2024
Beaver Computing Challenge
(Grades 5 & 6)

Questions

Part A

Pizza Party

Jun is ordering a large pizza for four of his friends. Each of his friends has three favourite pizza toppings as shown below.

Friend	Favourite toppings
Eslam	
Meral	
Salma	
Wout	

Jun wants to choose the three most popular toppings for the pizza he is ordering. (A topping is more popular than another topping if it is the favourite of more friends than the other topping.)

Question

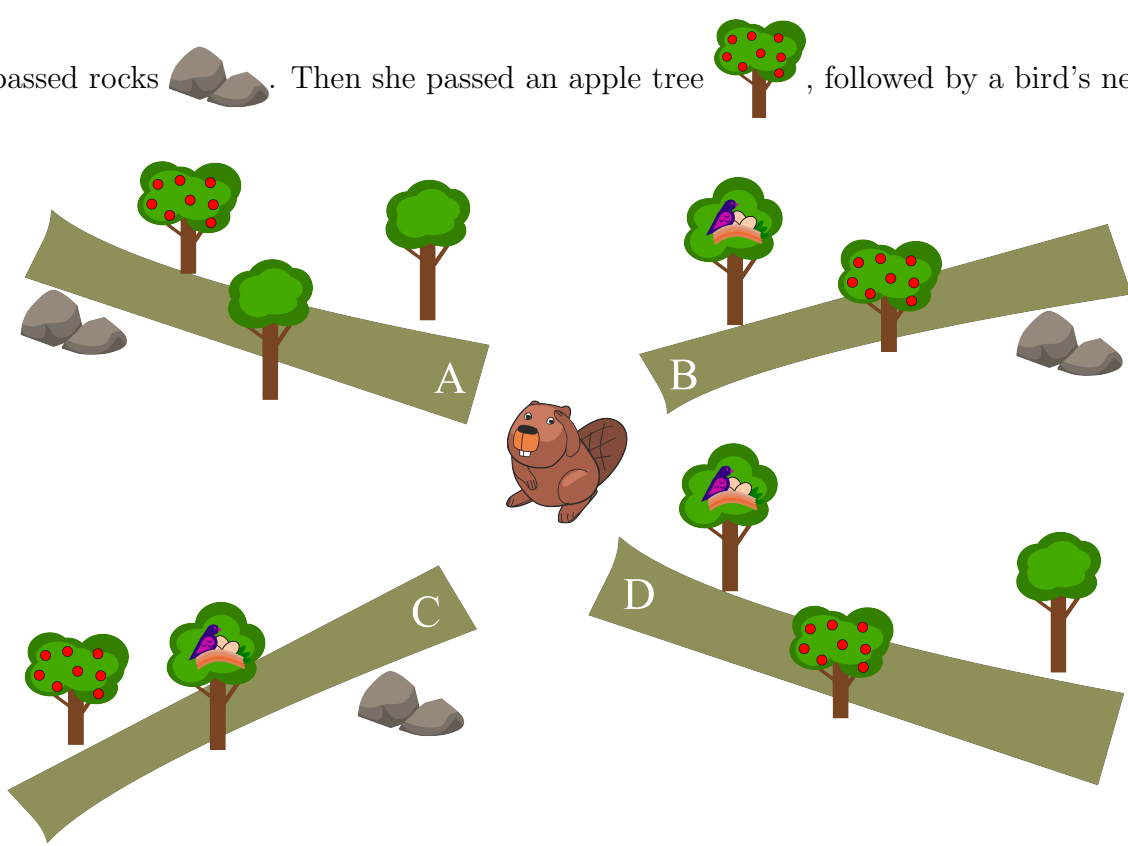Which of the following pizzas should Jun choose?

