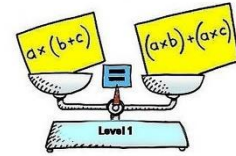




Grade 8 - Mathematics

Algebraic Equations 2

Activity



A. Solve the following problems by using an expression or an equation:

1. The sum of three consecutive numbers is eighty-four. What is the smallest of the three numbers?

$$\begin{aligned}x + x + 1 + x + 2 &= 84 \\3x + 3 &= 84 \\3x &= 84 - 3 \\3x &= 81 \\x &= 27\end{aligned}$$

2. Tom sold half of his comic books and then bought six more. He now has twelve. How many did he have to begin with?

$$\begin{aligned}\frac{1}{2}x + 6 &= 12 \\\frac{1}{2}x &= 12 - 6 \\\frac{1}{2}x &= 6 \\x &= 6 \times 2 \\x &= 12\end{aligned}$$

3. Lakeside Bike Rental Shop charges R14 plus R9 per hour for renting a bike. If Jabu paid R86 to rent the bike, how many hours did he have the bike for?

$$\begin{aligned}9x + R14 &= R86 \\9x &= R86 - R14 \\9x &= R72 \\x &= R8\end{aligned}$$



WorksheetCloud

4. Abdul has three big marbles and one small marble. Everyday he plays marbles at school and wins consistently. For everyday he wins double the amount of small marbles and the amount of big marbles he wins stays in the same proportion to the number of small marbles. How many big marbles does he have after a week at school?

Small Marbles	1	2	4	8	16
Big Marbles	3	6	12	24	48

5. Sandy bought a soft drink for R16 and she bought five chocolates. She spent a total of R58. How much did each chocolate cost?

$$\begin{aligned}5x + R16 &= R58 \\5x &= R58 - R16 \\5x &= R42 \\x &= R8,40\end{aligned}$$

6. On Monday, 301 students went on a trip. All 7 buses were filled, and 7 students had to travel in cars. How many students were in each bus?

$$\begin{aligned}7x + 7 &= 301 \\7x &= 301 - 7 \\7x &= 294 \\x &= 42\end{aligned}$$



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