

Look at the pattern ...



*What symbol comes next?*





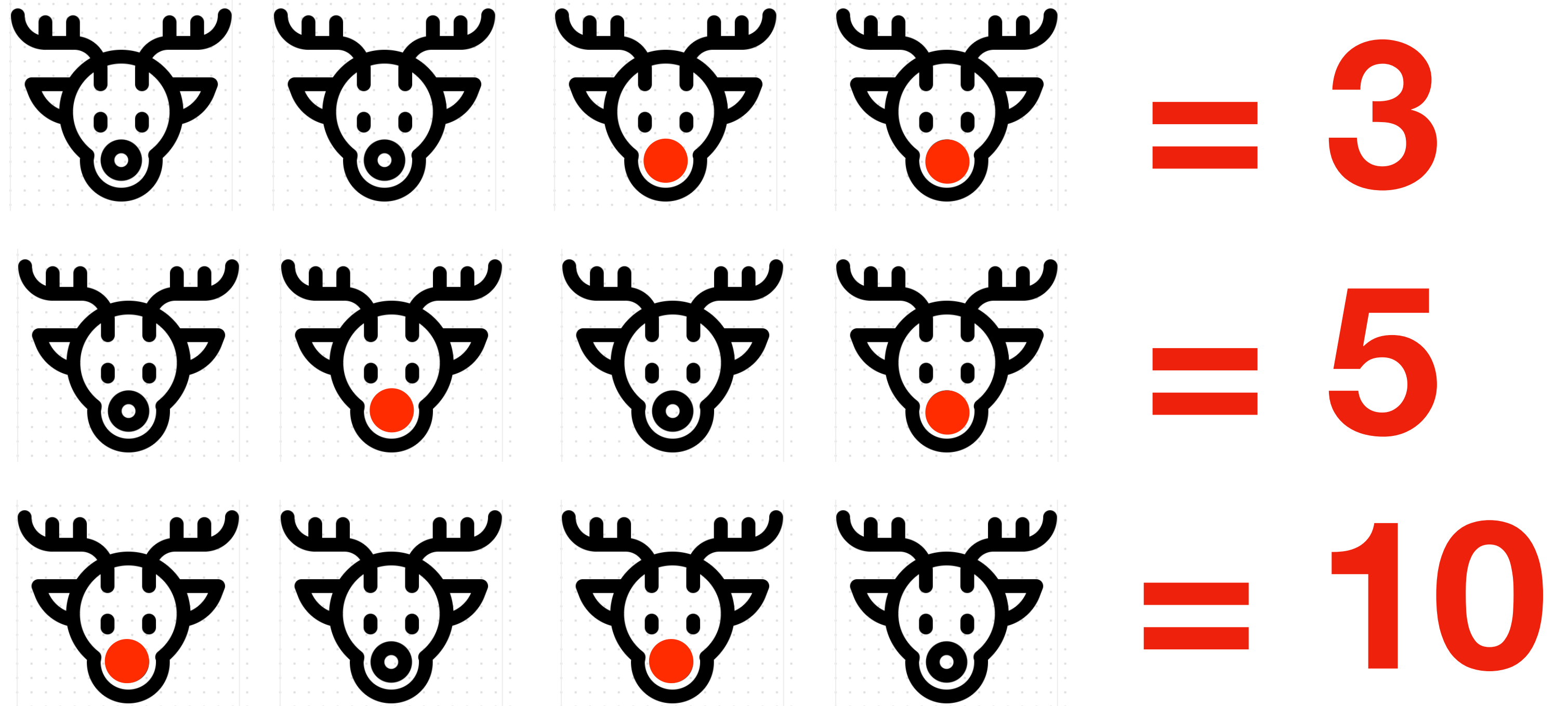
**The reindeer are decorating the stable by hanging decorations as above.**

