

Using a formula II

This task is about using algebraic formulae to solve maths problems.



- a) Lucy is a plumber. She charges a call-out fee of \$45 and \$35 each hour after that. She uses the following formula to work out her charges:

$$C = 45 + 35h \quad \text{where } h = \text{number of hours worked and } C = \text{total amount charged (\$)}$$

If Lucy worked for 4 hours how much would she charge?

Total amount charged = \$ _____



- b) Wiki dropped a ball from near the top of the Eiffel Tower. The distance travelled can be described by this formula:

$$S = 5t^2$$

where t = time taken to reach the ground (s) and S = distance travelled (m)

If the time taken for the ball to reach the ground was 7 seconds, how far had the ball travelled?

Distance travelled = _____ m



- c) Sam was working out how much money he had in his savings account after one year. The total amount in his account after one year can be shown by the formula:

$$T = 400 \left(1 + \frac{i}{100}\right)$$

where

i = interest rate (%)

T = total amount in his account after one year (\$)

and 400 = amount in his account at the beginning of the year (\$)

If the interest rate over the year was 15%, how much would be in Sam's account at the end of one year?

Total amount after one year = \$ _____