(A)   (B)   (C)   (D)
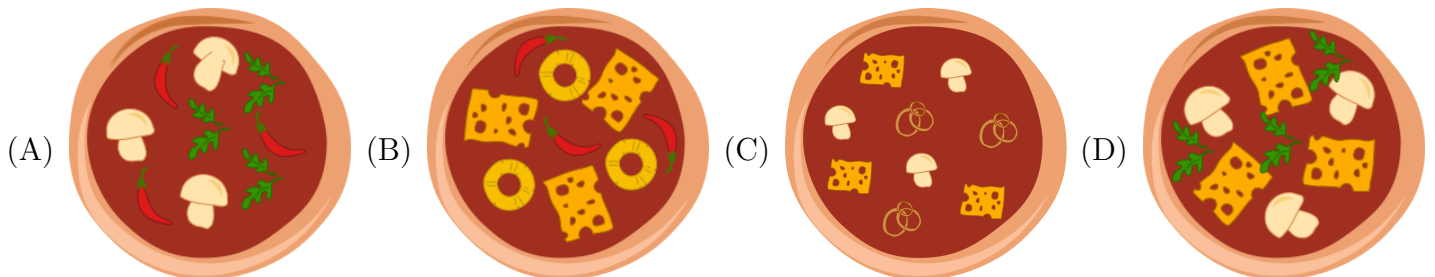
Nature Hike

Beaver Alia hiked along a path from her home to the middle of the forest, enjoying nature along the way.

She first passed rocks ⬤. Then she passed an apple tree 🌳, followed by a bird's nest 🌳.

Question

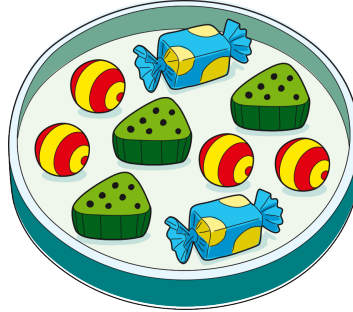Which of the four paths leads back to Alia's home?

(A) Path A

(B) Path B

(C) Path C

(D) Path D

Candies

Gabija offers to share the nine candies shown below with her friends.

They take some candy as follows:

- First, Benas takes one candy of each type.

- Then, Marija takes two green dotted candies .

- Finally, Andrius takes one round striped candy .

Question

After this, how many candies of each type remain?

(A) two , one , zero

(B) one , one , zero

(C) two , two , zero

(D) one , one , one

Gift Box

When folded, a gift box is a pyramid with a square base as shown.
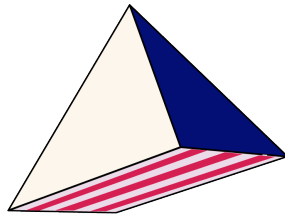
The sides and bottom of the box are different colours and patterns, but only some of these are shown.

Question

Which of the following could be the outside of the gift box when it is unfolded?

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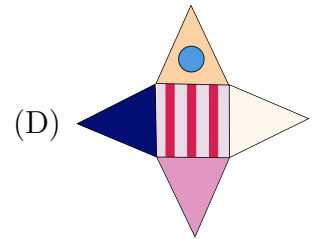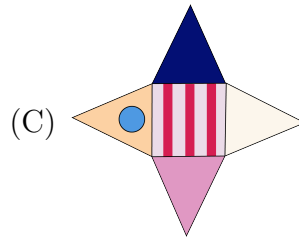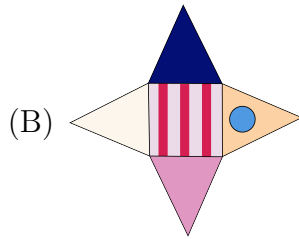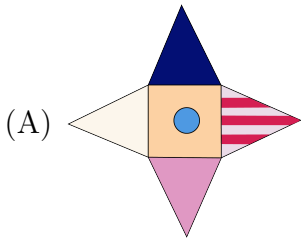
Part B

