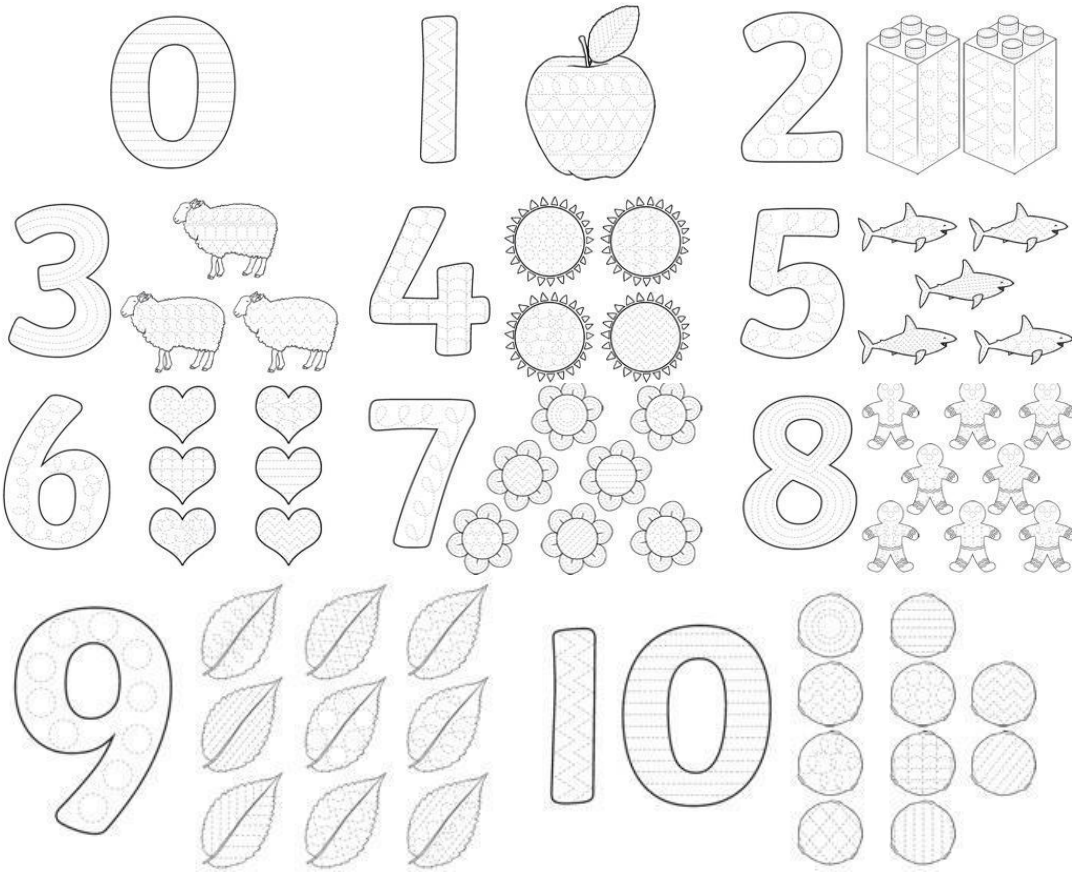
JUMPING MATH (LEVEL 0)

Description:	Learners will design their own number line to better grasp number sense and conduct simple addition functions.
Leading question:	Can you make your own number line?
Age group:	4 to 5 Years Old
Subjects:	Numeracy
Total time required:	5 hours over five days
Self-guided / Supervised activity:	Supervised
Resources required:	Paper, pencils, paint(optional), crayons(optional), cardboard or stiff paper.
Learning outcomes:	• Learners will be able to write numbers from 0-20 • Learners will be able to count numbers from 0-20 forwards and backward. • Learners will be able to tell what numbers comes before and after. • Learners will be able to make their own number line to 20 • Learners can make simple additions.

Day 1 - Today, learners will recall their knowledge about numbers from 0 to 10. Learners will improve their fine motor skills by practicing number formation, counting, and tracing.

