

ACTIVITY- POLYNOMIALS

1. What we have to do?

To prove the algebraic identity $(a + b)^3 = a^3 + b^3 + 3ab^2 + 3a^2b$

2. What is required?

Centimeter cubes

3. What do you need to know?

Cubes and Cuboids

Volume of cube and cuboid

4. How will you proceed?

Take $a = 3$ and $b = 1$

- Make a cube of edge $3 \times 3 \times 1$.
- Make three cuboids of $3 \times 3 \times 1$ to represent $3a^2b$
- Make three cuboids of $3 \times 1 \times 1$ to represent $3ab^2$
- Make a cube of dimension $1 \times 1 \times 1$
- Join the cubes and cuboids .

5. What have you observed?

- What is the resulting figure cube or cuboid?
- Write its dimensions?

6. What have you learnt?

7. What would you be interested in doing?

- Using centimeter cube verify the algebraic identity for $a = 2$ and $b = 1$

Real life application :- We can use algebraic identities, to solve the daily life problems. Whatever you want to find out, in terms of numbers, you can do that by just inputting the values of respective coefficient and variable in a given identity. That, in turn, increases the efficiency of thinking.... And also decreases the time to find out an answer for a question.

