**Tasks T1 – T7 carry 3 points each**

## T1. Beaver walk

Four beavers took a 12 *km* walk through the forest.



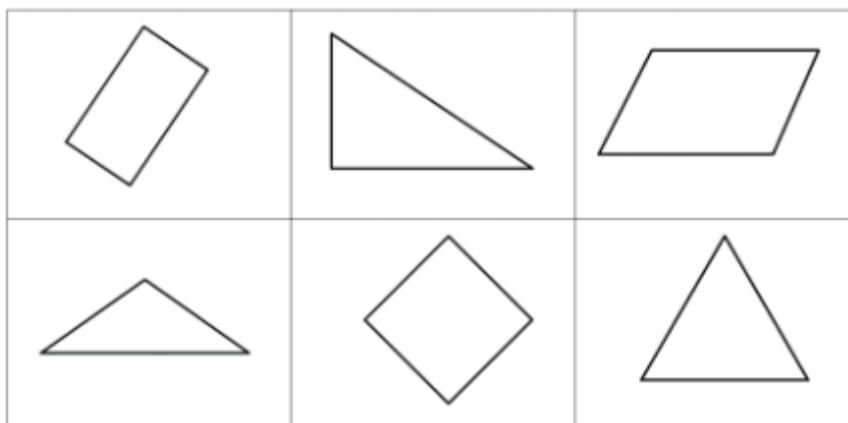**Question / Challenge**

How far did each beaver go?

**A)** 48 *km*          **B)** 24 *km*          **C)** 12 *km*          **D)** 3 *km*

## T2. Geometrical figures

How many of the following figures have four sides?

**Question / Challenge**



**A)** 2          **B)** 3          **C)** 4          **D)** 5

## T3. Helping the computer teacher

The computer teacher needs to install Scratch programming learning on 30 computers. Each day, she can install the program on 5 computers.

**Question / Challenge**

How many days will it take her to install the program on all the computers?

**A)** 6          **B)** 5          **C)** 4          **D)** 3

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**Time Allowed:** 120 minutes

## T4. Boiling eggs

An egg boils in 5 minutes.
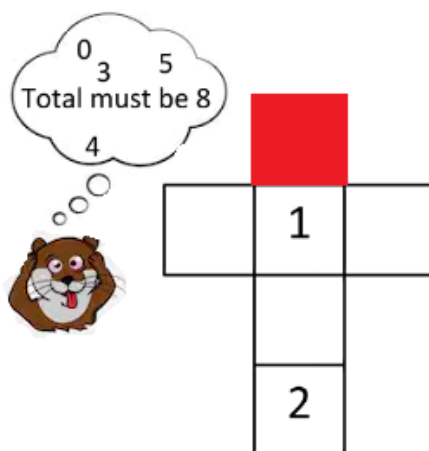
### Question / Challenge

In how many minutes will 3 eggs be cooked, if they are placed in the same pot?

**A)** 20 minutes      **B)** 15 minutes      **C)** 10 minutes      **D)** 5 minutes

## T5. Beaver solving a puzzle

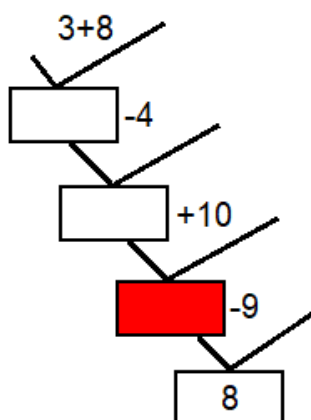Write the numbers 0, 3, 4 and 5 in the correct place so that each line of the cross adds up to 8.



### Question / Challenge

Which number is placed in red square?

**A)** 6      **B)** 3      **C)** 4      **D)** 5

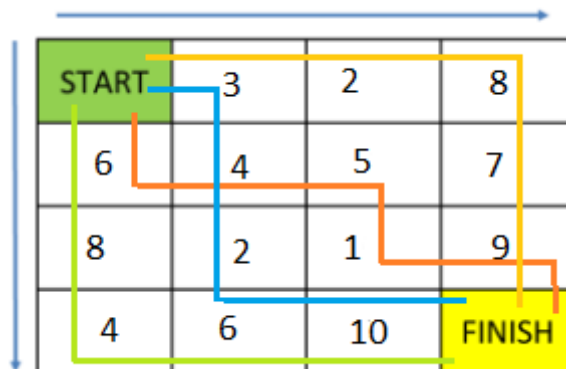## T6. Flow diagram



### Question / Challenge

What number is in the red box?

