



DEPARTMENT OF MATHEMATICS

S2 HOLIDAY WORK

ALGEBRA

1. Simplify the following expressions;
 - a.) $5x + 7y - 4x + 9y$
 - b.) $2ab + 7ab$
 - c.) $3(2x + y) - x(x + 4)$
2. Expand the following and simplify where possible;
 - a.) $3(2x - 1) + 6(3x - 4)$
 - b.) $2(4y - 8) - 3(y - 9)$
 - c.) $x(3x - 2y)$
3. Given that $x = 4$, find the value of these expressions;
 - a.) $3x - 4$
 - b.) $10 - 4x$
 - c.) $(3x - 2)^2$
 - d.) $\frac{x}{2} - 9$
 - e.) $5x^2 - 1$
4. Solve the following equations;
 - a.) $-2(x + 3) = x + 6$
 - b.) $-3(-x + 3) = x - 7$
 - c.) $-3(-x - 6) = 3x - 23$
 - d.) $\frac{3(x+4)}{4} - x - 2 = \frac{(x-4)}{3} - x$
 - e.) $\frac{m}{4} - \frac{(2-m)}{3} = \frac{1}{4}$
 - f.) $\frac{-2(x-6)}{7} - \frac{(x-3)}{2} = -x$

5. In a pizza take away, a medium pizza has 6 slices of tomato and a large pizza has 10 slices of tomato. How many slices of tomato are needed for;
a.) c medium pizzas
b.) d large pizzas
6. A number is increased by 48 to give 425, what is the number?
7. When a number is decreased by 24, the result is 59, find the number.
8. If twice a number is equal to 608, find the number.
9. If a number is divided by 9, the result is 12, find the number.
10. When three times a number is decreased by 5 it gives 82, find the number.
11. When half of a number is added to a third of the same number, the result is 14, find the number.
12. A rectangular paddock is twice as long as it is wide. If the perimeter is 570m, find its dimensions and area.

END