ALGEBRAIC EXPRESSIONS

1. What are the coefficients of x in the following expressions?
   $4x - 3y$, $8 - x + y$, $y^2x - y$, $2z - 5xy$.
2. Identify like terms in the following:-
   a. $-xy^2$, $-4yx^2$, $8x^2$, $2xy^2$, $7y$, $-11x$, $-100x$, $-11yx$, $20x^2y$.
3. Simplify combining like terms:-
   a. $p-(p-q)-q-(q-p)$
   b. $(3y^2 + 5y - 4)$
4. Add:-
   a. $a+b-3$, $b-a+3$, $a-b+3$
   b. $14x + 10y - 12xy - 13$, $18 - 7x - 10y + 8xy$, $4xy$
   c. $4x^2y$, $-3xy^2$, $-5xy^2$, $5x^2y$
   d. $12m^2 - 9m + 5m - 4m^2 - 7m + 10$
5. Subtract $24ab - 10ab - 18a$ from $30ab + 12 + 14a$.
6. From the sum of $2y^2 + 3yz$, $-y^2 - yz - z^2$ and $yz + 2z^2$ subtract the sum of $3y^2 - z^2$ and $-y^2 + yz + z^2$.
7. Subtract:-
   a. $a(b-5)$ from $b(5-a)$
   b. $4pq - 5q - 3p^2$ from $5p^2 + 3q^2 - pq$
8. What should be taken away from $3x^2 - 4y^2 + 5xy + 20$ to obtain $-x^2 - y^2 + 6xy + 20$
9. If $a = 0$, $b = -1$ find the value of the given expressions:-
   a. $2a^2 + b^2 + 1$
   b. $2a^2b + 2ab^2 + ab$
   c. $a^2 + ab + 2$
10. Simplify the expression and find the value if $x=2$
   a. $2a^2 + b^2 + 1$
   b. $2a^2b + 2ab^2 + ab$
   c. $a^2 + b + 2$
11. What should be the value of a if the value of $2x^2 + x - a = 5$ when $x=0$
12. Simplify when $a=5$, $b = -3$
   $2(a^2 + ab) + 3 - ab$