Important Questions for Class 8 Maths Chapter 2: Chapter 2 of Class 8 Maths, **Linear Equations in One Variable**, introduces students to solving equations with one unknown variable. Key topics include understanding the concept of linear equations, simplifying and balancing equations, and solving real-life problems. Important questions often involve applications like age problems, number problems, and practical scenarios in geometry and commerce. Students should focus on identifying like terms, transposing values across the equals sign, and simplifying expressions.

Word problems and questions requiring interpretation of statements into equations are vital for practice. Mastery of this chapter lays a strong foundation for algebraic concepts in higher classes.

Important Questions for Class 8 Maths Chapter 2 Overview

Chapter 2 of Class 8 Maths, Linear Equations in One Variable, is crucial for developing problem-solving and analytical skills. The chapter introduces equations with one variable, emphasizing their applications in real-life scenarios. Important questions include solving equations, interpreting word problems, and applying equations to age, number, and geometry-related problems.

These questions help students build logical reasoning and critical thinking, preparing them for advanced algebraic concepts in higher grades. Practicing these problems enhances precision and boosts confidence in tackling mathematical challenges. This chapter is foundational, as its principles are extensively used in physics, economics, and other higher-level mathematical applications.

Important Questions for Class 8 Maths Chapter 2 PDF

Chapter 2 of Class 8 Maths, Linear Equations in One Variable, focuses on solving equations and applying them to real-life problems. Below is the PDF containing important questions from this chapter, including age, number, and geometry-based problems, designed to enhance conceptual understanding and problem-solving skills.

Important Questions for Class 8 Maths Chapter 2 PDF

Important Questions for Class 8 Maths Chapter 2 Linear Equations in One Variable

Below is the Important Questions for Class 8 Maths Chapter 2 Linear Equations in One Variable -

Question 1: The perimeter of a rectangular swimming pool is 154m. Its length is 2m, more than twice its breadth. What is the length and the breadth of the pool?

Answer 1: Let the breadth of the swimming pool be x m.

The length of the swimming pool will be = (2x + 2) m.

Perimeter of swimming pool:- 2 (l + b) =154

2 (2x + 2 + x)=154

2 (3x + 2)=154

∴Dividing both sides by 2, we obtain

(3x + 2)=77

On transporting two on the R.H.S., we get

3x = 77 – 2

3x = 75

x= 75/3

x= 25 m

Hence, the breadth of the swimming pool is x= 25m

The length of the swimming pool will be= (2x + 2) m.

=(2 x 25 + 2) m

=(50 + 2) m

=52 m

Thus, the length of the swimming pool is 52m, and the breadth of the swimming pool is 25m.

Question 2: What is the share of A when Rs 25 are divided between A and B so that A gets Rs 8 more than B is 16.5?

Answer 2: Let the share of B be x.

Let the share of A be (x + 8).

From this, we get,

x + x + 8 = 25

2x = 25 – 8

2x= 17

x = 17/2

x = 8.5

Therefore, A's share will be 8.5.

Question 3: Find three consecutive odd numbers whose sum is 147.

Answer 3: Let the first, second, and third consecutive odd numbers be (2x +1),(2x + 3) and (2x + 5), respectively.

Hence the sum of the consecutive odd numbers is

(2x + 1) + (2x + 3) + (2x + 5)= 147.

On further simplifying, we get

2x + 2x + 2x + 1 + 3 + 5=147

6x + 9= 147.

On rearranging, we obtain

6x= 147 – 9

6x= 138

X= 138/6=23,

So the three consecutive odd numbers are (2x + 1)= 47

(2x + 3)= 49

(2x + 5)= 51.

Question 4: Ram's father is 26 years younger than Ram's grandfather and 29 years older than Ram. The sum of the ages of all three is 135 years. What is the age of each one of them?

Answer 4: Let Ram's present age be x years

Rams father's present age is = (x + 29) years

Rams grandfather's present age =(x + 29 + 26) years

The sum of all three ages adds up to 135 years

Hence,

x + (x + 29) + (x + 29 + 26)= 135

x + x + x + 29 + 29 + 26 =135

3x + 84= 135

3x = 135-84

3x = 51

x= 51/3

x= 17

Hence, Ram's present age is x=17 years

Ram's father's present age =(x + 29)

=(17 + 29)

=46 years

Ram's grandfather's age =(x + 29 + 26)

=(17 + 29 + 26)= 72 years

Question 5: If 8x – 3 +17x, then x _____.

- **is a fraction**
- **is an integer**
- **is a rational number**
- **cannot be solved**

Answer 5: (C) A rational number

Given:- 8x-3=25+17x

Moving -3 to R.H.S. and becomes 3 and 17x to L.H.S.

We obtain,

8x – 17x = 25 +3

-9x=28

x=-28/9

Thus, x is a rational number.