Time	Activity and Description
10 minutes	• Starts counting to 10 in a loud voice • Now, ask the learners to count with you to 10 • Now again, you can count altogether, this time clapping hands, one clap for 1, two claps for 2, etc.. • Repeat this activity at least three times. Now you can challenge them • Have learners count one after the other quickly - anyone to hesitate is out.
20 minutes	A great way to reinforce number formation can be tracing numbers activities: • Ask the learners to trace the numbers from 0 to 10. You can provide them with the template below or trace dots on a piece of paper so they can follow.  **TIP**: Repeat this activity at least three times; this will help the learners remember the correct number formation.

20 minutes	By doing “pattern tracing activities,” learners can recognize numbers up to 10 while developing fine motor skills. ● Ask the learners to follow the template provided below. Alternatively, ask them to write the numbers from 0 to 10 and to add a drawing for each number next to it, for example, 1 and one ball, 2 and two flowers, etc. In the template, each number has a handwriting pattern inside for children to trace over. The learners can complete the patterns in one sweeping movement without taking their pencils off the page.  **TIP** (If available): ● Encourage the learners to use different to complete the patterns, such as colored pencils, paints, or crayons.

Day 2 Today, learners will start the day by playing a number game. After that, they will recall their knowledge of numbers from 11 to 20. Through a fun game, learners will be introduced to the number line and how to use it.

Time	Activity and Description
10 minutes	Start the learning day with a math game: Jumping Game No. of Players: more than 3. How to Play • Call out a number from 11 to 20. (for example, 14) • Players will jump the number of times as the number is called out. For example, number called out is 14, they will jump 14 times. To do it more fun, you can change the actions. First, they will jump. Next, they will wave their hands, clap, stamp, and turn around in the same spot. • Whoever does it the fastest gets 1 point. Who has the most points? They win the game! **Tip**: repeat the game at least three times. You can change the game by clapping, stamping, and turning around in the same spot.
15 minutes	**Counting task:** ● Give the learners the counting worksheet(appendix)and ask them to count the objects and write the numbers they can find. ● Once they have finished, ask them to check the number formation. ● If any number is not in the correct formation, you can fix it for them and ask them to repeat the number. **Tip**: Always check the number formation. At this age, kids tend to do "mirror" writing, also called reverse writing (when children write certain letters or numbers backward or upside down).
15 minutes	**Number dictation:** this activity will help the learners to think and remember the number formation. ● Ask the learners to write the numbers you will tell. ● Start with numbers from 11 to 20 in that order. ● Now, tell them the numbers in a different order. For example, two, five, seven, three.
20 minutes	**Jumping math activity:** For this activity, you will make a dice for the learners. See the templates in the appendix. Once the dice are done, ● Give each learner one big square of paper. ● Each learner will write the number you ask (learner 1 number 0, learner 2 number 1, etc.)Have numbers write up to 20.

- Ask learners to place the numbers in line following the order from 1 to 20, creating a sort of number line. (See pictures for ideas).

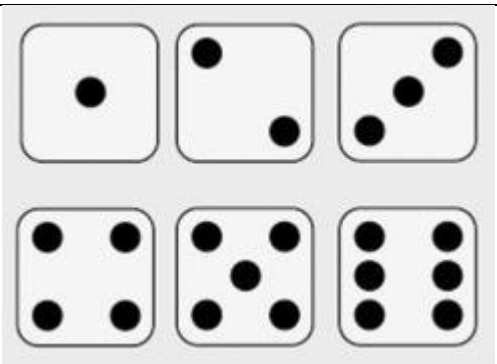
Now is time to roll the dice!

Rules:

- One learner will throw the dice and based on the number that comes, they have to jump that many places UP the “number-line”.
- Learners will start from 0 (e.g. if the dice is 3, they will jump up 1..2..3 to number 3, then throw the dice again and the will jump the number that the dice is showing.
- To make this game a bit challenging you can ask learners to roll the dice 2 times, and help them to count, for example, if the first number is 3 and the second number is 5, you can tell them to count 3+5= 8 and they will jump to 8 in the “number line” You can also complete a numerical representation by writing down the sums that they are practicing e.g., 3+5=8

Tip: for the numbers you can use paper, or write the numbers on the floor with chalk.