*What pattern of decorations should replace: ? ? ? ?*

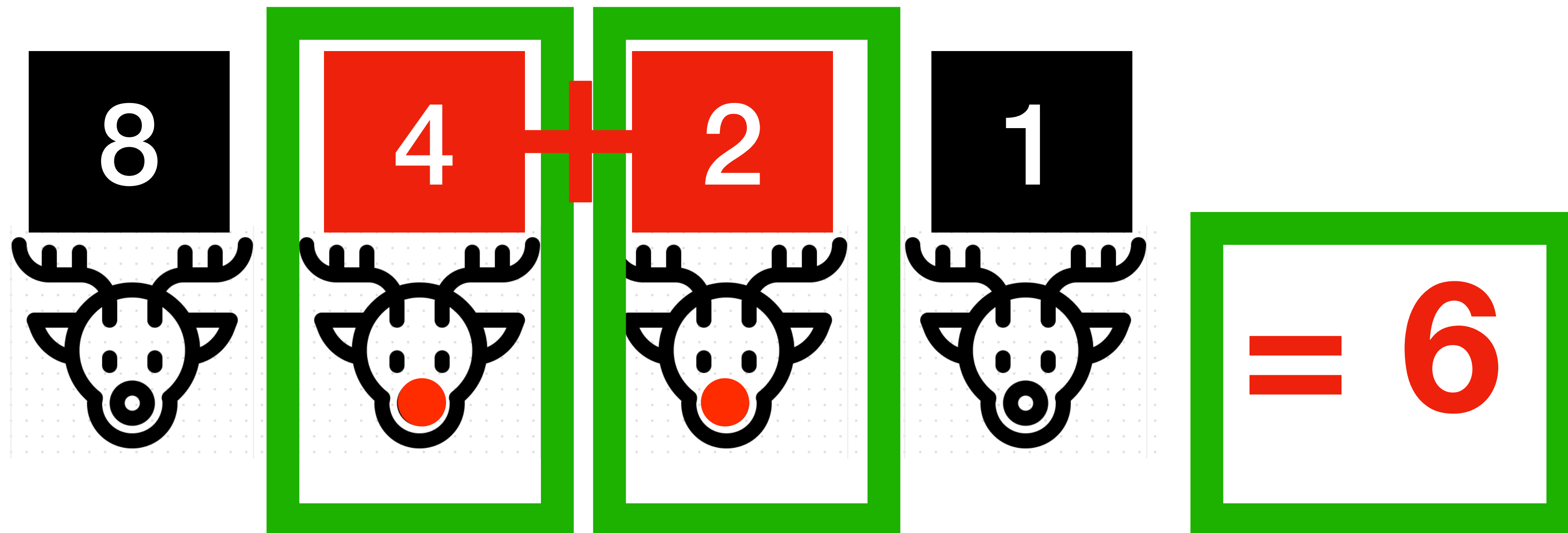
<b>1</b>				
<b>2</b>				
<b>3</b>				

*Groups of reindeer work together to light up their noses to signal numbers to other groups.*

*For example...*



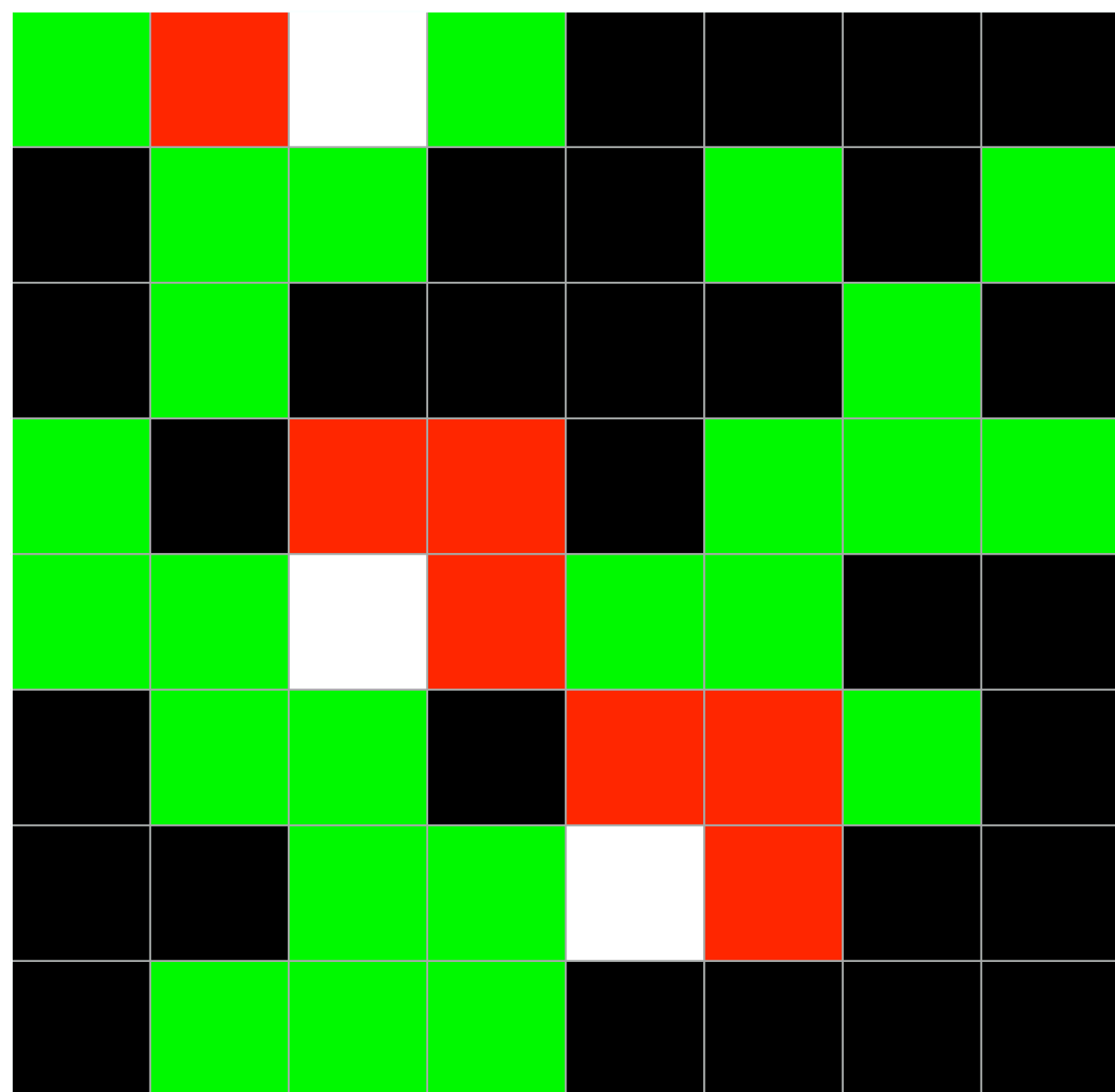
*Can you work out what number this group reindeer are signalling?*