Question 6: 3x+2/3=2x+1

Answer 6: 3x+ 2/3 = 2x +1

By transposing the above equation, we get

3x+2=3(2x+1)

3x+2=6x+3

By moving all the variables on the L.H.S., we get,

3x-6x=3-2

-3x=1

x=-1/3

Question 7: The angles of a triangle are in the ratio 2 : 3: 4. Find the angles of the triangle.

Answer 7: Let the angles of the triangle be 2x°, 3x° and 4x°.

From the given question, we get,

2x + 3x + 4x = 180

∵ The sum of all the angles of a triangle is 180°)

⇒ 9x = 180

⇒ x = 20…….. (Transposing 9 to R.H.S.)

Hence, The angles of the given triangle are

2× 20 = 40°,

3 × 20 = 60°,

4 × 20 = 80°.

Question 8: The sum of the two numbers is 95. If one exceeds the other by 15, find the numbers.

Answer 8: Let the smaller number be x.

Then, the larger number =x +15.

According to the question,

the sum of the two numbers is 95

x + (x + 15) =95

2x + 15 =95 ……..(transposing 15 to the R.H.S.)

2x= 80

x=80/2

x= 40

Hence, the smaller number is 40

The larger number is (x + 15)= 40 +15=55

Hence, the required numbers are 40 and 55

Question 9: If (5x/3) – 4 = (2x/5), then the numerical value of 2x – 7 is

(A) 19/13

(B) -13/19

(C) 0

(D) 13/19

Answer 9: (B) -13/19

Given :- (5x/3) – 4 = (2x/5)

(5x/3) – (2x/5) = 4

L.C.M. of 3 and 5 is 15

(25x – 6x)/15 = 4

19x = 4 × 15

19x = 60

X = 60/19

Substituting x=60/19 in the given equation,

= (2 × (60/19)) – 7

= (120/19) – 7

= (120 – 133)/19

= – 13/19

Question 10: 9x + 5 = 4(x – 2)+ 8

Answer 10: 9x + 5= 4(x – 2) + 8,

By transposing the above equation, we get,

9x + 5= 4x – 8 + 8

9x – 4x =5

Again by transposing

5x=5

X=5/5

X=1

Question 11: The sum of three consecutive multiples of 8 is 888. Find the multiple.

Answer 11: Let the three consecutive multiples be x, x + 8, x + 16

According to the given question,

The sum of three consecutive multiples of 8 is 888

x + x + 8 + x + 16 = 888

3x + 24 = 888

3x= 888 – 24

3x =864

x =864/3

x =288

Therefore the three consecutive multiples are:

x =288

x + 8=296

x + 16=304, respectively.

Question 12: A rational number is such that when you multiply it by 5/2 and add 2/3 to get -7/12. What is the number?

Answer 12: Let the rational number be x

According to the question,

X x (5/2) + 2/3 =-7/12

5x/2 +2/3 =-7/12

5x/2= -7/12 – 2/3

Taking L.C.M. on the R.H.S.

5x/2 = (-7-8)/12

5x/2 = -15/12

5x/2 = -5/4

x= (-5/4) x (2/5)

x=-10/20

x= -1/2

Therefore, the rational number is -1/2

Question 13: Find the number whose fifth part increased by 5 is equal to its fourth part diminished by 5.

Answer 13: Let the number be x.

According to the question, we get

(1/5)x + 5 = (1/4) x – 5

On rearranging the given equation,

(1/5) x – (1/4) x = -5-5

(1/5) x – (1/4)x =-10

By taking L.C.M., we will get,

(4x-5x)/20=-10

Again by transposing

-x= -200

x= 200

Question 14: The sum of two numbers is 11, and their difference is 5. Find the numbers.

Answer 14: Let one of the numbers from the two numbers be x.

Let the other number = 11 – x.

As per the given conditions, we have

x – (11 – x) = 5

⇒ x – 11 + x =5

⇒ 2x – 11 = 5

⇒ 2x = 5 + 11…… (Transposing 11 to R.H.S.)

⇒ 2x = 16

⇒ x = 8

Hence, the required numbers for the given question are 8 and 11 – 8 = 3, respectively.

Benefits of Using Important Questions for Class 8 Maths Chapter 2

Here are the benefits of using important questions for Class 8 Maths Chapter 2: Linear Equations in One Variable:

1. Strengthens Conceptual Understanding

Important questions focus on key concepts like solving equations, verifying solutions, and framing equations. Practicing these helps students grasp the underlying principles effectively.

2. Improves Problem-Solving Skills

Exposure to a variety of problems enhances problem-solving techniques, including simplification, transposition, and substitution.

3. Prepares for Exams

These questions often align with exam patterns, covering frequently asked types of problems. Practicing them boosts confidence in tackling similar questions during exams.

4. Encourages Analytical Thinking

Linear equations require logical reasoning and analytical thinking. Solving important questions helps students develop these critical skills.

5. Time Management

Practicing these questions improves speed and accuracy, enabling students to manage their time better during exams.

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