

① If  $a=2, b=-2$ , find the value of:

- Ⓐ  $a^2+b^2$       Ⓑ  $a^2+ab+b^2$       Ⓒ  $a^2-b^2$

② Simplify these expressions and find their values if  $a=3$   
 $b=-2$ .

- Ⓐ  $3a-5 = a+9$       Ⓑ  $3a+5-8a+2$       Ⓒ  $10-3b-4-5b$

③ If  $z=10$ , find the value of  $z^3-3(z-10)$ .

④ Simplify:

Ⓐ  $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

Ⓑ  $\frac{2 \times 3^4 \times 2^5}{18 \times 8^2}$

Ⓒ  $\frac{25 \times 5^2 \times t^8}{10^3 \times t^4}$

⑤ Express the following as a product of prime factors only in exponential form.

Ⓐ  $729 \times 32$

Ⓑ  $108 \times 192$

Ⓒ  $678$

⑥ Express the following in standard form.

Ⓐ  $300,00,000$

Ⓑ  $1,27,56,000$

Ⓒ  $39087.8$

⑦ Find the value of the following expressions when  $m=2$

Ⓐ  $3m^2-2m-1$

Ⓑ  $m^3+5m^2-5m+2$

⑧ Question no. ④, ⑧, ⑨ & ⑩ of exercise 9.2

⑨ Q. No 5, 6 & 7 of exercise 9.1

⑩ Write the following in ascending order:

Ⓐ  $-\frac{1}{3}, -\frac{2}{9}, -\frac{4}{3}$

Ⓑ  $-\frac{3}{7}, -\frac{3}{2}, -\frac{3}{4}$

Ⓒ  $\frac{1}{2}, \frac{3}{5}, \frac{3}{4}$

⑪ Which is greater?

Ⓐ  $-3\frac{2}{7}, -3\frac{4}{5}$

Ⓑ  $\frac{5}{12}, \frac{3}{4}$

Ⓒ  $\frac{2}{3}, \frac{3}{5}$

## SECTION-B

### ACTIVITIES

1. Maths Around us  
Identify and draw 5 objects at home that represent geometrical shapes like circles, triangles, rectangles etc.
2. Create Your Magic Square:  
Design a  $3 \times 3$  magic square where the sum of each row, column and diagonal is the same.

### PROJECT WORK

- 1) Journey of Numbers  
Research and create a timeline showing the evolution of numbers (e.g. Roman numerals, Hindu-Arabic numerals). Write a short description for each step.
- 2) Maths in Daily Life:  
Write a short essay (150-200 words) on how maths is used in daily life, giving real-life examples like shopping, cooking, or travelling.

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Darshan Hans