**3.4 – EQUATIONS AND GRAPHS OF POLYNOMIAL FUNCTIONS**

Sometimes a polynomial has a factor repeated several times.

Example:

The number of times the factor is repeated is called the **multiplicity** of the zero .

Example: has a zero multiplicity 2 at and a zero multiplicity 1 at .

**Effect on a graph:**

Graph on a piece of paper

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Note: When the multiplicity is odd, the sign of the function changes there.

When the multiplicity is even, it doesn’t.

**Getting Info from a graph:**

Example 1 p 138

A graph of function and function

Description automatically generated

Your turn p 139

A graph of a function

Description automatically generated

**Getting Info from Equations:**

Example 2 p 140

A math equations on a white background

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a) b) c)

A grid of white squares

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Your turn p 142



**Hwk: p 147 # 1 – 10, 12 – 16.**