Map It Out

Four animals travelled across a plain. The following map shows their routes with a path from where each animal started to where they finished. However, the middle section of the map is missing.
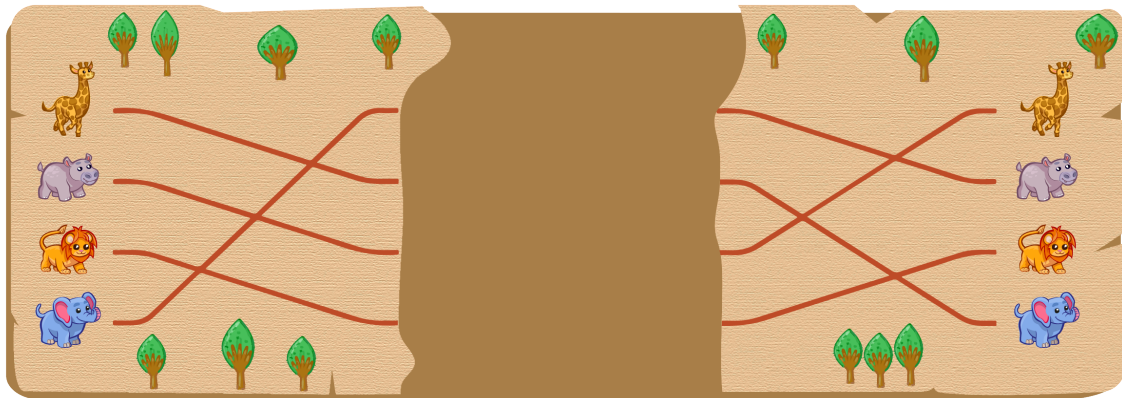
Which of these pieces could be the missing middle section of the map?

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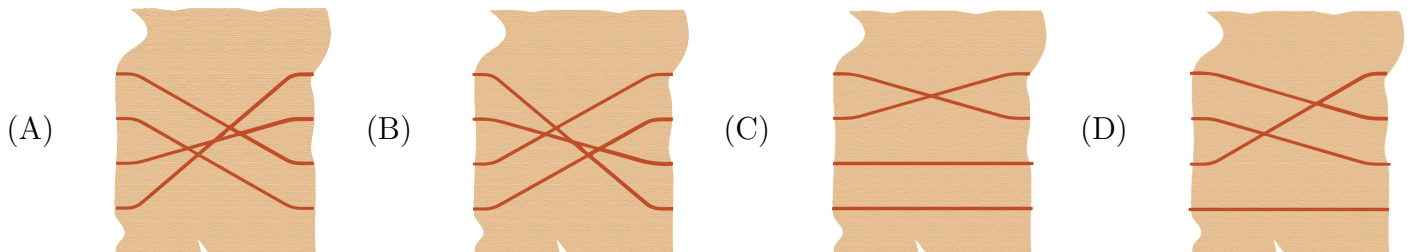
Story

The boat slips at a marina are either reserved or available as shown. For example, boat slip 2 is reserved on Friday but available on Saturday.

Friday	Saturday	Sunday
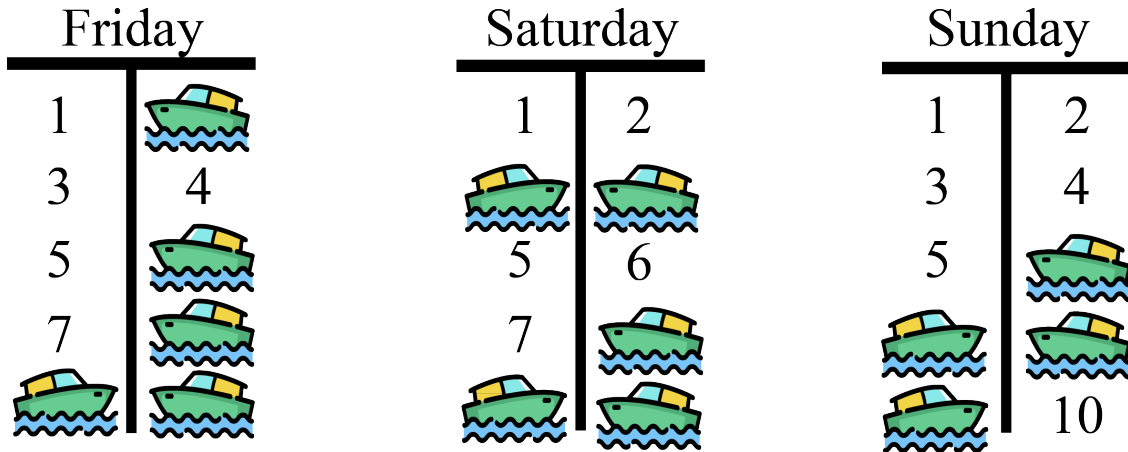
Tom will be parking his sailboat at the marina for two consecutive days. He will choose to arrive on either Friday or Saturday and he needs to book one boat slip that is available for both the day he arrives and the next day. He has several options available. For example, one option is for Tom to arrive on Saturday and book boat slip 1.