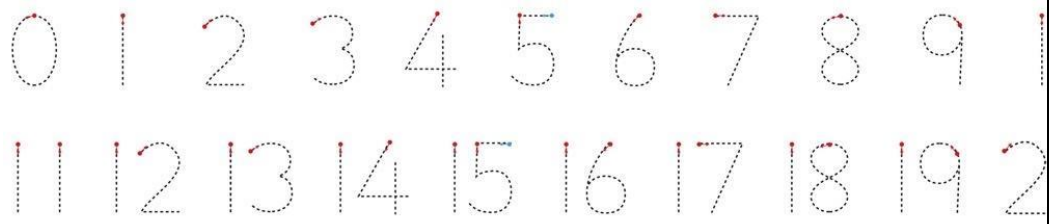
Alternative for the game: If you think the dice ca be hard to make, you can simply have 6 pieces of paper and write dots instead of numbers, same as a dice (one dot for 1, two dots for 2,etc.)

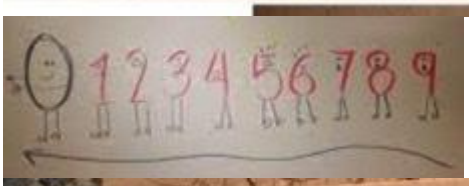


Then, write the numbers 1-6 on little pieces of paper and place them in a different order on the floor.

- you will ask a learner to pick a paper and shout out the number.
- the other learners will hear the number run over and tag the number.
- you can do this activity with or without the adding activity.

Day 3 - Today, learners will create their personal number lines, they will use these during their math activities. With the help of the number line, learners will improve their ability to recognize what numbers come before and after.

Time	Activity and Description
20 minutes	**Warm-up activity** ● Provide learners with the tracing template below.  ● Make a number dictation calling out numbers from 1 to 20. Ask them to write, then change the order of the numbers. They will write a second time..
10 Minutes	**Line up game:** Learners will now play an ordering game ● Make 2 or 3 teams of players; this will depend on how many learners you have. ● Each team member is given a number. ● The team must line up in the correct number order from small to big without talking. ● The first team to line up wins and runs to catch the players from the other team. **Tip**: you can use larger numbers for older kids. **Hint:** This game is designed to be physically engaging while practicing math concepts.
30 minutes	Number lines are an excellent resource to help young learners to learn the numbers from 1 to 20, as well as an excellent aid for when they attempt to work out simple calculations. ● Provide the learners with a long stripe of cardboard or stiff paper. ● Ask them to write numbers from 0 to 20, leaving a small space between them. They can use different colors for each number. ● Ask the learners to do it neat and clear. They will keep this number line for all their math lessons. See the examples below.


Once they finish their number lines, ask them to follow your instructions to play the "follow with your finger" activity:

- Call out a number and ask the learners to find it in the number line,
- Ask them what number comes before(make a jump with your finger backward)
- Repeat this exercise several times. This way, learners will improve their ability to recognize which number comes before.

Hint: counting backward and forward can help children develop confidence and practice simple sums. Learners will use the number line to add or subtract numbers, counting up or down the number line to find out what is the correct answer.

Day 4 - Today, learners will practise counting backward from 20 to 0. They will introduce simple addition and subtraction equations.

Time	Activity and Description
20 minutes	Learners will start the day by playing a game: ● Split the learners into two teams (team A and team B). ● Find something you can use to point toward the two teams. A magic wand would be great for this, or even just something like a stick. ● One team will face the other team. ● Point the wand or stick at the first team, and they say the first number, e.g., '10' if you start from 10 '20' if you start from 20. ● Then point to the other team who says the following number, '9' or '19'. Then the other team says '8' or '18' Keep bouncing back and forwards between the two teams until you get to zero. Repeat this several times until you are sure they can remember how to count backward. **Hint**: When they learn how to count, they will know what number comes next in any given sequence.
20 minutes	Learners will now play this fun subtraction game: "Jump for math" ● Split the learners into two groups (group A and group B). ● You will need to write and layout numbers on the floor (from 1 to 20) ● You will call out two different subtraction questions, one for group A another for group B: "5-2" or "16-4" ● Learners from each group will solve the question and taking turns will need to jump to the correct answer on the floor. Give 1 point to the fastest group with the correct answer. **Hint:** This game is designed to be physically engaging while practicing math concepts.
20 minutes	Provide the learners with the templates in appendix 3 and ask them to practise counting to 20 by filling in the missing numbers. Alternatively, you can write numbers for them on a piece of paper. **Tip**: Learners can warm up by practising writing numbers and then use this as a reference point before finding numbers before and after.

