Student name: _____

1 Find the values of the following:

a $E = IR$ when $I = 5$ and $R = 3$

b $A = \pi rl$ when $\pi = 3.14$, $r = 5$, $l = 20$

c $S = 90(2n - 4)$, when $n = 6$

2 The rule for simple interest is $I = \frac{PRT}{100}$, where the principal, P, is invested for a time, T years, at an interest rate R% per annum.

a Find I if the principal, P, is \$8000, T is 5 years and R is 3.5%.

b Use the rule to calculate how much money must be invested to obtain interest of \$2000 in 5 years at a rate of 3.5%.

3 Terry's Car Rentals charges \$20 per day plus 55c/km for the hire of a small car.

a Complete the table showing the costs for hiring a car and travelling various distances in 1 or 2 days.

Distance (km)	**50**	**100**	**200**	**300**	**500**
1 day (\$)					
2 day (\$)					

b Write a formula relating charges (C) to distances (d) and to the number of days (n) of the hire.

c Use your formula to find out how far you can travel (to the nearest kilometre) for \$500 in

i 2 days

ii 3 days

Use simultaneous equations to solve Questions 4, 5 and 6.

4 Three kilograms of jam and two kilograms of butter cost \$29 and six kilograms of jam and three kilograms of butter cost \$54. Find the cost of one kilogram of jam and one kilogram of butter.

5 Find a pair of numbers whose sum is 45 and whose difference is 11.

6 A party was organised for thirty people at which they could either have a hamburger or a pizza. If there were five times as many hamburgers as pizzas, calculate the number of each.

7 The sum of two consecutive numbers is 37. What are the numbers?
(Note: consecutive numbers follow one after the other)

8 The sum of two numbers is 84. One of the numbers is 12 more than the other number. What are the two numbers?

9 Martin bought 2 kilograms of bananas and 3 kilograms of oranges for $16.50. If oranges were 0.50 cents a kilogram more than the bananas, how much did the oranges and bananas cost per kilogram?