**A)** 15      **B)** 17      **C)** 12      **D)** 10

## T7. Choosing a rout

Start the maze with 0. Find the route with the highest total.



## Question / Challenge
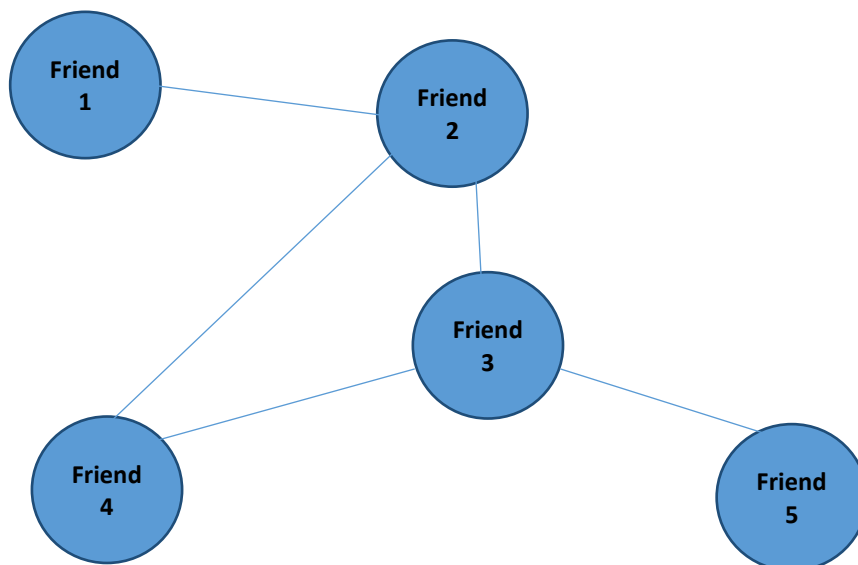
Witch route is the correct answer?

**A)** orange route          **B)** red route          **C)** blue route          **D)** green route

### Tasks T8 – T14 carry 4 points each

## T8. Beaver's friends

Beaver has five friends, some of them are friends with each other, some are not. Thus, friend 2 is also a friend of 1, 3 and 4; and 3 is a friend of 4 and 5. The relationship between friends is represented by the following drawing.



## Question / Challenge

What is the number of friendship relations that should be added between Beaver's five friends, so that everyone can be friends with each other?

**A)** 3                **B)** 4                **C)** 5                **D)** 6

## T9. Decreasing numbers

Beaver has only learned the numbers 0, 1, 2, 3 and 4. With these figures, he creates numbers having exactly three different digits, and he writes them in decreasing order.

### Question / Challenge

The first four numbers are: 432, 431, 430, 423. What is the fifth number?

**A)** 402           **B)** 412           **C)** 420           **D)** 421

## T10. Beaver family

Teacher says: "Beaver John, your mom is 25 years older than your sister. You are 5 years younger than your sister. You are 10. How old is your mom?".

### Question / Challenge

Beaver John's correct answer is:

**A)** 35           **B)** 40           **C)** 45           **D)** 50

## T11. Car repair

Beaver is a very good mechanic, but he can only work on one car at a time. In his yard there are 5 cars to be repaired. The time required to repair the first car is 6 hours, for the second car it takes 2 hours, for the third car 4 hours, for the fourth car 8 hours and for the fifth car it takes 2 hours.
Beaver can work a maximum of 10 hours a day.



### Question / Challenge

What is the maximum number of cars Beaver can repair in 10 hours?

