BYJU'S

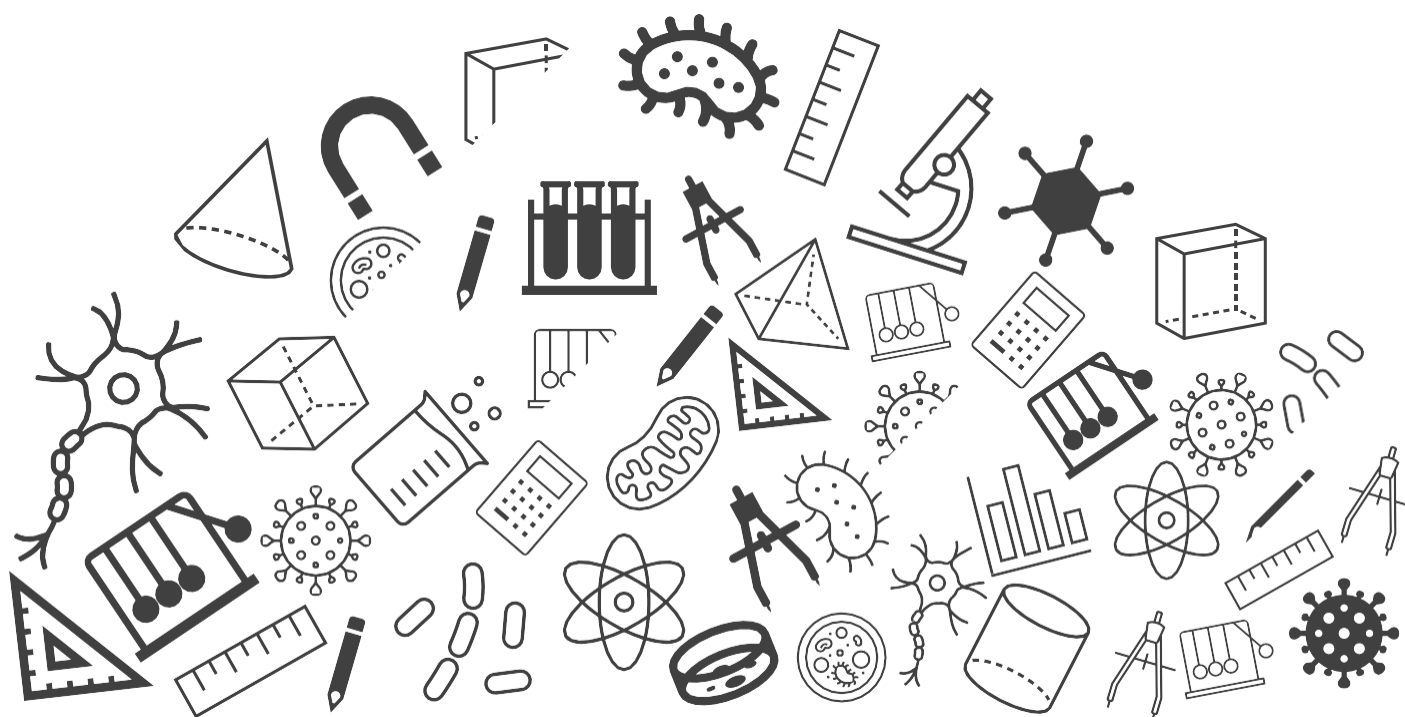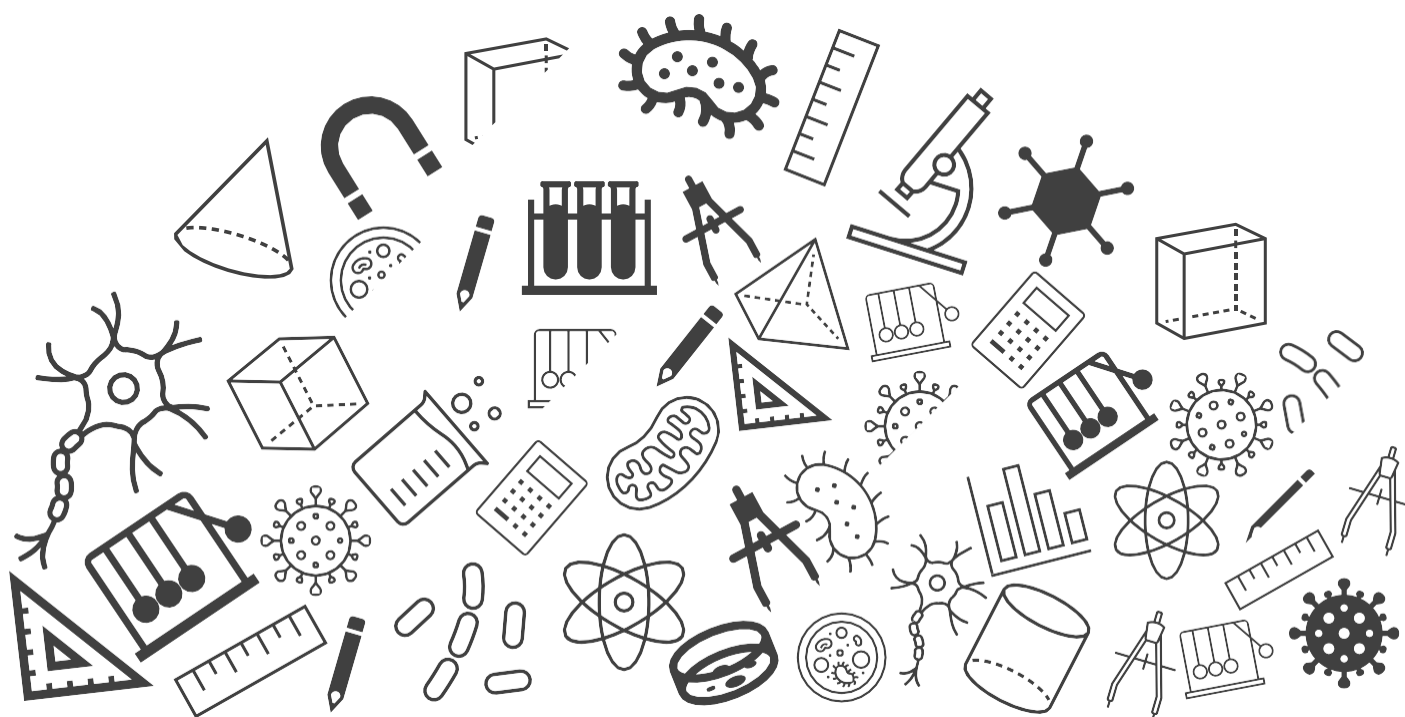# Grade 07: Maths
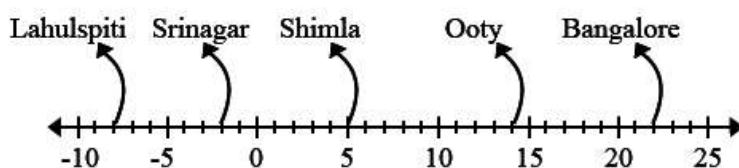# Exam Important Questions

