

ELEMENTARY SCIENCE



QUESTION CATALOGUE

Elementary Science

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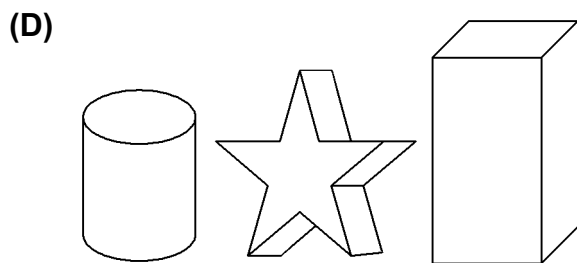
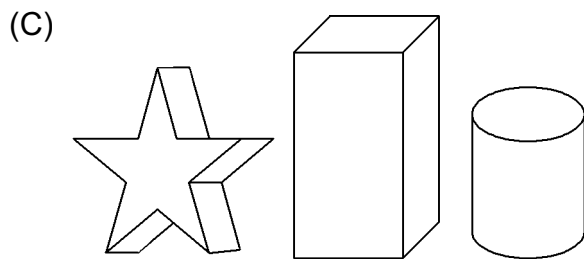
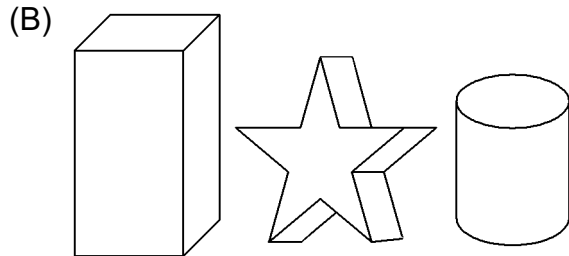
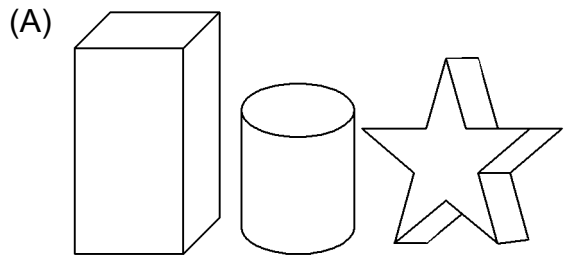
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1. Experimentation

1. Direct Observation of Basic Properties

730. Which of the following shows the blocks in correct sequence from **shortest** to **tallest**?



1416. In order to make observations, an observer must **always** use –

- (A) experiments.
- (B) the senses.**
- (C) proportions.
- (D) mathematical calculations.

1138.



Tina dropped both boxes at the same time down the slide. What can Tina say about this activity?

- (A) The first box and second box are identical.
- (B) The first box is heavier than the second box.
- (C) There is no friction acting on the boxes.
- (D) One box falls faster than the other.**

1402. Marta has 3 bags that are all the same size. She fills 1 with bananas, 1 with apples and 1 with raisins. If she fills each bag so it is full, which bag will have the **most** pieces of fruit in it?

- (A) The bag with the raisins.**
- (B) The bag with the bananas.
- (C) The bag with the apples.
- (D) They will all be about the same.

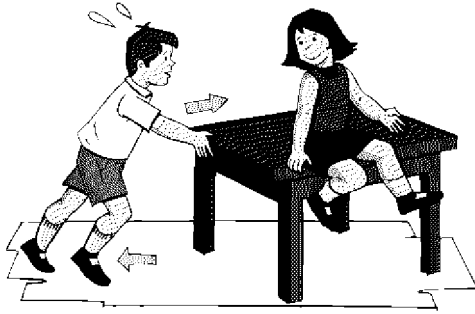
1430. Which action can be performed most accurately using **only** the human senses?

- (A) Tearing a sheet of paper into squares whose sides measure 1 centimeter.
- (B) Adding 10 grams of salt to a cup of water.
- (C) Measuring the air pressure of a room.
- (D) Counting 28 shells from a beach.**

II. FORCE, ENERGY, & MOTION

1. Forces

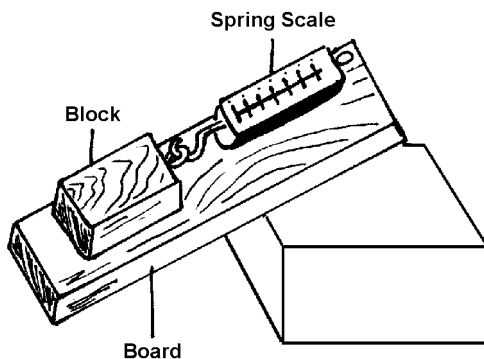
304. Base your answer to the following question on the picture below.



Mary is sitting on the table while Billy is pushing it across the floor. Billy applying force to

- (A) only the floor
- (B) only the table
- (C) both the table and the floor**
- (D) only Mary

Base your answer to the following question 1279. on the diagram below that shows a spring scale attached to a block that is being pulled up an inclined board. (Ignore friction).



