Substitution and formulas   name.....................................

1) If $p = -3$, $q = 5$ and $r = 10$ find the value of

a) $pr + q$

b) $\dfrac{r^2}{q}$

c) $\dfrac{5r + 4q}{p}$

d) $p^2 + q^2 + r^2$

2) The general term of a number pattern is given by
$T_n = 2n - 1$
Find
a) the first 4 terms

b) the 10th term

c) the 50th term

3) Find the general term of the number pattern
5 , 8 , 11 , 14 ....

T_n =

4) The formula for the area of a trapezium is
$A = \dfrac{1}{2} h(a + b)$

Find the area if h = 6 cm , a = 5 cm and b = 4 cm.

5) Write an expression for
a) the sum of b and k^2

b) the product of 5y and a

c) the average of w , x , y , and z

d) half of 11k

e) 3 times the sum of 2a and 5

6) Given $f(x) = 2x + 3$ and
$g(x) = x^2 + 1$ find

a) f(5)

b) g(3)

c) f(11)

d) g(a)

e)   f(x) + g(x)

7) Construct a formula for
a) the number of hours (H) in D days
   H =

b) the average speed (S) of a car travelling D km in H hours.
   S =

8) Write an equation linking x and y

a)

x	0	1	2	3
y	0	3	6	9

y =

b)

x	0	1	2	3
y	9	7	5	3

y =