Coefficient:

A coefficient is a numerical quantity placed before and multiplying the variable in an algebraic expression.

Linear Term:

A linear term is any term in an expression in which the exponent on the variable is 1.

Examples: $2x, \; -k, \; -3m$

Quadratic Term:

A quadratic term is any term in an expression in which the exponent on the variable is 2.

Examples: $2x^2, \; -k^2, \; -3m^2$

Guided Practice:

Determine the coefficient on the linear term.

1) $-3v^2 + 8v$

$8v$ is the linear term since the exponent on v is 1. The coefficient of this term is 8.

$$8$$

2) $10x - 4$

$10x$ is the linear term since the exponent on x is 1. The coefficient of this term is 10.

$$10$$

3) $-2m^6 + 4m^3 - m^2$

There is no linear term since there is no term where the exponent on m is 1. So, the coefficient of this term must be zero since it isn't written.

$$0$$

4) $8b - 3$

$8b$ is the linear term since the exponent on b is 1. The coefficient of this term is 8.

$$8$$

5) $-8v^5 + 7v^2$

There is no linear term since there is no term where the exponent on v is 1. So, the coefficient of this term must be zero since it isn't written.

$$0$$

6) $-2n + 10n^3$

$-2n$ is the linear term since the exponent on n is 1. The coefficient of this term is -2.

$$-2$$

Determine the coefficient on the quadratic term.

7) $-3v^2 + 8v$

$-3v^2$ is the quadratic term since the exponent on v is 2. The coefficient of this term is -3.

$$-3$$

8) $10x - 4$

There is no quadratic term since there is no term where the exponent on x is 2. So, the coefficient of this term must be zero since it isn't written.

$$0$$

9) $-2m^6 + 4m^3 - m^2$

$-m^2$ is the quadratic term since the exponent on m is 2. The coefficient of this term is -1.

$$-1$$

10) $8b - 3$

There is no quadratic term since there is no term where the exponent on b is 2. So, the coefficient of this term must be zero since it isn't written.

$$0$$

11) $-8v^5 + 7v^2$

$7v^2$ is the quadratic term since the exponent on v is 2. The coefficient of this term is 7.

$$7$$

12) $-2n + 10n^3$

There is no quadratic term since there is no term where the exponent on n is 2. So, the coefficient of this term must be zero since it isn't written.

$$0$$