Grade 8 Mathematics Worksheet

Algebraic expressions

Questions:

1. Mary is the best baby sitter in the neighbourhood. She charges R15 per hour, for the first child, and then R8 per hour for the second child, and if there is a third child, she adds R6 per hour. She does not work longer than 5 hour sessions, and also does not babysit for periods shorter than 2 hours.

    a)   What is the minimum that Mary can make for a 5 hour session?

    b)   What is the maximum she can make for a 5 hour session?

    c)   On the same set of axes, draw three graphs that show all the possibilities for Mary's income for a five hour session.
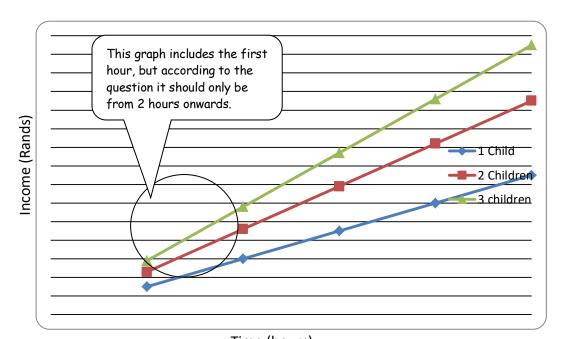
Grade 8 Mathematics Worksheet

Solution

1. a) Minimum amount of money that Mary can earn in 5 hours is if she looks after only one child for a period of five hours. Then the cost to babysit one child is R15 per hour and:

    $\therefore$ Amount received = 5 hours $\times$ R15 per hour

    = R75 for 5 hours

    b) Maximum amount of money that Mary can earn in 5 hours is if she looks after three children. Then the cost to babysit child is R15 + R8 + R6 = R29 per hour

    $\therefore$ Amount received = 5 hours $\times$ R29 per hour for 3 children

    = R145 for 5 hours

    c)