

# POWERS

I am learning simple powers of numbers.



### USING MATERIALS:

1) Complete the table below which describes powers. The first line has been completed for you.

Number and power	Number as an equation	Equation as a diagram
a) $3^2$	$3 \times 3 = 9$	
	Three sets of three	
b) $3^3$	$3 \times 3 \times 3 = \dots\dots\dots$	
	Three sets of three sets of three.	

- E
- CA
- AC
- EA
- AA
- AM
- AP

2) Fill in the blanks and complete the diagrams on the table below.

Number and power	Number as an equation	Equation as a diagram
a) $2^2$	$2 \times 2 = 4$	
	Two sets of .....	
b) $2^3$	$2 \times 2 \times \dots\dots\dots = 8$	
	Two sets of ..... sets of .....	
c) $2^4$	$2 \times 2 \times \dots\dots \times \dots\dots = \dots\dots$	
	Two sets of ..... sets of ..... .....	

**USING IMAGING:**

3) Complete the table below by writing out the multiplication equation.

Question	As multiplication equation	Question	As multiplication equation
a) $2^5$	$2 \times 2 \times 2 \times 2 \times 2 = \dots\dots\dots$ <ul style="list-style-type: none"> <li>• <math>2 \times 2 = 4</math></li> <li>• <math>4 \times 2 = 8</math></li> <li>• <math>8 \times 2 = 16</math></li> <li>• <math>16 \times 2 = \dots\dots\dots</math></li> </ul>	f) $4^3$	$\dots\dots\dots \times \dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$
b) $3^2$	$3 \times \dots\dots\dots = \dots\dots\dots$	g) $10^3$	$\dots\dots\dots \times \dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$
c) $3^3$	$3 \times \dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$ <ul style="list-style-type: none"> <li>• <math>3 \times 3 = \dots\dots\dots</math></li> <li>• <math>9 \dots\dots\dots = \dots\dots\dots</math></li> </ul>	h) $6^2$	$\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$
d) $7^2$	$7 \times \dots\dots\dots = \dots\dots\dots$	i) $5^3$	$\dots\dots\dots \times \dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$  $\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$
e) $9^2$	$9 \times \dots\dots\dots = \dots\dots\dots$	j) $8^2$	$\dots\dots\dots \times \dots\dots\dots = \dots\dots\dots$

**NUMBER PROPERTIES:**

There are five crates in a container. Inside each of the five crates are five boxes and inside each of the five boxes are five computers.

4) What number to what power will help you answer this question?



5) How many computers are there in the container?

There are three big rooms in a building. Each of these three rooms are split into three smaller rooms. In each of the smaller rooms there are three desks.

6) What number to what power will help you answer this question?



7) How many desks are there in the building?