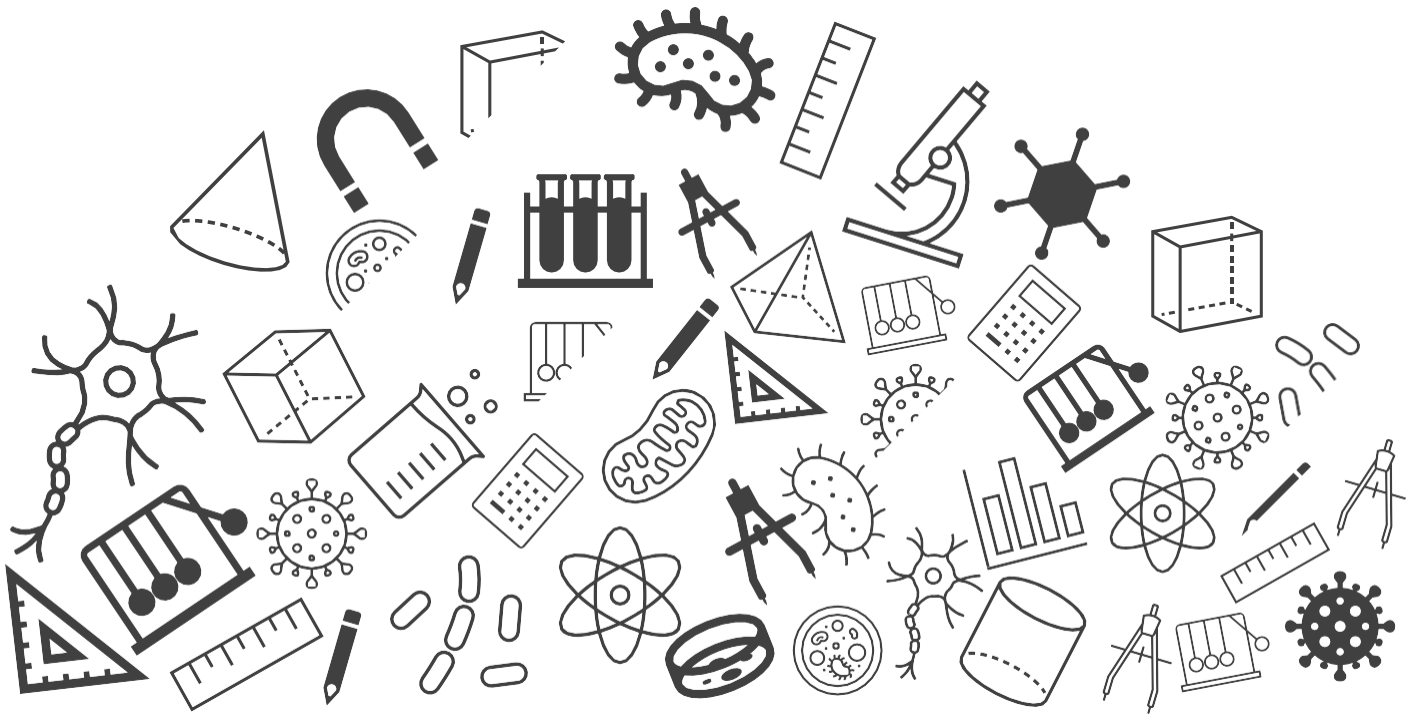
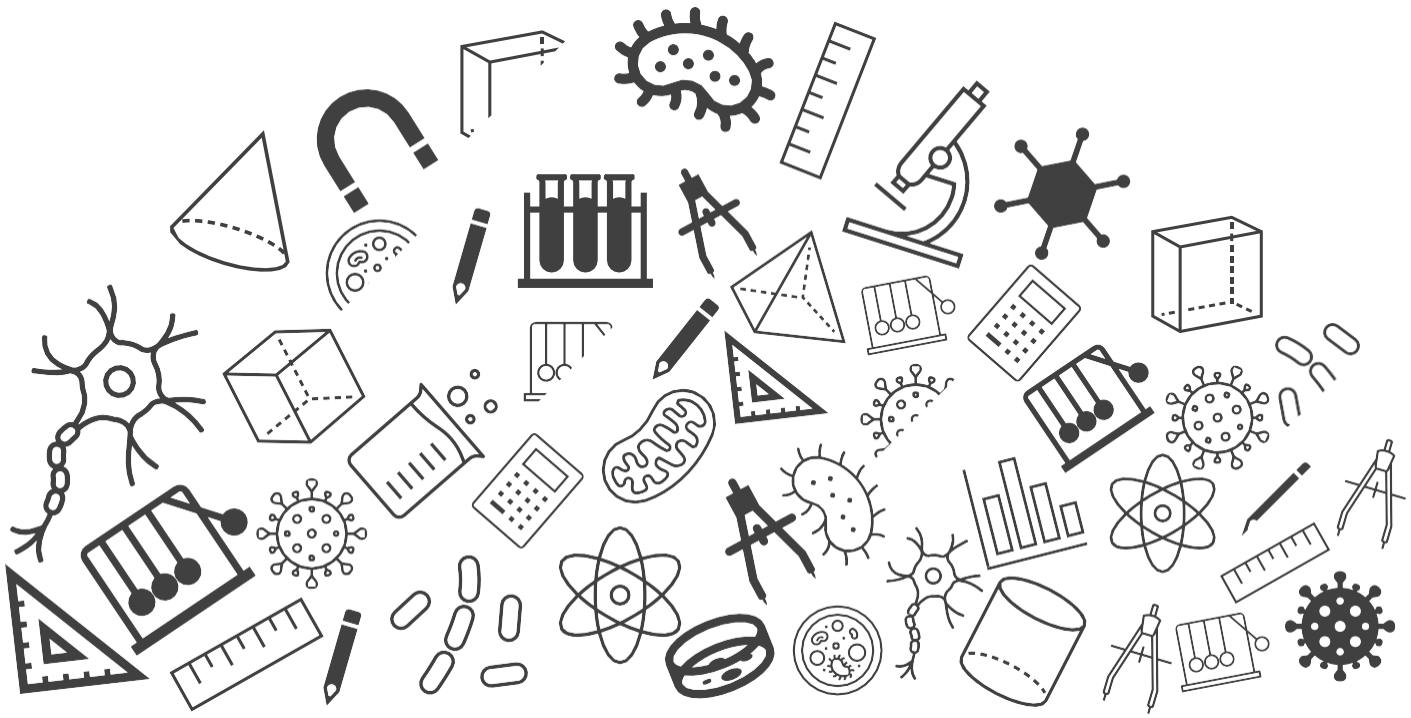
Grade 07: Maths
Exam Important Questions