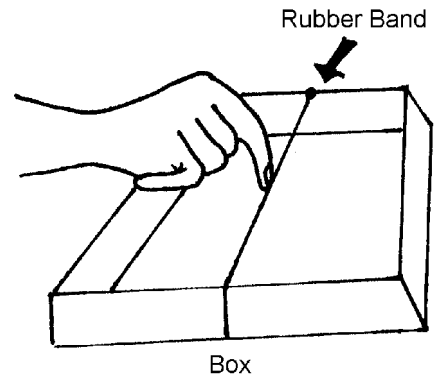
If the board is inclined at a sharper angle, the reading on the spring scale will

- (A) increase**
- (B) decrease
- (C) remain the same
- (D) not enough information is given

A. Basic Forces

1. Influencing Motion with Push & Pull Forces

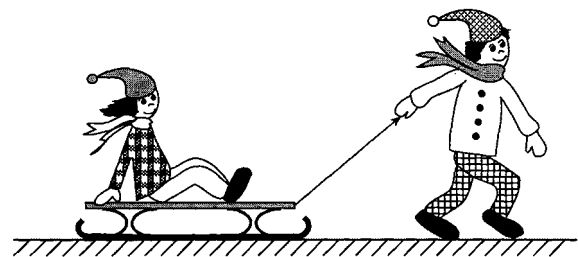
Base your answer to the following question 1294. on the diagram below that shows a person pulling a rubber band stretched over an open box.



As the person pulls the rubber band away from the center, the

- (A) potential energy of the rubber band increases**
- (B) chemical composition of the rubber band changes
- (C) kinetic energy of the rubber band increases
- (D) rubber band produces a magnetic pull

Base your answers to questions 1480 and 1481 on the picture below showing Brian pulling Melissa on a sled.



What is Brian applying a pulling force to?

1480. (A) the ground **(C) the sled**
(B) Melissa (D) the scarf

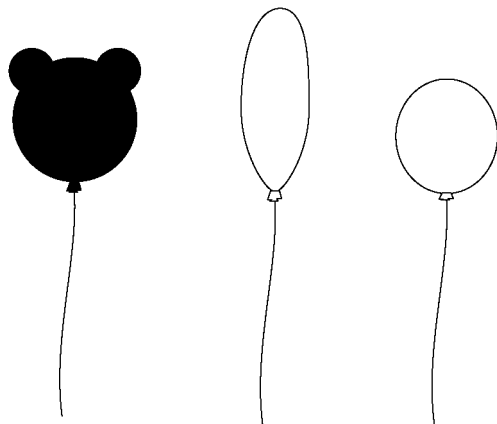
What is Brian applying a pushing force to?

1481. **(A) the ground** (C) the sled
(B) Melissa (D) the scarf

III. MATTER

1. Forms of Matter

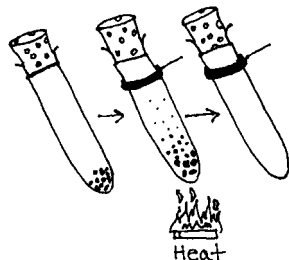
7. At a parade, Josh noticed the various balloons shown below.



Based on his observation, Josh concluded that

- (A) all gases release energy
- (B) gases form when liquids are heated
- (C) gases take the shape of their containers**
- (D) all gases provide heat

343. In the pictures below, iodine crystals in a corked test tube are being changed to iodine gas by heat.



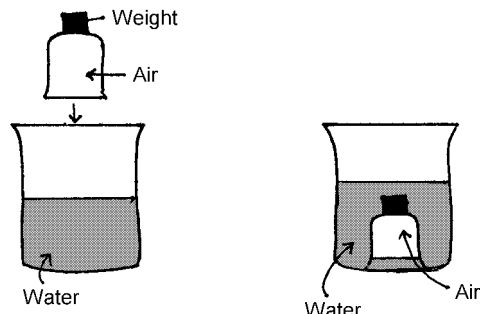
Tell two ways that the iodine gas is different from the iodine crystals.

examples: –The molecules in the iodine gas are further apart than they are in the crystals – The gas has no particular shape (takes the shape of its container), while the crystals have a definite shape.

A. Phases

3. Identifying Gases & Their Properties

The demonstration below shows what happens to the water level in a large beaker when a small beaker is placed upside down in the large beaker of water.



Why does the water level rise?

- (A) the air in the small beaker weighs more than the water
- (B) the air in the small beaker takes up space**
- (C) the air in the small beaker is a solid
- (D) the air in the small beaker reacts with the water

The diagrams below show sealed containers with only one substance, but in different states of matter. Which diagram best represents the molecules of a substance in the gaseous state?