**A)** 2           **B)** 3           **C)** 4           **D)** 5

## T12. Painting the fence

Two children are painting a fence. The first child paints boards 2, 4, 6, 8, 10, … in red and the second paints boards 3, 6, 9, 12, 15, … in blue.
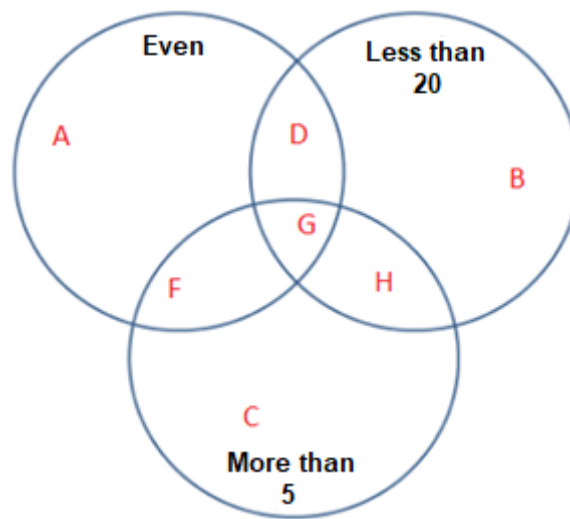
### Question / Challenge

Which board is painted with purple (red plus blue)?

**A)** 24           **B)** 25           **C)** 26           **D)** 27

### T13. 3 circles puzzle

Consider the diagram below.



### Question / Challenge

Which of the following is correct?

**A)** G=15       **B)** H=3       **C)** F=18       **D)** D=30

### T14. Red and black balls

There are 10 balls in a box, 5 red and 5 black.



### Question / Challenge

How many balls need to be picked up from the box in order to make sure you pick one red ball?

**A)** 3       **B)** 4       **C)** 5       **D)** 6

**Time Allowed:** 120 minutes

Tasks T15 – T21 carry 5 points each

## T15. Candy Shop

Beavers Alex, Bob, Chloe and Deborah stand in line at the candy shop. Each one of them will be given a single candy. The shopkeeper has only one candy of each type and he always gives the candy which is closest to the current beaver. For example, he will give the first square green candy 🟩 to Alex.



Alex        Bob        Chloe        Deborah
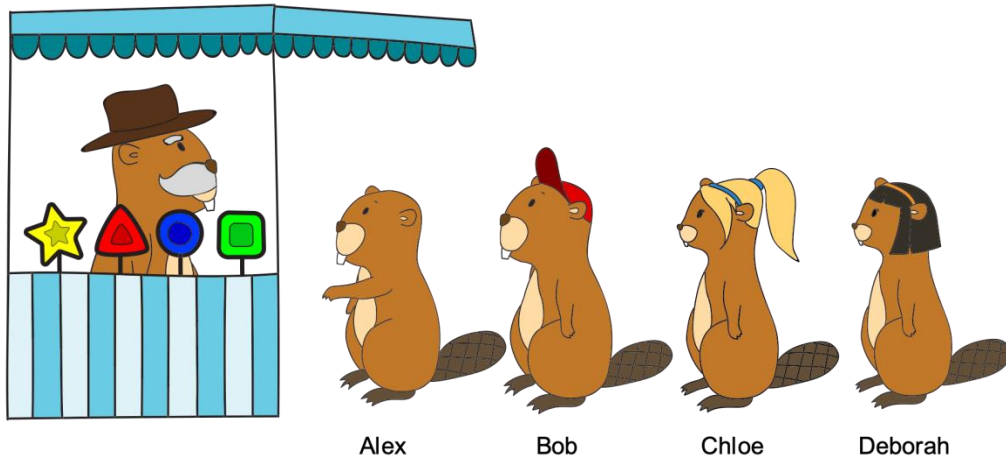
### Question / Challenge

Who is going to get the triangular red candy 🔺 ?