***Vixen the reindeer has taken a photo of some holly and zoomed in.  
The photo is stored as a set of numbers.***

***Can you work out what numbers are missing?***

**Zoomed in photo**



**Stored as...**

3	2	0	3	1	1	1	1
1	3	3	1	1	3	1	3
1	3	1	1	1	1	3	1
3	1	2	2	1	3	3	3
<b>3</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>
1	3	3	1	2	2	3	1
1	1	3	3	0	2	1	1
1	3	3	3	1	1	1	1

**White = 0  
Black = 1  
Red = 2  
Green = 3**

***Enter your answer with no spaces eg 12301230***

The reindeer use code to send messages.

Part of the code has been found....

A=65, B=66, C=67,  
D=68, E=69, F=70 ....

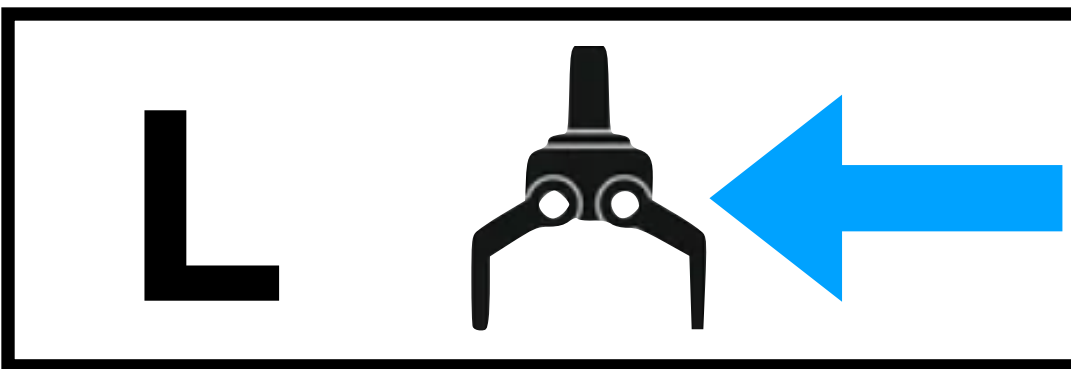
