Primary 5 Mathematics

Term 3

Theme: ALGEBRA

Topic 4/4 – Algebra

Learning Outcome The learner is able to solve mathematical problems and puzzles using the knowledge of algebra.

Algebra

Algebra uses letters to stand for numbers.

Algebra helps us solve problems with unknowns.

Example 1

Find the value of x

(i) $x + 3 = 10$.

Subtract 3 from either sides

$x + 3 - 3 = 10 - 3$

$x = 7$

(ii) x - 5 = 4

Add 5 to either sides

x – 5 + 5 = 4 + 4

x = 8

(iii) 2x = 14

Divide both sides by 2

$\frac{2x}{2} = \frac{14}{2}$

x = 7

(iv) $\frac{x}{3} = 2$

Multiply both sides by 3

$\frac{x}{3}\ x\ 3 = 2\ x\ 3$

$x = 6$

Example 2

(i) "Sarah has x sweets. If she buys 5 more, she has 12. How many did she have at first?"

Equation

x + 5 = 12

subtract 5 from each side

x + 5 – 5 = 12 – 5

x = 7

Hence Sarah had 7 sweets

(ii) "A bus carries y passengers. After 8 get off, 20 remain. How many were on the bus?"

Equation

y – 8 = 20

add 8 to either sides

y – 8 + 8 = 20 + 8

y = 28

Hence the bus had 28 passengers

Exercise 1

Solve:

1. x + 7 = 15
2. y – 6 = 10
3. 2x + 3 = 11
4. X + 7 = 12
5. Y – 5 = 9
6. 2x = 14
7. z+3 = 10
8. x−8 = 4
9. 3y = 21
10. x + 15=20
11. z − 6=2
12. 4x = 16
13. Y + 9=18
14. Sarah thinks of a number. When she adds 5, she gets 12. What is her number?
15. Peter's age plus 7 years equals 15. How old is Peter?
16. A bus carries x passengers. After 8 get off, 20 remain. How many were on the bus at first?

17. John had x sweets. After giving away 6, he has 10 left. How many did he start with?
18. A number doubled equals 18. What is the number?
19. Mary has x books. If she buys 4 more, she will have 15. How many books does she have now?
20. A farmer has y cows. After selling 7, he has 20 left. How many cows did he have at first?
21. The sum of a number and 9 equals 25. What is the number?
22. James had x shillings. After spending 12, he has 8 left. How much did he have at first?
23. A number minus 10 equals 15. What is the number?

Thank You

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