**A)** Alex            **B)** Bob            **C)** Chloe            **D)** Deborah

## T16. Rabbit in the Forest

A rabbit decides to take a walk around his forest.
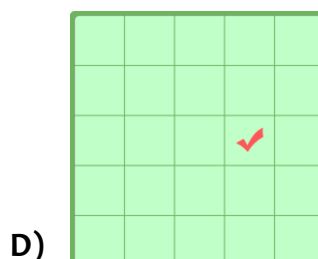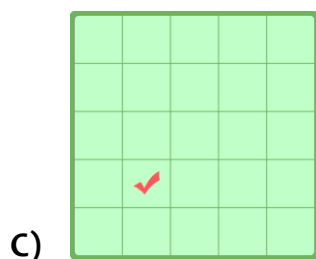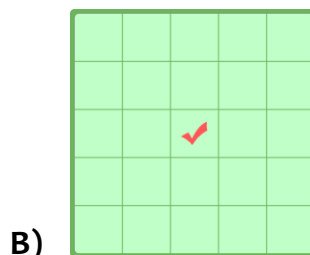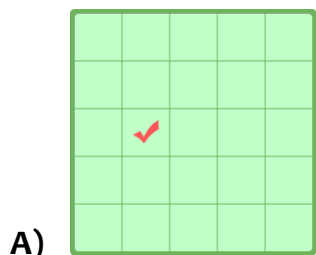He starts on the square marked with the rabbit and then follows the following instructions:

**W N E N E S**

Each letter marks a step in the direction shown in the compass rose.

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**Time Allowed:** 120 minutes
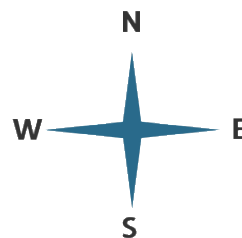
## Question / Challenge

Where is the rabbit after following all the instructions?

A)

B)

C)

D)

## T17. Beavercoins

The money used in Beaverland is called 'Beavercoins'. The coins have the following values:

|  16  |  8  |  4  |  2  |  1  |
|------|-----|-----|-----|-----|
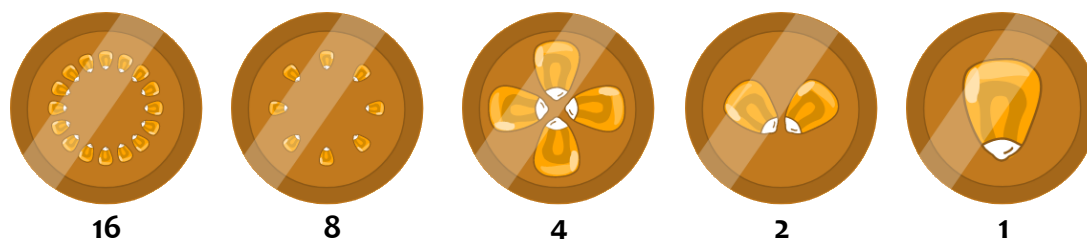
## Question / Challenge

The beavers do not like to carry many coins so they have a rule to always pay with as few coins as possible. Under this rule, what is the minimum number of coins that would be used to pay 13 Beavercoins?
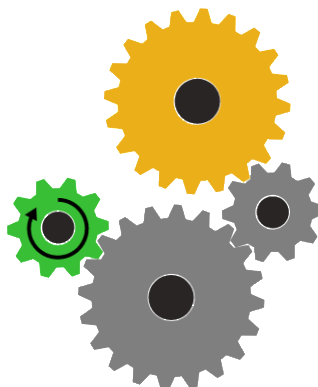
**A)** 1          **B)** 2          **C)** 3          **D)** 4
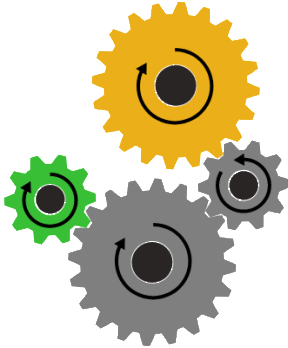
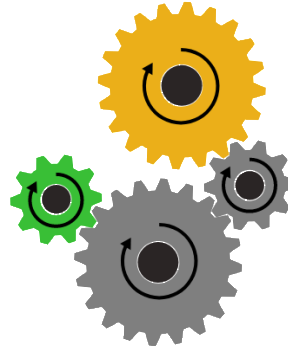## T18. Gears

Look at the gears below.