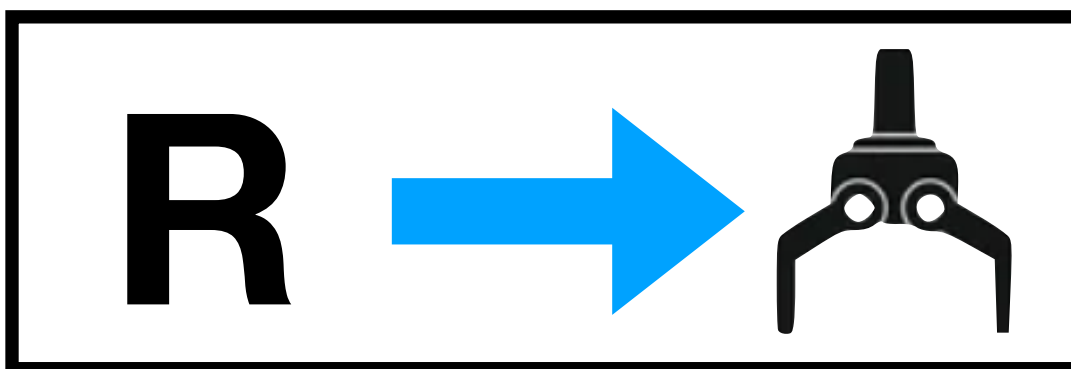
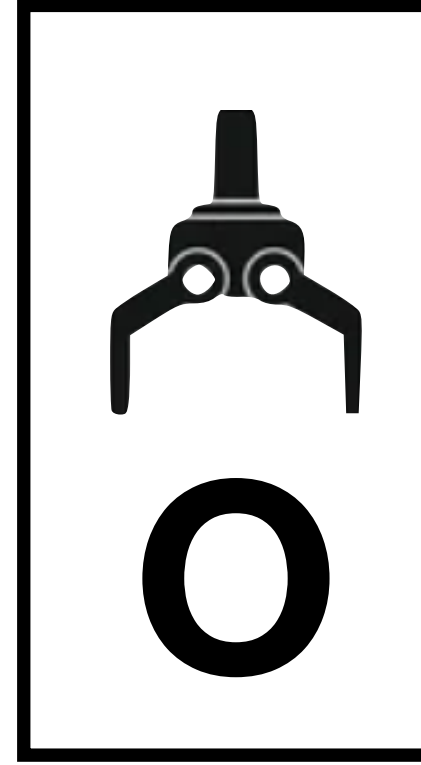
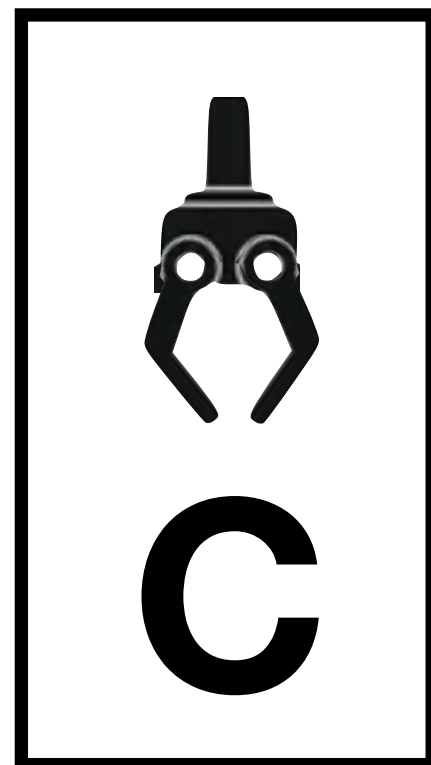
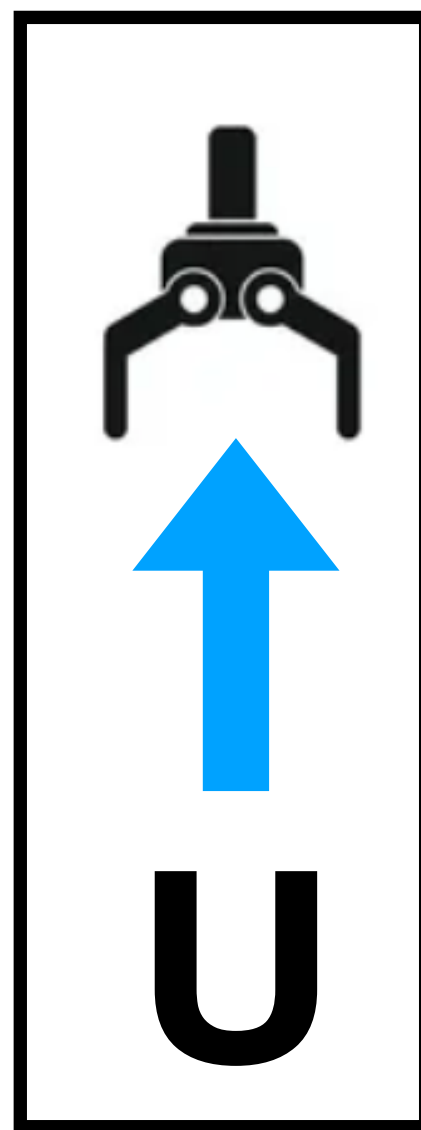
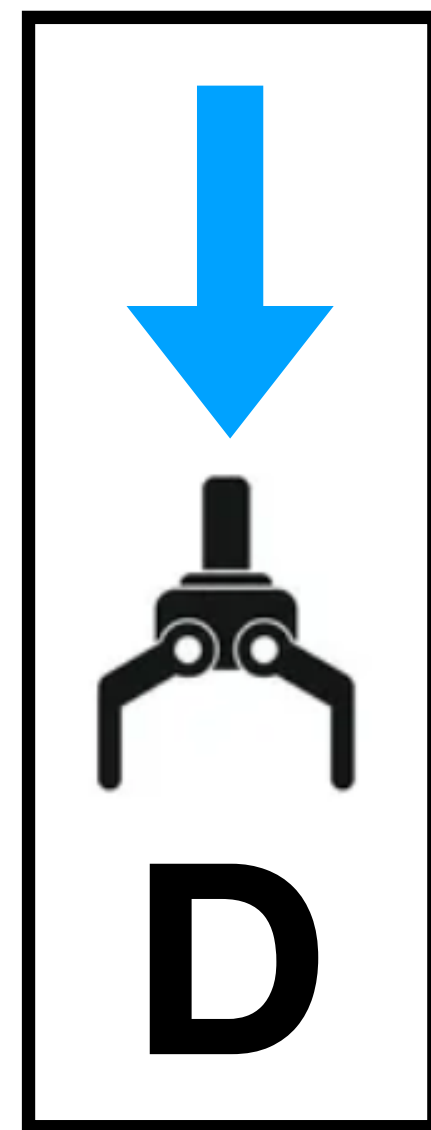
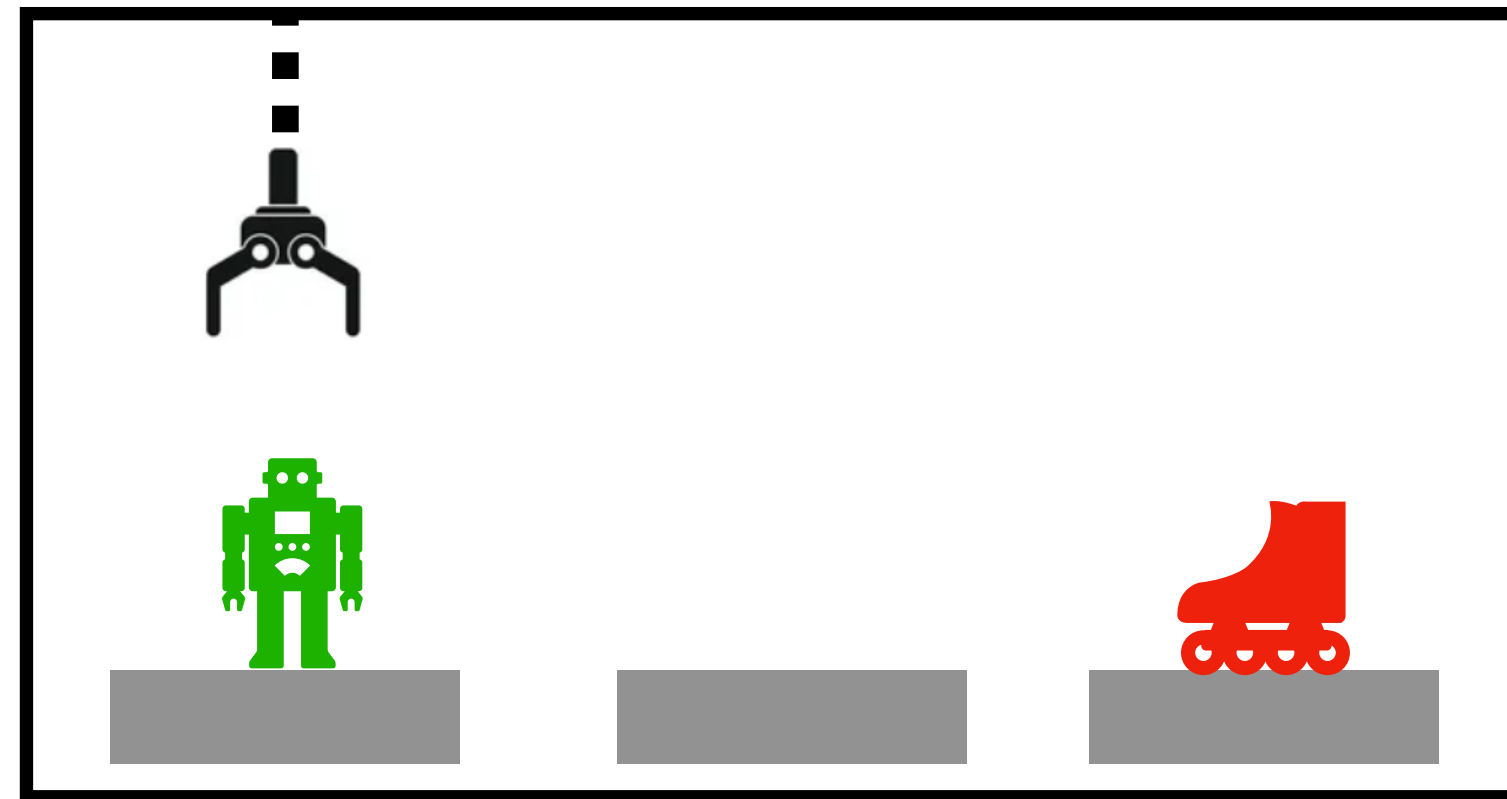
*Can you work out the rest of the code and figure out this message?*

