2022 Beaver Computing Challenge (Grades 5 & 6) Questions
Part A
A beaver family has five children with different heights as shown.

The two tallest children and two shortest children leave.

Which child remains?

(A) Qadr
(B) Ravi
(C) Sana
(D) Todd
Trail Home

Story
In between a beaver and her home are some trails, where each intersection is marked with a different tree. The beaver walks home using these trails passing exactly four intersections on the way.

Question
In which order could the beaver have passed the intersections?

(A)

(B)

(C)

(D)
A hamburger is made using the following six ingredients.

<table>
<thead>
<tr>
<th>Bun</th>
<th>Meat</th>
<th>Sauce</th>
<th>Lettuce</th>
<th>Onions</th>
<th>Cheese</th>
</tr>
</thead>
</table>

The hamburger is made according to the following three rules.

1. The sauce should be directly on top of the meat.
2. The meat and cheese should be somewhere below the lettuce and onions.
3. The onions should not be in contact with the bun.

Which of the following could be the hamburger?

(A) ![Hamburger A Image]  (B) ![Hamburger B Image]  (C) ![Hamburger C Image]  (D) ![Hamburger D Image]
Lila’s Guessing Game

Story
Lila and her friends play a guessing game. To start, Lila puts a marble in bag X, a gem in bag Y, and a crumpled piece of paper in bag Z.

Then, while her friends’ eyes are closed, she mixes up the contents of the bags.

1. First, she switches the items in bags X and Y.
2. Then, she switches the items in bags X and Z.
3. Finally, she switches the items in bags Y and Z.

Question
Where are Lila’s items now?

(A) The marble is in bag X, the paper is in bag Y, and the gem is in bag Z.
(B) The paper is in bag X, the gem is in bag Y, and the marble is in bag Z.
(C) The gem is in bag X, the paper is in bag Y, and the marble is in bag Z.
(D) The paper is in bag X, the marble is in bag Y, and the gem is in bag Z.
Part B
Talia is very forgetful, so she has created a system to help her remember the names of her four group members.

If a group member is wearing sunglasses, Talia checks to see if they are wearing a hat. If they are wearing a hat, then it is Ash, otherwise it is Deniz. If the group member is not wearing sunglasses, Talia checks to see if they are wearing a scarf. If they are wearing a scarf, then it is Raul, otherwise it is Ming.

Question

Which of the following correctly matches names with faces?

(A)  
(ASH)  (DENIZ)  (RAUL)  (MING)

(B)  
(ASH)  (DENIZ)  (RAUL)  (MING)

(C)  
(ASH)  (DENIZ)  (RAUL)  (MING)

(D)  
(ASH)  (DENIZ)  (RAUL)  (MING)
Luis has hexagon pieces in three different colours. Whenever Luis arranges three pieces in a way that resembles an upright triangle, the three pieces must either be *all the same colour*, or *all different colours*. These rules do not apply to other three-piece arrangements. In particular:

![Diagram of all colours the same or all colours different](image1)

No colour rules

Luis arranges his hexagon pieces in a way that resembles a tower as shown:

![Hexagon tower](image2)

**Question**

Which hexagon piece must be at the very top?

(A) ![Option A](image3)  
(B) ![Option B](image4)  
(C) ![Option C](image5)  
(D) There is more than one possibility
Apples, Bananas, Broccoli, and Carrots

Story

Some fruit (apples and bananas), and some vegetables (broccoli and carrots) are placed on four plates:

Then the following actions are performed, in the order given:

1. One banana is added to each plate.
2. Each plate with less than four items in total, is removed.
3. All the fruit is removed from each plate.
4. Each plate with at least one carrot and no other fruit or vegetables, is removed.

Question

How many plates remain after all the actions are performed?

(A) 0
(B) 1
(C) 2
(D) 3
A tortoise and a hare follow the arrows in the diagram shown.

They both start at the same time at the circle labelled with a heart. The tortoise moves from one circle to the next in two minutes. The hare moves from one circle to the next in one minute.

Where do the tortoise and hare meet for the first time after they begin moving?

(A) Watermelon  (B) Acorn  (C) Orange  (D) Garlic
Part C
Janine is planting a row of seven flowers in her flowerbed. She has the following types of flowers.

<table>
<thead>
<tr>
<th>Tulip</th>
<th>Daffodil</th>
<th>Pansy</th>
<th>Snowdrop</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Tulip" /></td>
<td><img src="image2" alt="Daffodil" /></td>
<td><img src="image3" alt="Pansy" /></td>
<td><img src="image4" alt="Snowdrop" /></td>
</tr>
</tbody>
</table>

She plants her flowers in her flowerbed according to the following plan.

1. The flowers must be planted in a row from left to right.
2. Any flower can be planted in the leftmost spot.
3. Two flowers can be planted next to each other only if the diagram shows an arrow from the flower being planted first to the flower being planted next.

For example, Janine can plant a tulip and then a daffodil to its right because there is an arrow from the tulip to the daffodil. However, she cannot plant a daffodil and then a tulip to its right because there is no arrow from the daffodil to the tulip.

**Question**

Which flowerbed could not possibly be Janine’s?

(A) ![Flowerbed A](image5)  
(B) ![Flowerbed B](image6)  
(C) ![Flowerbed C](image7)  
(D) ![Flowerbed D](image8)
Four of Gosia’s friends are hiding in a park. No two friends are hiding in the same spot. Gosia knows the following information about who is hiding where:

- Beka or Nissa is hiding behind the trees.
- Rona or Pasha is hiding behind the fountain.
- Beka or Nissa is hiding behind the bench.
- Rona or Beka is hiding behind the lamppost.

What is Rona hiding behind?

(A) The trees
(B) The fountain
(C) The bench
(D) The lamppost
Beach Necklaces

Story

Bashir makes necklaces using wavy beads and blue beads. He always makes them as follows.

1. Place one wavy bead and one blue bead on a string with the wavy bead to the left of the blue bead.

2. Do one of the following two actions.
   - *Action B*: Add a blue bead to both ends of the string.
   - *Action W*: Add two wavy beads to the rightmost end of the string.

3. Repeat step 2 until the necklace is complete.

Question

Which necklace below cannot be made by Bashir?

(A) ![Image of a possible necklace construction](imageA)

(B) ![Image of a possible necklace construction](imageB)

(C) ![Image of a possible necklace construction](imageC)

(D) ![Image of a possible necklace construction](imageD)
Every day, a beaver goes to a strawberry patch for dessert. It starts eating strawberries from one of the twelve fields in the patch. Then it moves either north (↑), south (↓), east (→), or west (←) to a neighbouring field exactly three times.

This behaviour ensures that the beaver eats strawberries from exactly four fields and leaves the rest of the strawberries for others to enjoy.

For example, in the strawberry patch shown, a beaver could follow the path shown on the left and eat \(1 + 1 + 7 + 5 = 14\) strawberries or follow the path shown on the right and eat \(6 + 9 + 1 + 8 = 24\) strawberries.

What is the maximum number of strawberries the beaver could eat from the following patch?

(A) 21  (B) 22  (C) 23  (D) 24