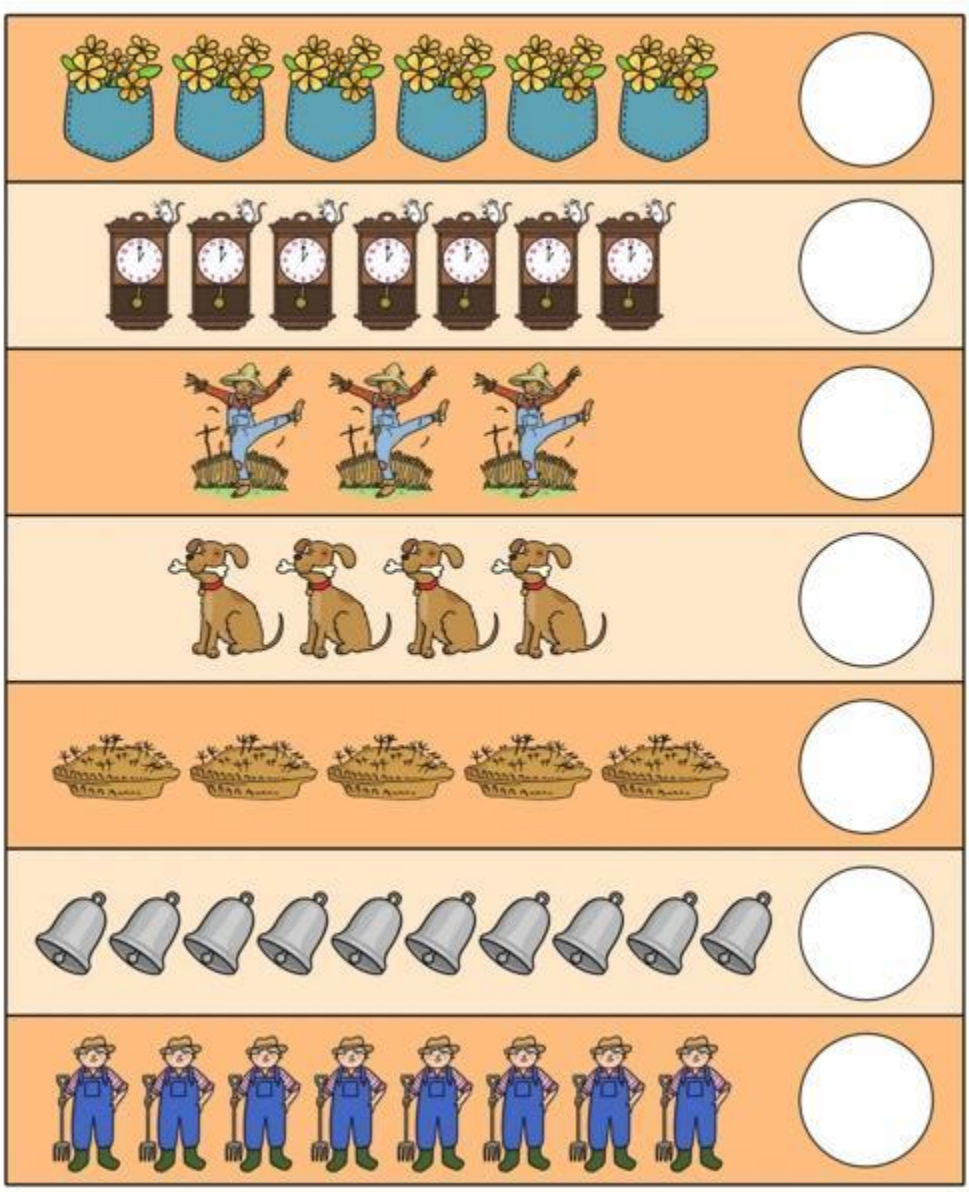
Day 5- Learners will reinforce what they learned this week through different games.