Fractions and Decimals



Fractions and Decimals

Topic : Exam important questions

1. Find $\frac{1}{4}$ of:

(a) $\frac{1}{4}$

(b) $\frac{3}{5}$

(c) $\frac{4}{3}$

[3 marks]

Solution:

(a) $\frac{1}{4}$ of $\frac{1}{4} = \frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$

[1 mark]

(b) $\frac{1}{4}$ of $\frac{3}{5} = \frac{1}{4} \times \frac{3}{5} = \frac{3}{20}$

[1 mark]

(c) $\frac{1}{4}$ of $\frac{4}{3} = \frac{1}{4} \times \frac{4}{3} = \frac{1}{3}$

[1 mark]

2. Sushant reads $\frac{1}{3}$ part of a book in 1 hour. How much will he read in $2\frac{1}{5}$ hours?

[1 mark]

Solution:

The part of the book read by Sushant in 1 hour $= \frac{1}{3}$

So, the part of the book read by him in $2\frac{1}{5}$ hours $= 2\frac{1}{5} \times \frac{1}{3}$

$= \frac{11}{5} \times \frac{1}{3}$

$= \frac{11}{15}$

[1 mark]

3. Damayanti ate $\frac{2}{9}$th part of a pizza. The remaining was divided equally between Hari and Shankar. What part of pizza did Hari and Shankar get?
[3 marks]

Solution:
Amount of pizza eaten by Damayanti $= \frac{2}{9}$
Amount of pizza not eaten by Damayanti
$\frac{9}{9} - \frac{2}{9} = \frac{7}{9}$
[1 mark]

This portion is to be divided equally amongst Hari and Shankar.

$\therefore$ Hari and Shankar will get $\frac{7}{9} \div \frac{2}{1}$

$\Rightarrow \frac{7}{9} \times \frac{1}{2}$
[1 mark]

$\Rightarrow \frac{7}{18}$ of the pizza each

So Hari and Shankar each gets $\frac{7}{18}$ of the pizza
[1 mark]

4. Rita has bought a carpet of size 4 m $\times 6\frac{2}{3}$ m. But her room size is $3\frac{1}{3}$ m $\times 5\frac{1}{3}$ m, what fraction of the area should be cut - off to fit wall to wall carpet into the room?
[4 marks]

Solution:
Given carpet size:
$4\text{ m} \times 6\frac{2}{3}\text{m}$

So, area of the given carpet $= 4 \times 6\frac{2}{3}\text{m}^2$

$= 4 \times \frac{(6 \times 3) + 2}{3}$

$= 4 \times \frac{(18 + 2)}{3}$

$= 4 \times \frac{20}{3}$

$= \frac{4 \times 20}{3}$

$= \frac{80}{3}\text{m}^2$

[1 mark]

Room size $= 3\frac{1}{3}\text{m} \times 5\frac{1}{3}\text{m}$

So, area of the room $= 3\frac{1}{3} \times 5\frac{1}{3}\text{m}^2$

$= \frac{(3 \times 3) + 1}{3} \times \frac{(5 \times 3) + 1}{3}$

$= \frac{(9 + 1)}{3} \times \frac{(15 + 1)}{3}$

$= \frac{10}{3} \times \frac{16}{3}$

$= \frac{160}{9}\ \text{m}^2$

[1 mark]

∴ Difference between the area of carpet and room sizes =

$= \frac{80}{3} - \frac{160}{9} = \frac{240 - 160}{9} = \frac{80}{9}\text{m}^2$

[1 mark]