Integers

Topic : Exam Important Questions

1. The given number line shows the temperature in degree Celsius (°C)at different places on a particular day.

Observe this number line and write the temperature of the places marked on it.

[5 marks]

Place	Temperature
Lahulspiti	-8 °C
Srinagar	-2 °C
Shimla	5 °C
Ooty	14 °C
Bangalore	22 °C

[5×1 = 5 marks]

2. A plane is flying at the height of 5000 m above the sea level. At a particular point, it is exactly above a submarine floating 1200 m below the sea level. What is the vertical distance between them?

    [2 marks]

    Height of the plane above sea level = $+5000\ m$
    Depth of the submarine below sea level = $-1200\ m$
    [1 mark]

    Vertical distance between them
    = $5000\ m - (-1200\ m)$
    = $5000 + 1200$
    = $6200\ m$
    [1 mark]

3. Find each of the following products:
    (i) $9 \times (-3) \times (-6)$

    (ii) $(-1) \times (-2) \times (-3) \times 4$
    [3 marks]

    (i) 9 × (-3) = -27
    Now, -27 × (-6) = 162
    [1 mark]

    (ii) (−1) × (−2) = 2
    Now, 2 × (−3) = −6
    Hence, −6 × 4 = −24
    [2 marks]

4. Verify whether $[(-16) \div 4] \div (-2)$ is equal to $(-16) \div [4 \div (-2)]$.

   [3 marks]

   $[(-16) \div 4] \div (-2)$
   $= -4 \div (-2)$
   $= 2$
   [1 mark]

   $(-16) \div [4 \div (-2)]$
   $= (-16) \div (-2)$
   $= 8$
   [1 mark]

   So, they are not equal. Hence, associative property does not hold true for division of integers.
   [1 mark]

5. A grocery shop had a profit of ₹990 on Monday, a profit of ₹220 on Tuesday, a profit of ₹99 on Wednesday and a loss of ₹1210 on Thursday. Find his net profit or loss in 4 days.
    [2 marks]

    ✗ **A.** ₹220

    ✗ **B.** ₹2519

    ✗ **C.** ₹1210

    ✔ **D.** ₹99

    Solution:

    The net profit/loss
    = ₹990 + ₹220 + ₹99 − ₹1210
    (0.5 mark)
    = (₹990 + ₹220) + ₹99 − ₹1210
    = ₹1210 + ₹99 − ₹1210
    = ₹1210 − ₹1210 + ₹99 [∵ Commutative property]
    (0.5 mark)
    = (₹1210 − ₹1210) + ₹99
    = ₹99
    (0.5 mark)

    As 99 > 0, the grocery shop has a net profit of ₹99 in 4 days.
    (0.5 mark)

6. Find the value of (–26) × 72 + 26 × (–28), using a suitable property.
   [2 marks]

   ✗ **A.** 2600

   ✗ **B.** 2800

   ✓ **C.** –2600

   ✗ **D.** –2800

   Solution:

   (–26) × 72 + 26 × (–28)
   = (–26) × 72 + (–26) × 28
   = (–26) × (72 + 28) [∵ Distributive property]
   (1 mark)
   = (–26) × 100
   = −2600\
   (1 mark)

7. A cement company earns a profit of ₹8 per bag of white cement sold and incurs a loss of ₹5 per bag of grey cement sold. How many bags of white cement must it sell to make neither profit nor loss, if the number of grey cement bags sold is 6400?
[2 marks]

Profit per bag of white cement $= ₹8$
Loss per bag of grey cement $= ₹5$

Loss incurred in selling 6400 bags of grey cement $= 6400 \times ₹5$
[1 mark]
$= ₹32000$

Number of white cement bags to be sold for obtaining same profit as loss incurred $= \frac{32000}{8}$
$= 4000$
[1 mark]

8. If $a = -9$ and $b = -6$, show that $(a - b) \neq (b - a)$.
[2 marks]

Given: $a = -9$ and $b = -6$
Now, LHS $= a - b = -9 - (-6) = -9 + 6 = -3$
[1 mark]
And RHS $= b - a = -6 - (-9) = -6 + 9 = 3$
[1 mark]
Here it is clear that $(a - b) \neq (b - a)$
Hence, $(a - b) \neq (b - a)$ is proved.

9. There are 40 classes in Aman's school, and each class has 25 students. The fee paid by each student is ₹1591 per month. Find the total fee collected by the school per month. (Use the associative property to solve the problem).
[2 marks]

Number of students per class = 25
Fees paid by each student = ₹812
∴ Fees collected per class = ($25 \times$ ₹812)
Total number of classes in school = 40
[0.5 mark]

∴ Total fee collection in a month = $40 \times (25 \times$ ₹$812)$
$= (40 \times 25) \times$ ₹812 [Associative property]
[0.5 mark]
$= 1000 \times$ ₹812
$=$ ₹812000
[1 mark]