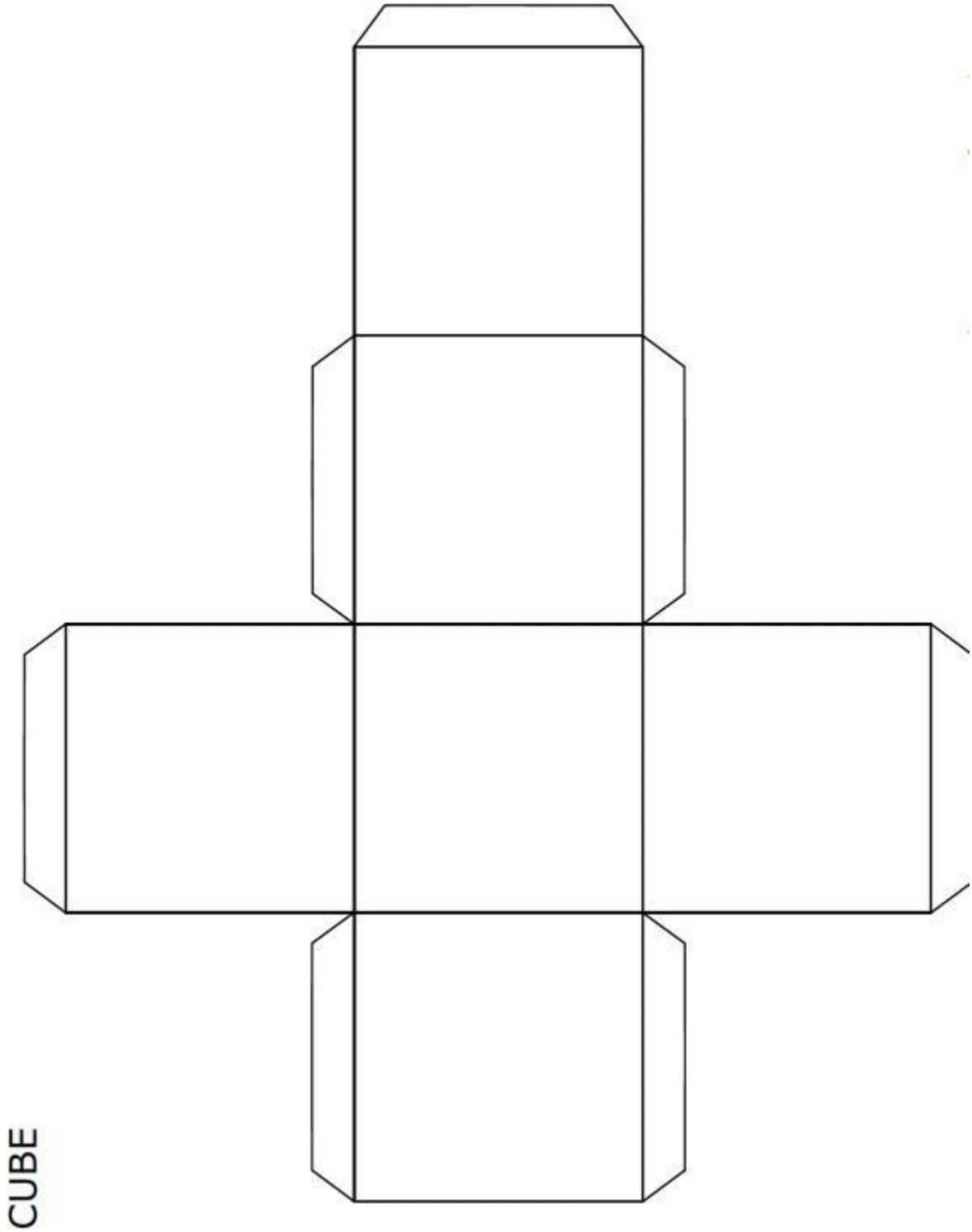
Time	Activity and Description
20 minutes	Learners will play the “follow with your finger “ activity. This time learners will tell you what number comes before and after, using the number line first, then challenging them without the number line. ● Ask the learners to take the number line they made during day 3. ● You will call out a number and ask the learners to find that number ● You will tell them to write on a piece of paper what number comes after and before. They will show you. ● This time, repeat the activity by calling out the numbers and asking them to find before and after without the number line. **TIP**: Through playing these games, learners will gain more experience working with numbers, performing calculations, and estimating the value of different numbers.
20 minutes.	Let’s jump some numbers! This is an exciting number line activity for learners who can jump across the number line! For this game, ● You will prepare 20 big squares on paper where you will write numbers from 1 to 20. ● Place the numbers on the floor following the sequence imitating a big number line. ● Give each learner 2 simple equations, one adding (5+6=11) and one subtraction(10-4=6). They will write it and solve it. ● Learners will come to the number line individually. They will read the equation to their peers and then solve it on the big number line. Learners will take turns on the number line and count together as they jump across! Hint: Number line games are super interactive activities that involve the whole group. These games are beneficial when teaching subjects like addition and subtraction.
20 minutes.	Keep the learners' brains awake with this jumping game. Finish the learning journey with these two fun activities. 1-Stand-Up competition. Make the learners work in groups of 3(optional). ● You will start reading an addition problem. For example, 5+1= ● Learners will find the answer and stand up out the answer. If the answer is correct, award them with a point. If the answer is incorrect, give another group a chance to play. They will use the number line for a few rounds to help them. Challenge them by asking them to do it without the number line. 2-Who says?

