In response to multiple requests from the field, we’ve asked instructors who have been teaching math remotely to suggest a list of manipulatives that students can use at home. We’ve included a wide range of options for different learner levels. You will need to decide which ones are appropriate for your students.

**Items already available at home (check with your students)**

* Scissors
* Scotch tape
* Measuring tapes
* Scrap paper
* Items for counting

 (pennies, buttons)

* Measuring cups and spoons
* Different size "cups"
* Different size containers

(pint, quart, half gallon, gallon, liter)

* Rulers

(see below for printable rulers)

**To be provided by program**

* String (enough length to be used for multiple purposes)
* Paper plates (for data activities; see *Paper Plate Pie Chart* instructions [here](https://www.dropbox.com/sh/p7do32p5x4quzkc/AADGPgCuyDKoGW0yASn_M8kJa?dl=0))
* Graph paper (grid size —for example, 1-cm grid vs. ¼-inch grid —depends on the task and level of students. See next page for printable templates if not buying in a pad or pack.)
* Homemade whiteboards (made of clear plastic sleeves with card stock inside to give rigidity; useful for when students want to write and hold up their work to a computer screen or phone camera)

You can use inserts with the whiteboards, depending on your needs, such as plain white paper to give the appearance of a whiteboard, grid paper, fraction strips, or a number line, etc.

Photos: Heather Palmer, Middlesex Community College

Don’t forget to include dry erase markers and erasers (pieces of felt work, too) so students can reuse their ‘whiteboards’.

**Free Printable Items**

For items that will be used as manipulatives, we suggest printing on cardstock to improve durability.

* Grid and Dot Paper

<https://incompetech.com/graphpaper/>

* Rulers (Be sure to print "Actual Size".)

<https://printable-ruler.net/all-rulers/>

* Pattern Blocks

[http://www.raebear.net/goodies/patternblocks/printableblocks/](https://classplayground.com/pattern-blocks/#printables)

* Protractor  (Be sure to print "Actual Size".)

<https://www.inchcalculator.com/printable-protractor-download/>

* 1-inch Square Tile Graph Paper

(can be cut into 1-inch tiles for making arrays, etc.)

****<https://free-printable-paper.com/1-inch-graph-paper/>

* Dice (for statistics as well as number sense activities).

<http://www.clipartbest.com/download?clipart=7TaogbGbc>

* **Fraction Strips** printable template

(or create your own using strips of colored paper)

https://tinyurl.com/RemoteMathManipulatives

* Algebra Tiles

https://tinyurl.com/RemoteMathManipulatives

Photo: Heather Palmer, Middlesex Community College