Fraction of the area of carpet that needs to be cut off

$= \frac{\text{Difference in area}}{\text{Area of carpet}} = \frac{\left(\frac{80}{9}\right)}{\left(\frac{80}{3}\right)} = \frac{80}{9} \times \frac{3}{80} = \frac{1}{3}$

[1 mark]

5. In a fruit stall, $\frac{2}{5}$ of the fruits are bananas, $\frac{1}{3}$ of the total fruits are apples. Out of apples, $\frac{2}{3}$ are green and the remaining are red. Find the number of red apples, if the total number of fruits are 45.
[3 marks]

Solution:
Given, total number of fruits $= 45$
So, number of apples $= 45 \times \frac{1}{3} = 15$
[1 mark]

Out of apples, $\frac{2}{3}$ are green apples.
So, $1 - \frac{2}{3} = \frac{1}{3}$ of the apples are red apples.
[1 mark]

Hence, number of red apples $= \frac{1}{3} \times 15 = 5$
[1 mark]

6. A bag contains 4 kg of wheat which costs ₹55.67 per kg and 3 kg of pulses which costs ₹145.39 per kg. Find the cost of 4 such bags.
[5 marks]

Solution:
Each bag contains 4 kg of wheat and 3 kg of pulses.

Cost of 1 kg of wheat = ₹55.67
Cost of 4 kg of wheat = 55.67×4
= 222.68
[1.5 marks]

Cost of 1 kg of pulses = ₹145.39
Cost of 3 kg of pulses = 145.39×3
= 436.17
[1.5 marks]

Cost of wheat and pulses in 1 bag = ₹222.68 + ₹436.17
= ₹658.85
[0.5 marks]

Cost of 4 bags = 658.85×4
= ₹2635.40
[1.5 marks]

7. A bag of wheat weighs 97.8 kg. How much wheat is contained in 500 such bags?
[2 marks]

Solution:
Weight of each bag of wheat is $= 97.8$ kg
Total number of bags $= 500$

Net weight of wheat contained in 500 bags is:
$= (500 \times 97.8)$ kg
$= (5 \times 100 \times 97.8)$ kg
[1 mark]

$= (5 \times 9780)$ kg
$= 48900$ kg

Therefore, 48900 kg wheat is contained in 500 such bags.
[1 mark]

8. Find: 128.9 ÷ 1000
[2 marks]

Solution:
$128.9 \div 1000$
$= \frac{1289}{10} \times \frac{1}{1000}$
[1 mark]

$= \frac{1289}{10000}$
$= 0.1289$

[1 mark]

9. How many buckets of equal capacity can be filled from 586.5 litres of water, if each has capacity of 8.5 litres?
[1 mark]

Solution:
Given that capacity of each bucket $= 8.5$ litres
Total water available $= 586.5$ litres
Number of buckets $= \frac{586.5}{8.5}$
$= \frac{5865}{85}$
$= 69$
[1 mark]

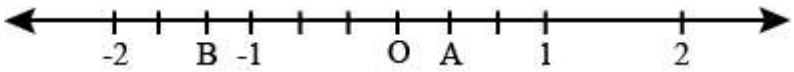
10. The product of two decimals is 1.5008. If one of them is 0.56, find the other.
[3 marks]

Solution:
Given: The product of 0.56 and one other number is 1.5008.
Let the other number be x.
So, $0.56 \times x = 1.5008$
[1 mark]

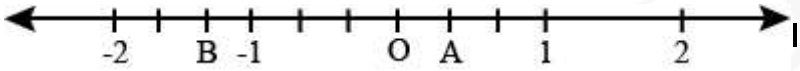
$\Rightarrow x = \frac{1.5008}{0.56}$
$\Rightarrow x = \frac{150.08}{56}$
Now, $\frac{15008}{56} = 268$
$\Rightarrow x = 2.68$

So, the other number is 2.68.
[2 marks]

11. Using the given number line find the difference between point A and point B :



- ✗ **A.** $\frac{7}{3}$
- ✓ **B.** $\frac{5}{3}$
- ✗ **C.** $\frac{2}{3}$
- ✗ **D.** $\frac{-5}{3}$



In the given number Line :

Point A is at $\frac{1}{3}$

Point B is at $\frac{-4}{3}$

We can find the difference using 2 methods.

1st method : $\frac{1}{3} - \frac{-4}{3} = \frac{1-(-4)}{3} = \frac{1+4}{3} = \frac{5}{3}$

2nd method : We can simply count the number of markings on the number line from point A to point B as there are equal markings at equal distances.

On counting we get that B is $\frac{5}{3}$ places away from A.

12. What should be added to 7 to get - $\frac{4}{5}$?

✗ **A.** $\frac{39}{5}$

✓ **B.** $-\frac{39}{5}$

✗ **C.** $-\frac{31}{5}$

✗ **D.** $\frac{31}{5}$

Let the number to be added be x.

Hence $7 + x = -\frac{4}{5}$

$\therefore x = -\frac{4}{5} - 7$

$= -\frac{4}{5} - \frac{7\times5}{1\times5}$

$= \frac{-4-35}{5}$

$= -\frac{39}{5}$