	How to Play ● Learners will sit in a circle ● They will take turns calling out any number from 1 to 20. (Eg: 12) ● The first learner to jump (or do any other action you collectively decide) says a number before (11) and after (13) the number called out. ● If said correctly, they get the point. ● The player with the most points wins! **Tip**: Older learners can perform numbers from 1 to 30 or 50.

Additional enrichment activities:	Design the number line for 30 - 50.
Modifications for simplification	Focus only on numbers from 0 to 10, counting forward and backward. Focus only on numbers from 0 to 20, counting forward and backward. Make a number line only to 10. Addition can be done only with +1

APPENDIX 1





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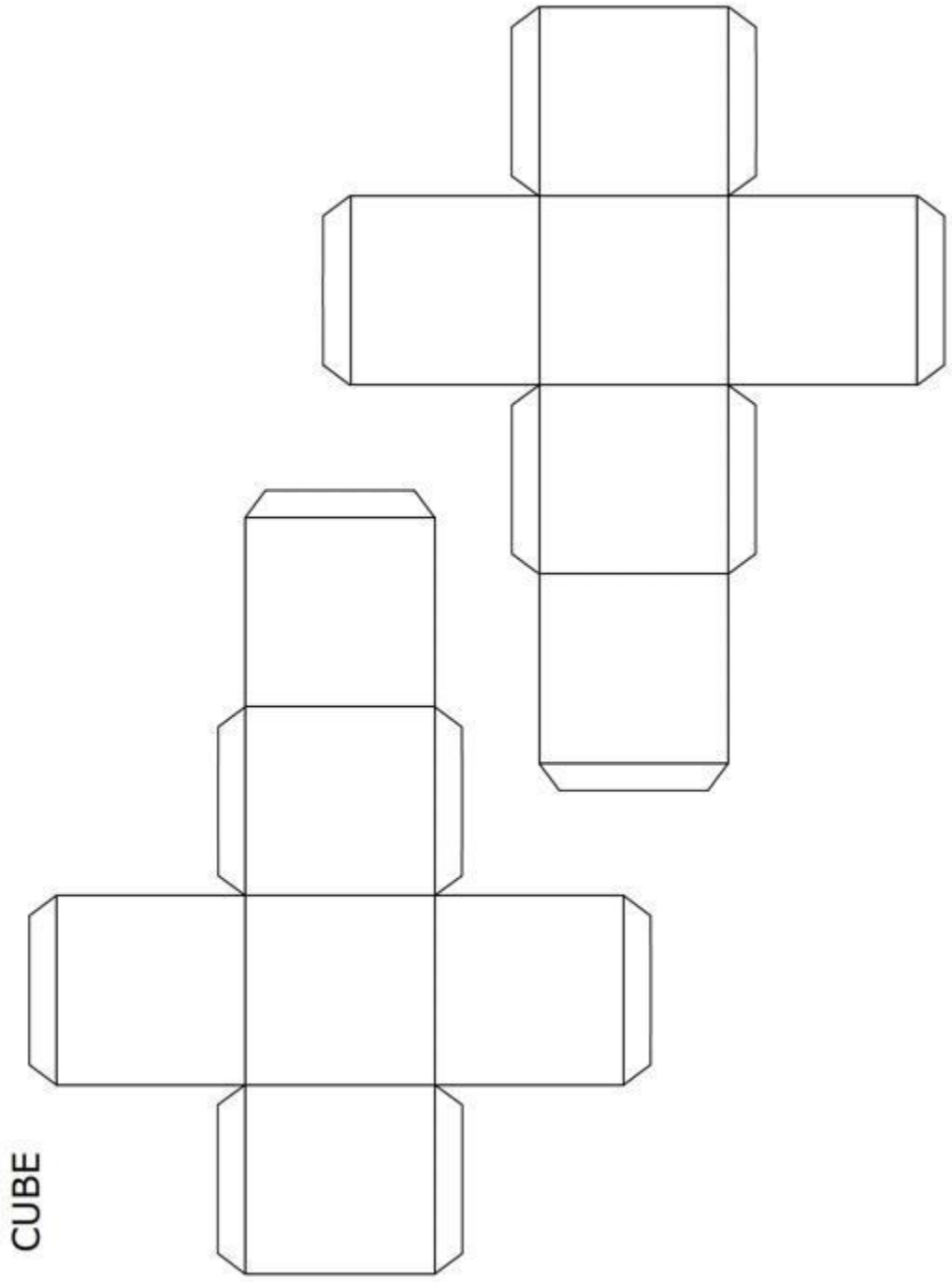

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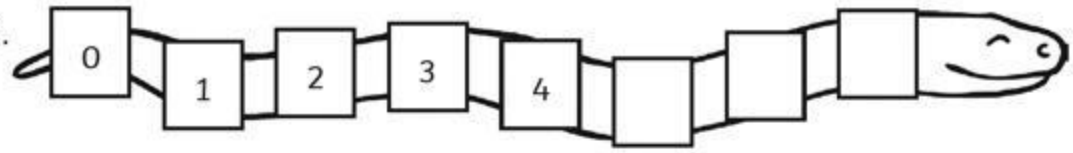

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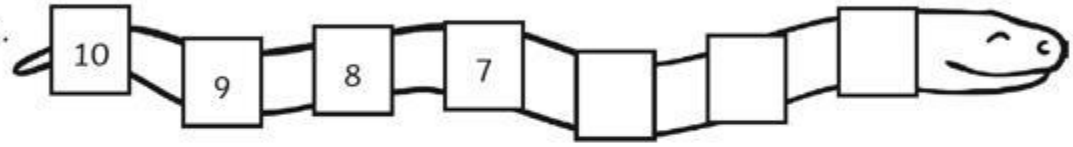

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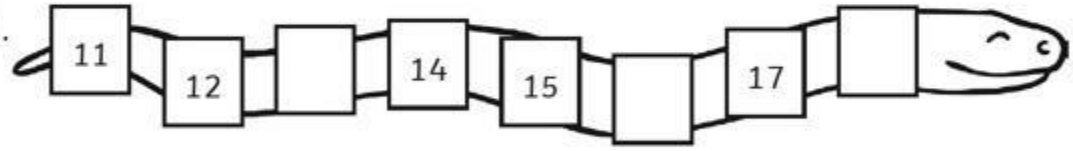