Question

How many options does Tom have in total?

(A) 5

(B) 6

(C) 7

(D) 8

Pushed Out

Story

Minji has a tube that is open at both ends and can hold a maximum of three balls. Balls can be added to the tube from either end. If the tube is already filled with three balls and Minji adds a fourth ball from one end, the ball closest to the other end will be pushed out, and the remaining two will shift, as shown below.

added from the left · added from the right
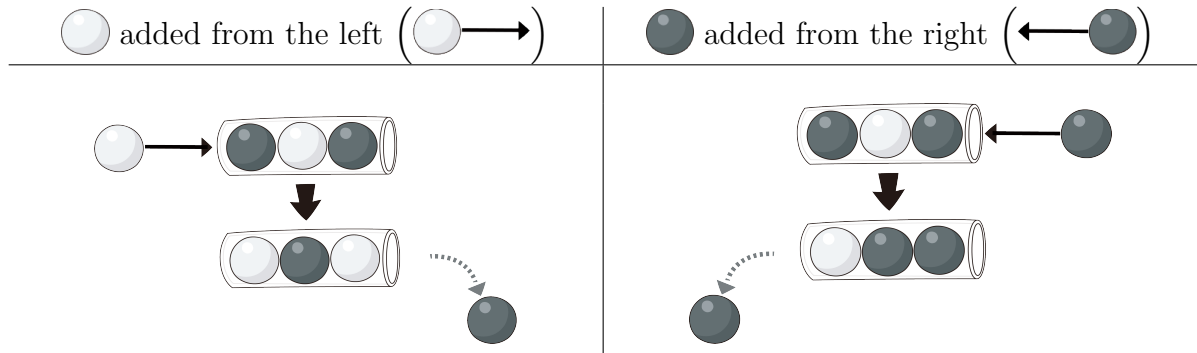
Question

The tube is initially filled with the following three balls.

What does the tube look like after Minji performs the four actions shown below in order from left to right?

(A)

(B)

(C)

(D)

Sewing Machines

Story

Two types of sewing machines can each be fed two pieces of fabric to make a larger piece of fabric. They work separately as shown.
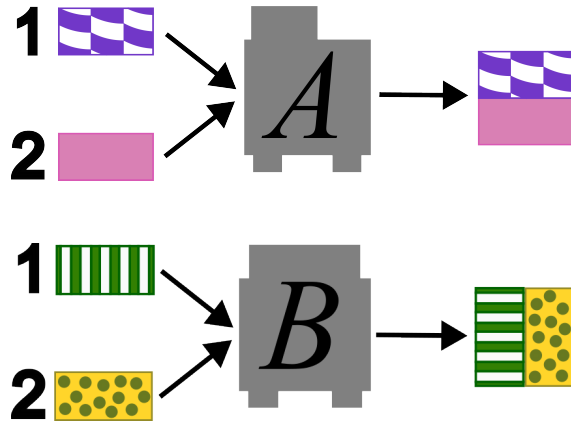
Machine A sews piece 1 centered on top of piece 2.

Machine B turns piece 1 and piece 2 counter-clockwise by 90 degrees and then sews piece 1 centered to the left of piece 2.

The two machines can be combined to form even larger pieces of fabric.

Question

Pieces are fed through machines as shown by the arrows in the diagram below. What does the final large piece made by the three combined machines look like?

