



Donut Division

Learners will create a pretend donut shop and use arrays and division equations to solve real-world "baking" problems.

Materials Needed:

- Printable donuts, play dough doughnuts, or real donuts
- Printed order cards OR index cards (write the orders on them)
- Optional: Coloring supplies to color donuts
- Optional: Muffin tins, egg cartons, or grid paper (to model arrays)

Project Setup:

Tell the learners they're opening a donut shop. Customers place orders, and they need to figure out how to pack the orders using multiplication and division.

Learning Goals Reinforced:

Interpreting the unknown in division

Understanding the relationship between multiplication and division

Using arrays as visual tools

Applying math to real-world contexts

Activities

1. Array Station – "Pack the Order"

Learners are given cards with a total number of donuts and told how many go in each row/package/boxes. Using the pretend donuts they must pack the order (you could use muffin tins, egg cartons, or printable grids to do this).

Optional: Learners write in the division/multiplication problem OR they match the equations cards and fill in missing numbers.

2. Missing Factor Bakery Board

Learners are given cards with a total number of cookies and then told how many groups (boxes, trays, shelves) they are using. They must figure out how many items go in each group (the size of the group) by physically "filling" them with the donuts.

Optional: Learners write in the division/multiplication problem OR they match the equations cards and fill in missing numbers.

3. Create Your Own Problem

Students draw a bakery item, decide how many they baked, and write a division problem for someone else to solve. They model it using arrays or manipulatives.

4. Extensions

Learners could also practice their money skills by deciding how much their donuts would cost and practice buying them from each other.



You baked 18 donuts.
You want to pack them in boxes with 6 donuts each. How many boxes will you need?

You made 30 donuts and want to put them in bags with 5 donuts each. How many bags will you need?

You baked 24 donuts.
You use trays that hold 4 donuts each. How many trays do you need?

You have 32 donuts.
You put 8 donuts in each box. How many boxes do you need?

You made 36 donuts and display them in rows of 6.
How many rows will you have?

You baked 20 donuts.
You use containers that hold 4 donuts each. How many containers will you use?

$$\underline{\quad} \times 6 = 18$$

$$18 \div 6 = \underline{\quad}$$

$$\underline{\quad} \times 5 = 30$$

$$30 \div 5 = \underline{\quad}$$

$$\underline{\quad} \times 4 = 24$$

$$24 \div 4 = \underline{\quad}$$

$$\underline{\quad} \times 8 = 32$$

$$32 \div 8 = \underline{\quad}$$

$$\underline{\quad} \times 6 = 36$$

$$36 \div 6 = \underline{\quad}$$

$$\underline{\quad} \times 4 = 20$$

$$20 \div 4 = \underline{\quad}$$

You made 35 donuts.
You packed them in 5
boxes.

How many donuts
are in each box?

You have 6 trays.
Each tray has the
same number of
donuts. There are 42
donuts total.

How many are on
each tray?

You baked 27 donuts
and used 9
containers.

How many donuts
are in each container?

There are 7 shelves of
donuts. There are 49
donuts total.

How many donuts
are on each shelf?

You have 4 boxes and
36 donuts.

How many donuts
are in each box?

You used 3 pans and
made 24 donuts.

How many donuts
are in each pan?

$$5 \times \underline{\quad} = 35$$

$$35 \div 5 = \underline{\quad}$$

$$6 \times \underline{\quad} = 42$$

$$42 \div 6 = \underline{\quad}$$

$$9 \times \underline{\quad} = 27$$

$$27 \div 9 = \underline{\quad}$$

$$7 \times \underline{\quad} = 49$$

$$49 \div 7 = \underline{\quad}$$

$$4 \times \underline{\quad} = 36$$

$$36 \div 4 = \underline{\quad}$$

$$3 \times \underline{\quad} = 24$$

$$24 \div 3 = \underline{\quad}$$









