hours and placed the pot of plant in the garden for 48 hours.



She tested for the presence of starch with iodine solution on leaves X, Y and Z. Which of the following shows the results correctly?

	Leaf X	Leaf Y	Leaf Z
1.	Brown	Brown	Blue-black
2.	Brown	Blue-black	Brown
3.	Blue-black	Brown	Brown
4.	Blue-black	Brown	Blue-black

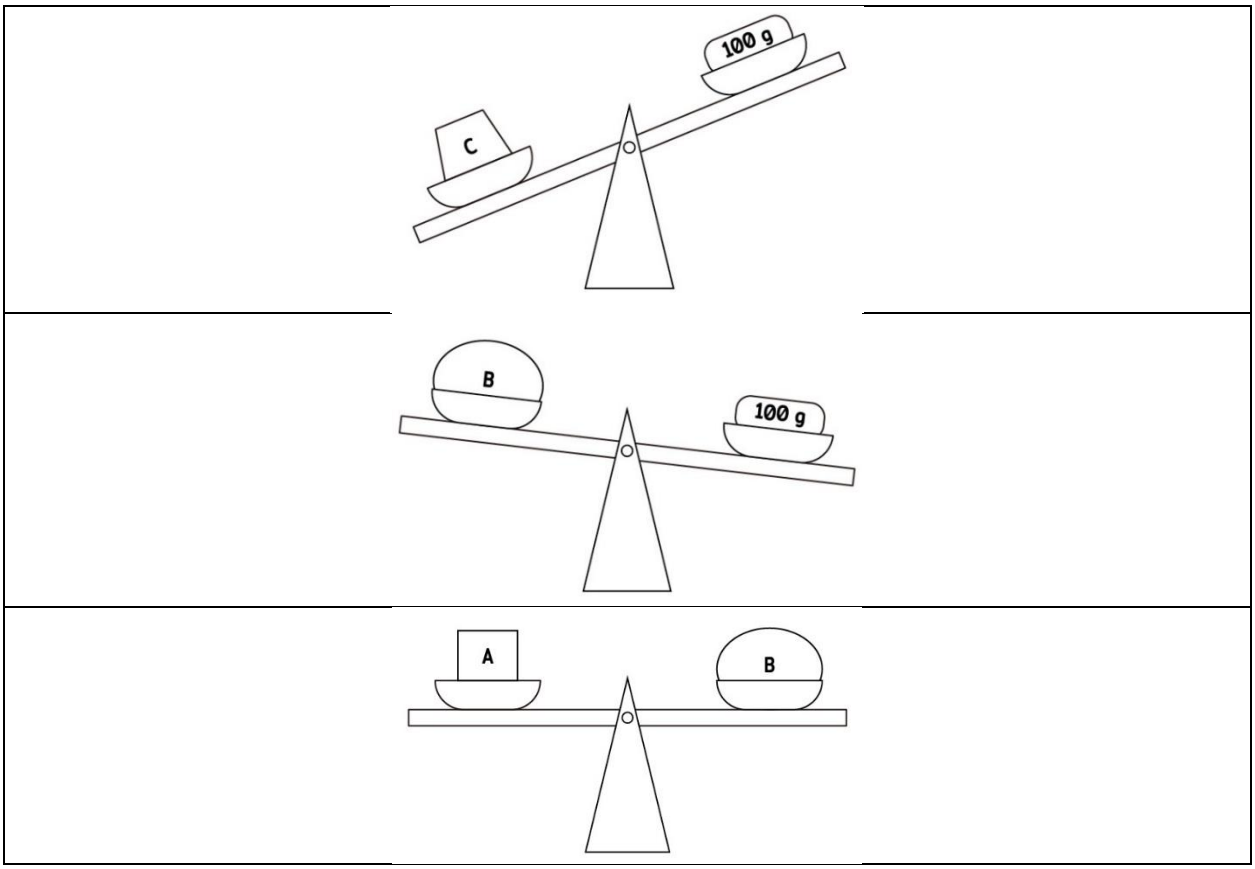
36. Adrian conducted an experiment to find out which biscuit will be broken down the fastest by 30 ml of digestive juice in three set-ups as shown below. The biscuit in set-up Y was broken down the fastest into simpler substances.



