WORKSHEET 2
CLASS VIII
ALGEBRAIC EXPRESSIONS

1. Identify, in the following expressions, terms which are not constants. Give their numerical coefficients: $xy + 4$, $13 - y^2$, $13 - y + 5y^2$, $4p^2q - 3pq^2 + 5$

2. (a) What are the coefficients of x in the following expressions? $4x - 3y$, $8 - x + y$, $y^2x - y$, $2z - 5xz$

   (b) What are the coefficients of y in the following expressions? $4x - 3y$, $8 + yz$, $yz^2 + 5$, $my + m$

3. Classify the following expressions as a monomial, a binomial or a trinomial: a, $a + b$, $ab + a + b$, $ab + a + b - 5$, xy, $xy + 5$, $5x^2 - x + 2$, $4pq - 3q + 5p$, 7, $4m - 7n + 10$, $4mn + 7$.

4. Collect like terms and simplify the expression: $12m^2 - 9m + 5m - 4m^2 - 7m + 10$

5. Add and subtract
   (i) $m - n$, $m + n$
   (ii) $mn + 5 - 2$, $mn + 3$

6. Subtract $24ab - 10b - 18a$ from $30ab + 12b + 14a$.

7. 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 $-y^2 + yz + z^2$.

8. Classify the following polynomials as monomials, binomials, trinomials.
   $-z + 5$, $x + y + z$, $y + z + 100$, $ab - ac$, 17

9. Add:
   1. $t - 8tz$, $3tz - z$, $z - t$
   2. $7mn + 5$, $12mn + 2$, $9mn - 8$, $- 2mn - 3$
   3. $a + b - 3$, $b - a + 3$, $a - b + 3$
   4. $14x + 10y - 12xy - 13$, $18 - 7x - 10y + 8xy$, $4xy$
   5. $5m - 7n$, $3n - 4m + 2$, $2m - 3mn - 5$

10. Add: $7xy + 5yz - 3zx$, $4yz + 9zx - 4y$, $-3xz + 5x - 2xy$.