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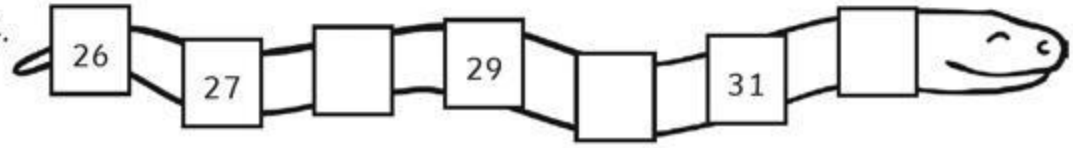

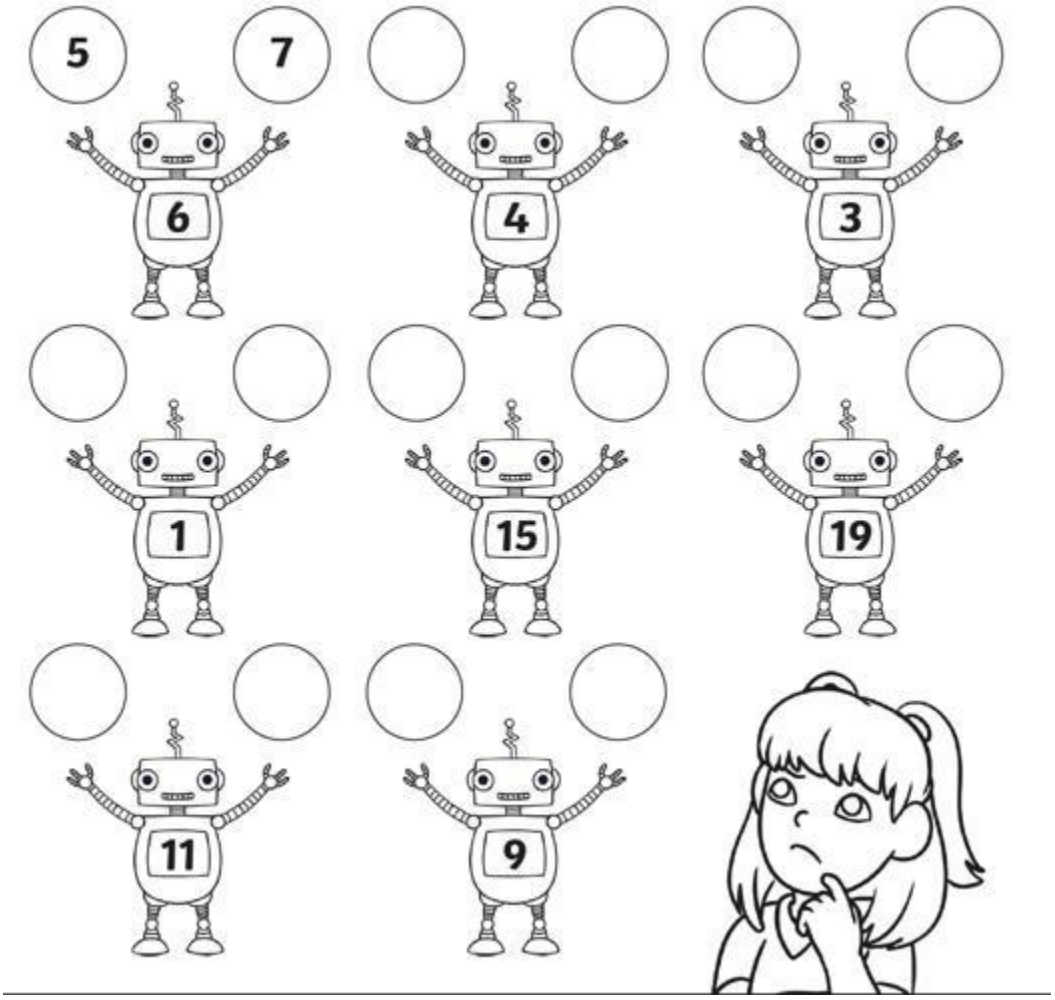
5
7
6
4
3
1
15
19
11
9

Can you find 1 less and 1 more than the number shown?