**83 76 69 73 71 72 82 73 68 69**

**S L E I G H R I D E**

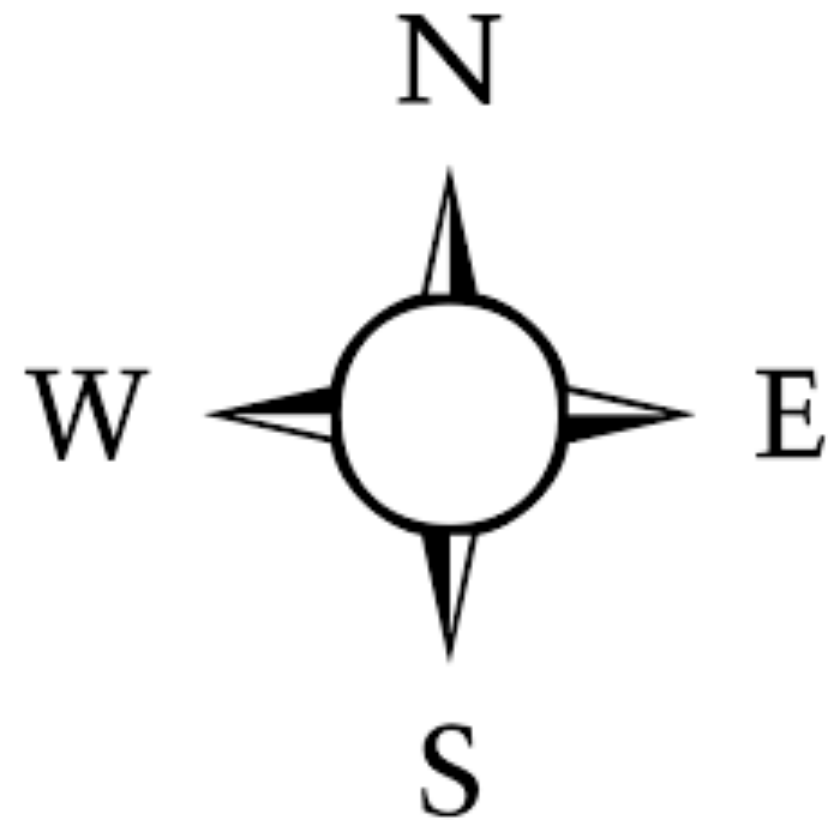
Can you code the claw to swap the **green robot** with the **red roller skate** using the commands on the left. Only **ONE** object can be on one platform at any time.

For example the code **RDCU** would move the claw **Right, Down, Close, Up**  
Enter your answer in capital letters with no spaces



Correct answers (one of the following):  
DCURDOURDCULLDOURDCURDO,  
DCURDOURDCULLDOURDCURDOU,  
DCURDOURDCULLDOURDCURDOULL



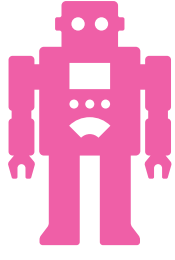
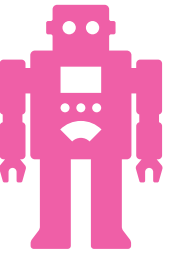






