

Math 2 Classwork 14

WARM UP

1

What number am I?

- a) When I am taken from 26, the result is 12. _____
- b) When I have 18 added to me, the result is 49. _____
- c) When I am decreased by 60, the result is 17. _____

2

Insert the correct number:

- a) 3,687 has a ____ in the ten's place
- b) 3,687 has a ____ in the thousand's place
- c) 3,687 has a ____ in the hundred's place

Homework Review

3

Draw two triangles whose intersection is:

(Practice of the separate piece of paper first!)

a triangle	a point	a rectangle	a line segment

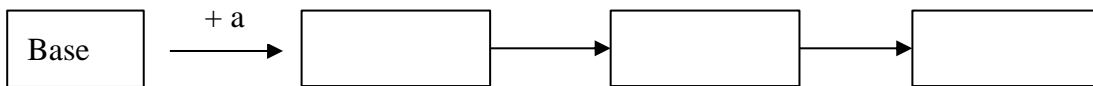
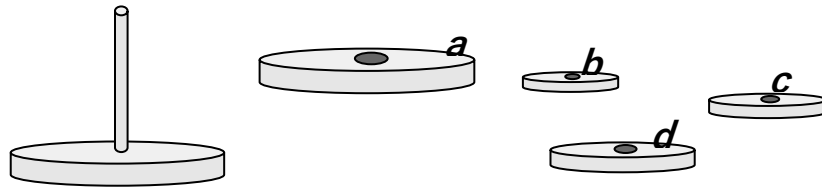
New Material

An algorithm is a set of instructions designed to perform a specific task. This can be a simple process, such as multiplying two numbers, or a complex operation, such as playing a compressed video file.

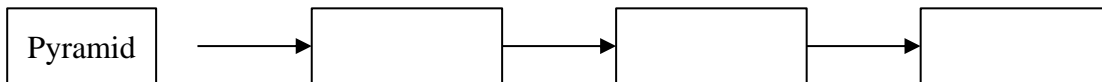
Examples: Any kind of instructions from how to build paper airplanes to how to plant flowers, from rules on how to add numbers to programming. The internet, your Wi-Fi, smartphone, phone, computer, router, satellites, almost everything that has a computer inside uses these algorithms in one way or another to function.

4

a) Write an algorithm for putting the toy together so the size of the pieces gets smaller towards the top.



b) Write the algorithm for taking the toy apart.



5

The following list represents the steps needed in order to mail a letter. Put the items on the list in the correct order.

- Put the letter in the mailbox _____
- Take a letter, an envelope and a stamp _____
- Stick the stamp _____
- Go outside to a mailbox _____
- Put a letter inside an envelope _____
- Write a letter _____
- Write address on the envelope _____
- Fold a letter _____

When the algorithm lists the operations from first to last, after performing the last one, we stop. Such algorithms are called **linear**.

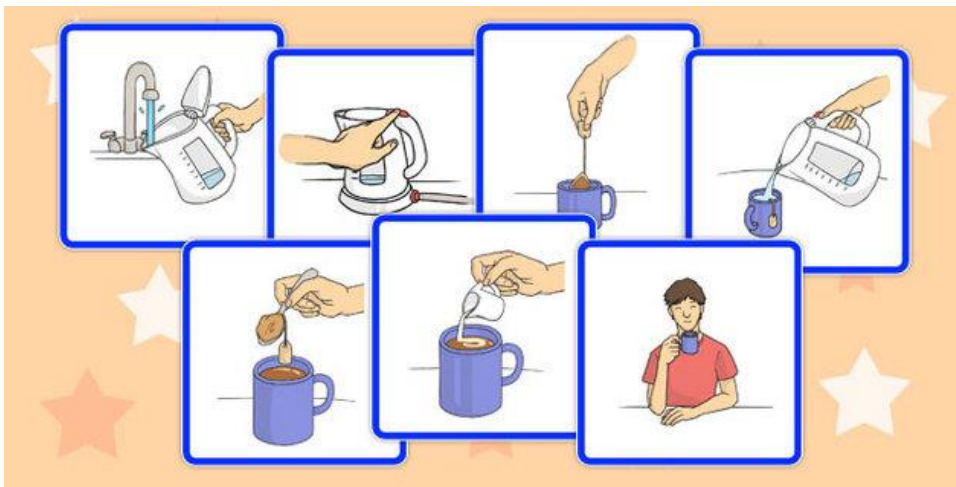
Some algorithms ask that when you reach the last instruction, you go back to the beginning. Such algorithms are called **cycling**.

Example: Algorithm for downhill skiing: every time you get down to the base, you go to a lift to get back up on the mountain. You repeat this cycle until it's time to go home.

6

Let's consider a tea making algorithm.

Write algorithms for making one cup of tea for one guest (**linear**) and for many guests (**cycling**).



a) Steps for making a cup of tea for one guest: _____

b) Steps for making a cup of tea each of the 8 guests: _____

7

Make a "Get Ready for the School" algorithm.

Make one for the in-person days and another one for a remote day.

Which steps of the algorithm could be switched? _____

Which steps could not be switched? _____

What steps can be removed? _____

What other steps can be added? _____

- ___ Eat breakfast
- 1 Wake up
- ___ Get dressed
- ___ Comb hair
- ___ Brush teeth
- ___ Prepare a backpack
- ___ Make up a bed
- ___ Do morning exercises
- ___ Go to the bus stop