## Question / Challenge

When the green gear turns in the direction shown by the arrow, which direction do the gears turn?
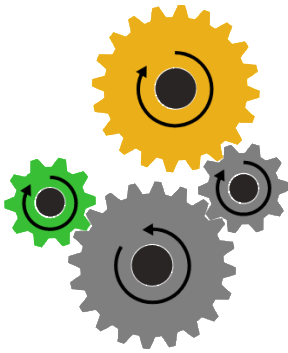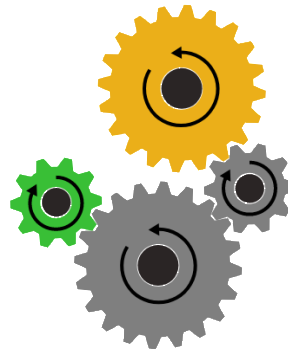
A)



B)



C)



D)



## T19. Cleaning

After a concert, the cleaning robot picks up the trash that some of the audience has left on the lawn:
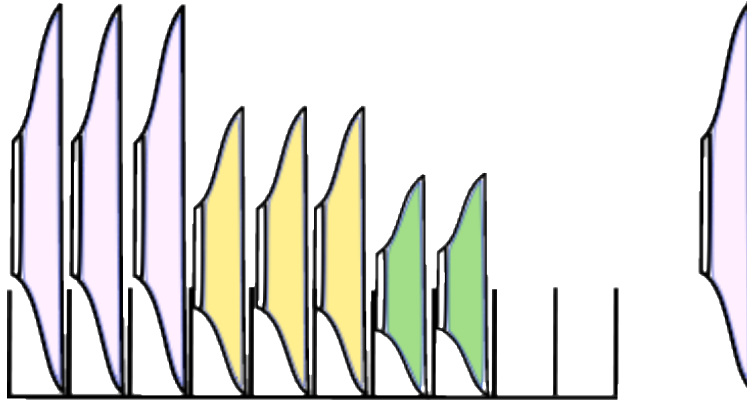


The cleaning robot moves to the closest piece of trash and picks it up. It then moves to the next closest piece of trash and picks it up. The robot continuously does this till all the pieces of trash are picked up.

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**Time Allowed:** 120 minutes

## Question / Challenge

Which piece of trash will the robot pick up *last?*

A)          B)          C)          D)

## T20. Plates

Accurate Beaver always has her plates arranged in the order as seen in the picture above: large ones first, then medium ones and finally the small ones. Now she needs to put an additional large plate into her drier.
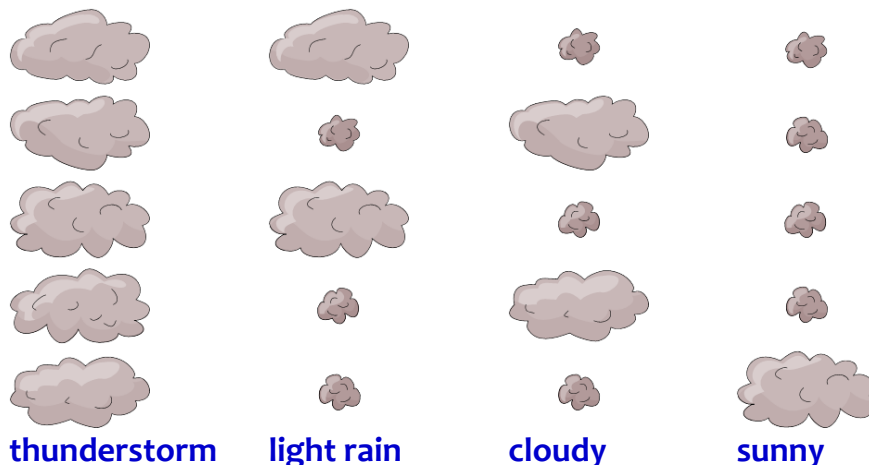
## Question / Challenge

What is the minimum number of plates (including the new one) she should move, if she wants her plates to be arranged correctly?

**A)** 3                **B)** 4                **C)** 5                **D)** 6

## T21. Cloud Communication

A weather beaver sends messages from the top of a mountain to beavers in the valley below. She makes small and large smoke clouds and uses the code below.

| thunderstorm | light rain | cloudy | sunny |

**Time Allowed:** 120 minutes

One windy day, the beavers in the valley were only able to see two large clouds as below:



## Question / Challenge

What messages might have been sent?

**A)** sunny and light rain          **B)** thunderstorm and light rain
**C)** cloudy and light rain          **D)** thunderstorm and cloudy