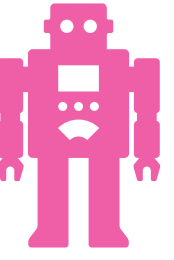






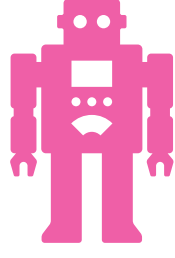



***N for North  
S for South  
E for East  
W for West***



***Code **one** route that each reindeer can follow that will end with all three reindeer on a different object.***

***Reindeer cannot land on or pass through rocks*** 

***Enter your answer in capital letters with no spaces eg **EENS** would be **East East North South*****

**Correct answer:  
NWWS. Or NNWWSS**

# SNOW PATTERNS

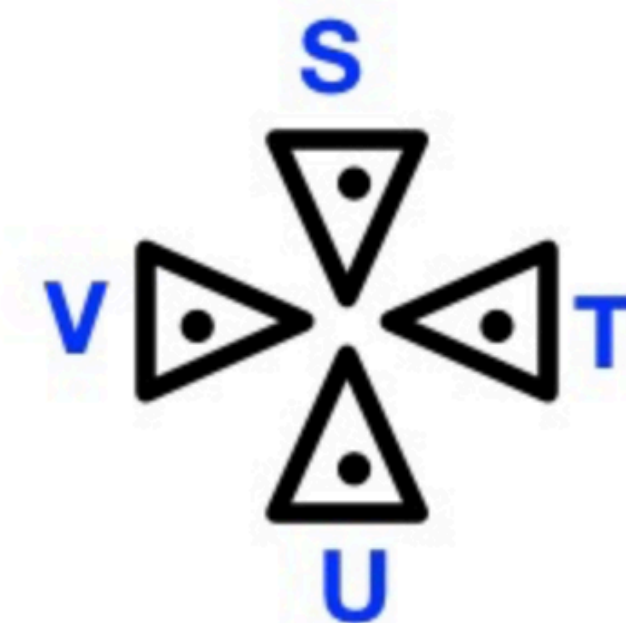
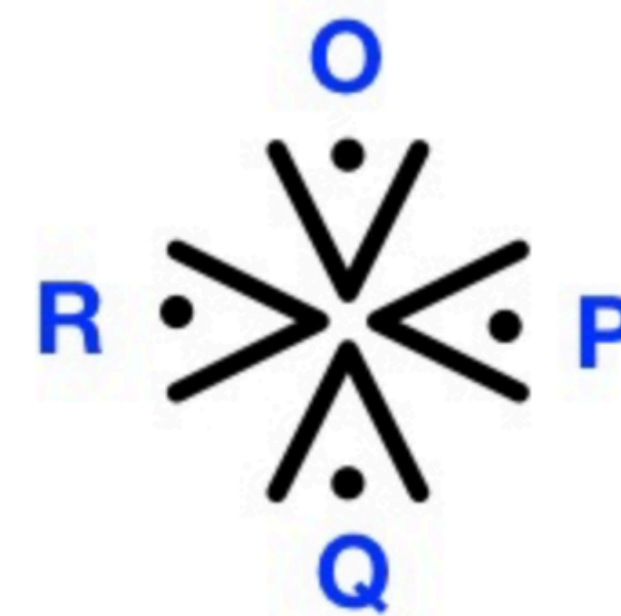
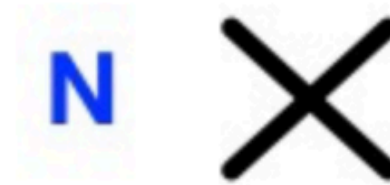
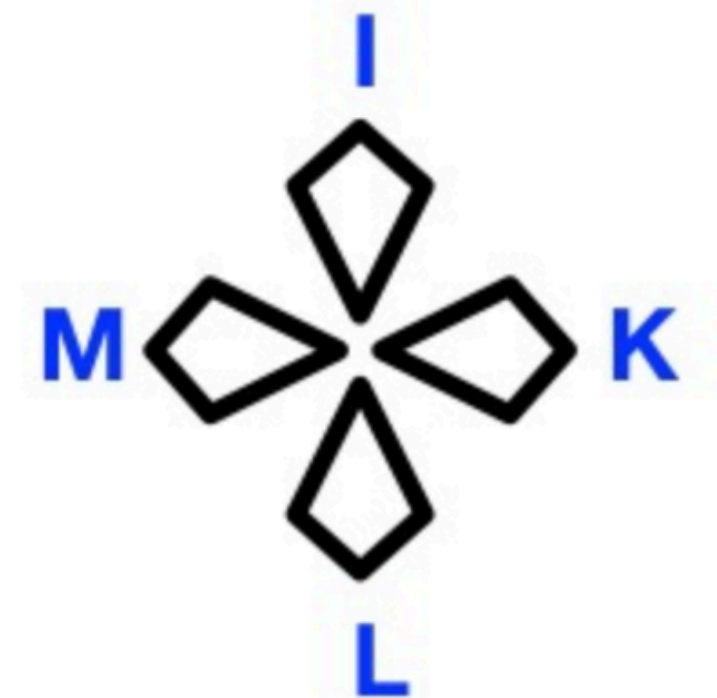
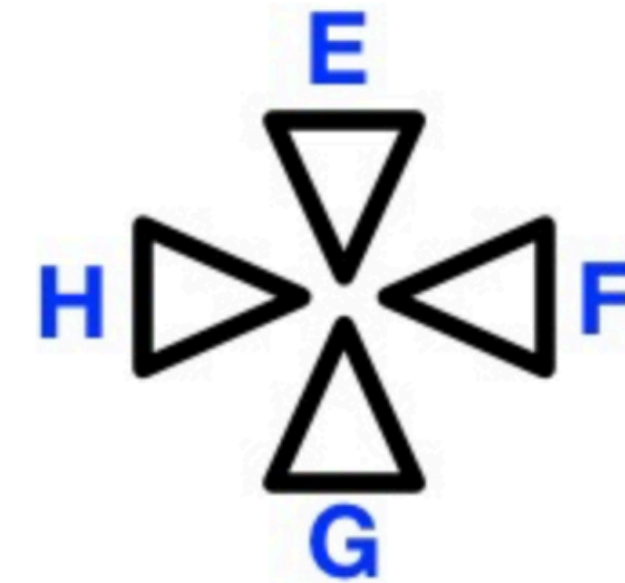
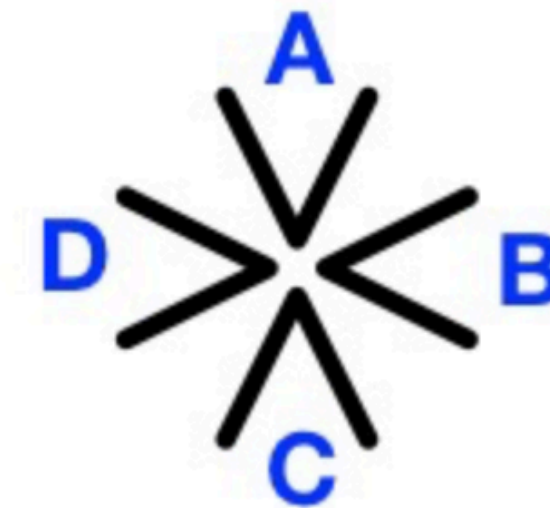
*The reindeer have made patterns in the snow and use these patterns to leave messages for each other.*