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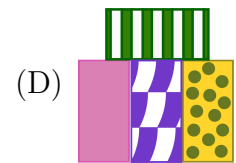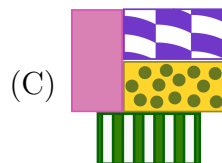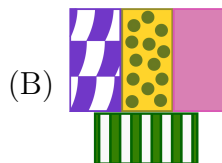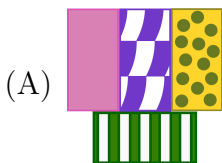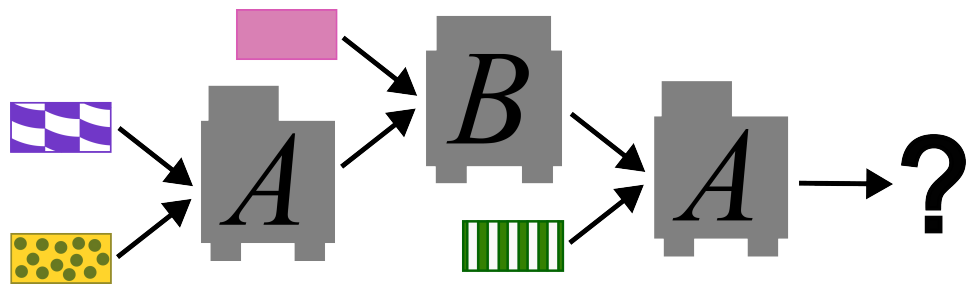
Part C

Online Class

Story

Nine students are sitting side by side in one row in the library while their teacher conducts an online lesson from her home. The teacher sees the class from her laptop screen as shown.

Each student is using a different computer, but the teacher's screen shows who each student is sitting next to.

Question

Which student is sitting in the middle (5th position) of the row in the library?

(A) Raul

(B) Lee

(C) Busara

(D) Hannah

Collecting Dolls

Story

Beaver Deana enters the maze below carrying a doll of size 1. She then goes through the maze and collects dolls of different sizes, placing smaller dolls inside larger dolls.

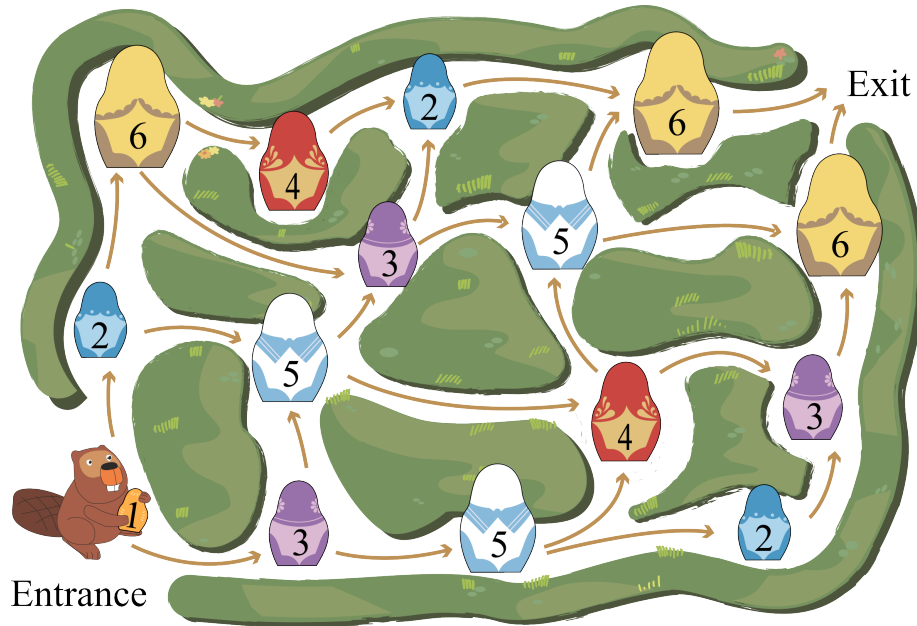Deana follows the arrows and obeys the following rule whenever she encounters a doll.

- If the doll she encounters is bigger than the biggest doll she already has, she can choose to either take the doll and put her dolls inside of it, or leave it behind.

- Otherwise, if the doll she encounters is the same size or smaller than the biggest doll she already has, she must leave the doll behind.