Which of the following conclusions could he draw from his experiment?

1. The smaller the piece of biscuit, the faster it will be digested.
2. The smaller the piece of biscuit, the slower it will be digested.
3. The larger the amount of digestive juice used, the faster the biscuit will be digested.
4. The larger the amount of digestive juice used, the slower the biscuit will be digested.

37. The diagrams below show what happens when different objects and a 100 g object are placed on the weighing balance. The objects are labelled A, B and C.



Study the diagrams above and state whether the following statements is/are true

A : Object A has a mass of 100 g.

B : Object B has a bigger mass than object C.

C : Object C has a bigger mass than object A.

D : Object C has a mass of 150 g.

1. C only
2. D only
3. B and D only
4. C and D only

38. A mineral supplement designed to prevent the flu was given to two groups of people during a scientific study. Dosages of the supplement were measured in milligrams per day, as shown in the table below.

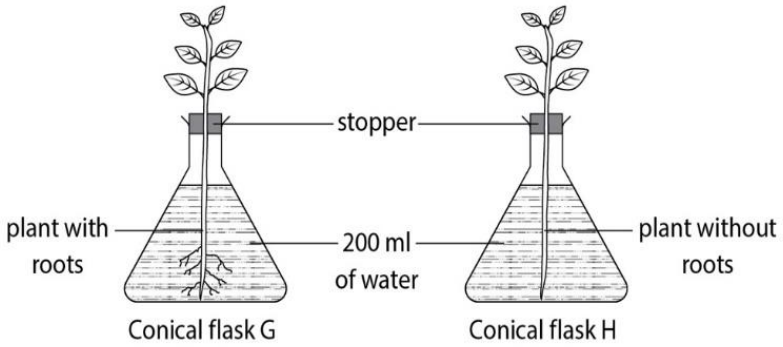
Supplement Dosages

Group	Dosage (mg/day)
A	100
B	200

After 10 weeks, neither group reported a case of the flu. Which procedure would have made the outcome of this study more valid?

1. test only one group with 200 mg of the supplement
2. test the supplement on both groups for 5 weeks instead of 10 weeks
3. test a third group that receives 150 mg of the supplement
4. test a third group that does not receive the supplement

39. Siri had the following set-ups for her experiment.



She left the two set-ups in an open field and recorded the amount of water in the conical flasks every 12 hours.

Time (h)	Amount of water (ml)	
	conical flasks G	conical flasks H
0	200	200
12	190	196
24	185	192
36	170	184
48	160	180

What conclusion(s) or inference(s) could Susan draw from her experiment?

A. Plants have water-carrying tubes in their stem.

B. The leaves of plants need water to make food.

C. Plants cannot take in water when their roots are removed.

D. ants with roots take in more water than plant roots.

1. D only
2. A and D only
3. B and C only 4
4. A, B and D only

40. There are many ways to electricity carefully.

A. Do not put too many plugs into one socket, because the plugs may get too hot and start a fire.

B. Check electrical appliances regularly for exposed wires.

C. You should not do electrical repairs yourself. Get an adult or an electrician to do it for you.

D. You can touch switches with wet hands because switch covers are made of plastic to prevent users from getting an electric shock.

Which of the following is/are correct?

1. A and C only
2. B, and D only
3. A, B, and C only
4. All of the above are correct.

คำตอบวิชาวิทยาศาสตร์ ชั้นประถมศึกษาปีที่ 4

ข้อ	คำตอบ	ข้อ	คำตอบ
1	3	21	1
2	3	22	4
3	1	23	4
4	2	24	2
5	2	25	1
6	2	26	1
7	3	27	4
8	1	28	1
9	3	29	3
10	1	30	1
11	4	31	3
12	1	32	2
13	2	33	3
14	4	34	2
15	1	35	3
16	1	36	1
17	1	37	1
18	4	38	4
19	1	39	Free*
20	2	40	3

* หมายเหตุ : ข้อ 23 ชุด A ตอบ 4 ชุด B ตอบ 3 ข้อ 39 ข้อความในโจทย์ไม่สมบูรณ์