*The patterns are shown on the right.*

*What message has been left here?*



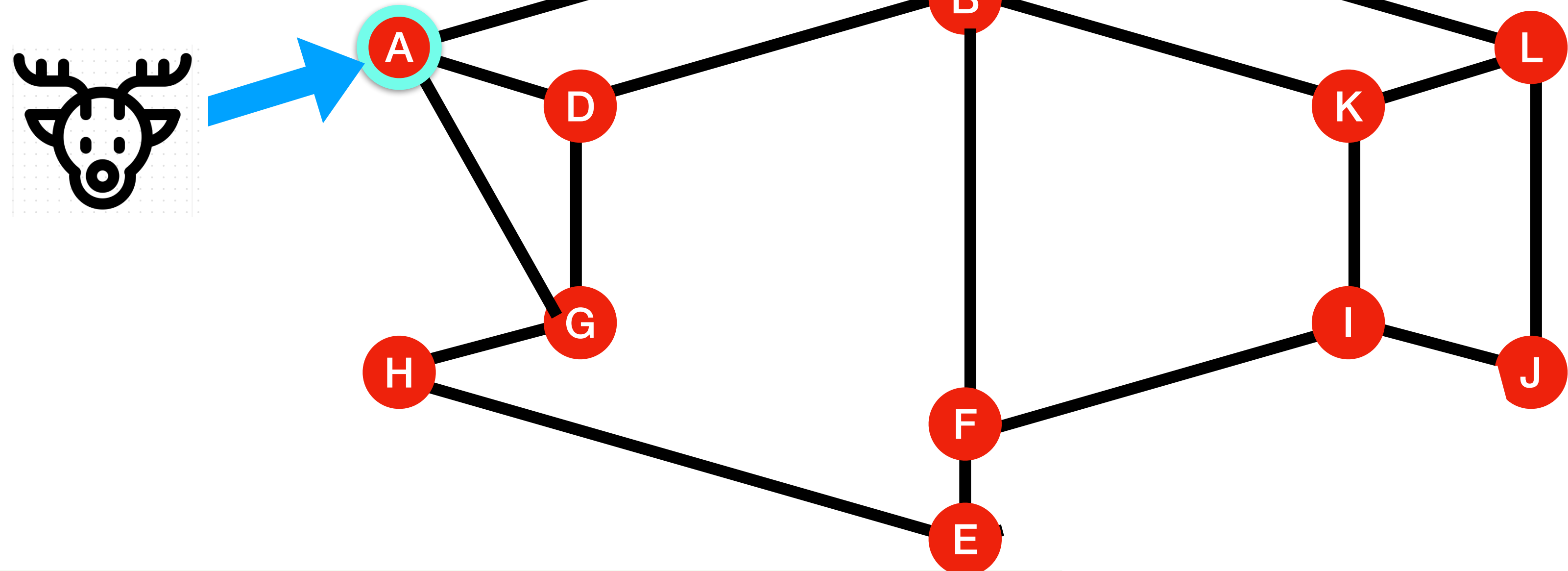
DINNERATSIX





Comet the reindeer lives at point A. They want to visit all of their friends who live at all the other points on the map.

*Plot a route for Comet so that they only visit each friend once and ends up back at A.*



**Correct Answers (one of the following - must end back at A!)**

**ADGHEFIJLKBCA Or ADGHEFBKIJLCA Or**

**ACLJIKBFEHGDA Or ACBKLJIFEHGDA**

# Blitzen, Dancer and Cupid are having a race! During the race, the following happens....

Cupid will overtake one reindeer when running uphill.

Blitzen will overtake one reindeer when running downhill.

Dancer will overtake one reindeer when running across ice.

Who will be first, second and third?

**1. Cupid 2. Dancer 3. Blitzen**