Question
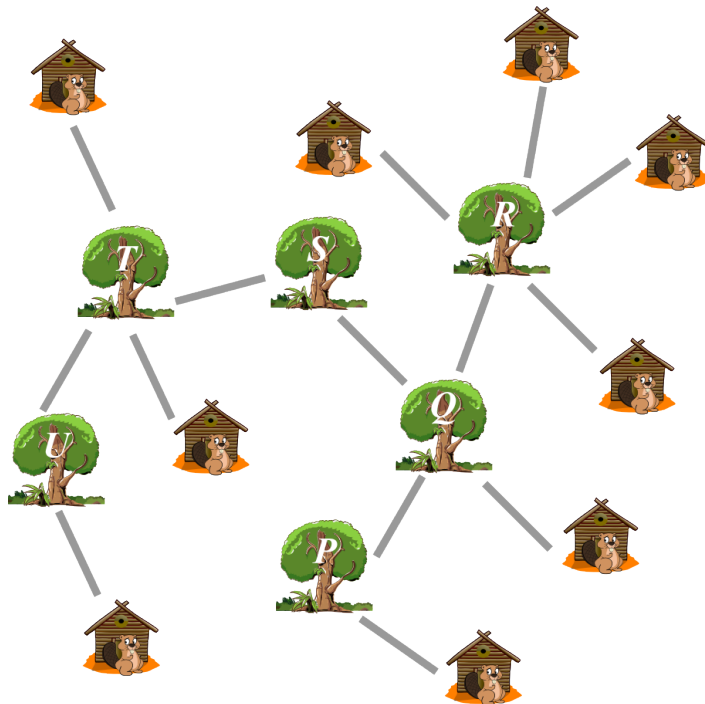
What is the maximum number of dolls that Deana can collect, including the size 1 doll, by the time she reaches the exit of the maze?

(A) 3

(B) 4

(C) 5

(D) 6

Meeting Point

Story

In an area containing trees , beavers have constructed lodges . The beavers have also constructed paths that connect their lodges to trees, and some trees to one another.

The beavers now want to hold a group meeting at one of the trees, but they don't want to travel more than necessary. They want to choose a tree so that each beaver can travel to that tree using only one, two or three paths.
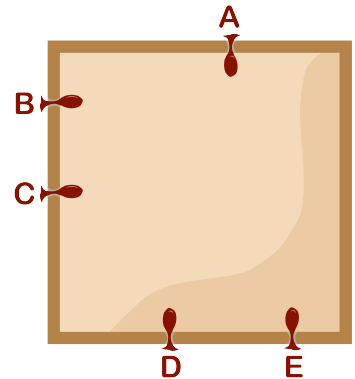
Question

Where should the beavers hold their group meeting?

(A) Tree Q

(B) Tree R

(C) Tree S

(D) Tree T

Balloon Machine

A machine creates different designs by inflating long, skinny balloons attached to the edges of a square frame. There are five balloons labelled A, B, C, D, and E, arranged around the frame as shown.
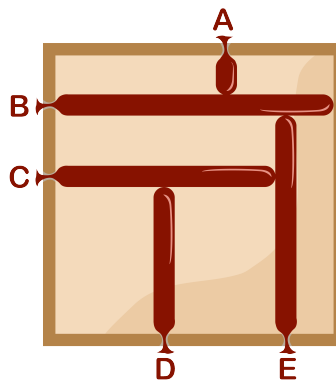
All balloons start deflated. To create a design, the machine reads a sequence of letters, from left to right, and inflates the corresponding balloons in that order. When a particular balloon is inflated, it will continue to extend until it reaches either another balloon or the opposite edge of the frame.

For example, starting with all balloons deflated, if the machine reads the sequence $E\ C$, then it will create the following design.
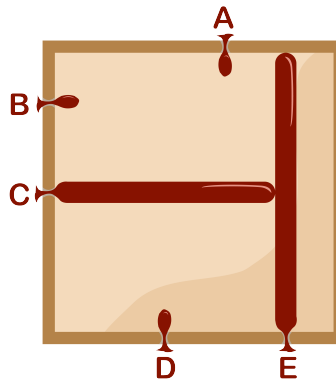
Question

Starting with all balloons deflated, the machine reads a sequence consisting of the five letters A, B, C, D, and E in some order and creates the design shown. How many of the balloons could have been the third balloon inflated?

(A) 1   (B) 2   (C) 3   (D) 4