

Formulae

1. Evaluate each of the following if $a = 3$, $b = 5$, $c = 6$ and $d = 12$

a. $t = a + b - d$ b. $u = c - b$ c. $v = d - a + b$ d. $u = (c + d) \div a$

e. $w = ab$ f. $x = bd/c$ g. $y = ad - bc$ h. $k = abc - 4(d - c)$

i. $t = 4a^2 + b^2 - d$ j. $\sqrt{a^2 + cd}$ k. $\sqrt{2a^2 + b^2 + c}$

2. The volume of a certain prism is given by $v = \frac{1}{2}wh(f + e)$. Calculate the volume when $f = 12$ cm, $e = 15$ cm, $h = 30$ cm and $w = 4$ cm.

3. Write down an expression for 3 bottles of lager at a cost of c per bottle

4. Write down an expression for n bottles of beer at a cost of b per bottle

5. The cost C of hiring a car is £100 basic charge plus £50 per day.

a) What is the cost of hiring a car for 4 days?

b) Write down a formula for the cost C in terms of time t .

6. An approximate method for changing miles per hour into km/hour is to halve the speed in mph and then add this answer on to the speed in mph. Write this as a formula using K as km/hour and M for mph.

7. An approximate method for changing degrees centigrade into degrees Fahrenheit is to double and add 30. Write this as a formula in terms of C (centigrade) and F (Fahrenheit).

8. In a Joe's cafe cups of tea cost 75p and cups of coffee cost 86p. Write down a formula for the total cost c for the purchase t cups of tea and f cups of coffee.

9. The velocity v of an object is given by its initial velocity u added to the product of its acceleration a and time t .

a. Write this as a formula

b. Make t the subject of this formula