## Unit 2 Lesson 11: Finding Intersections

### 1 Math Talk: When Meets (Warm up)

#### Student Task Statement

Mentally identify a point where the graphs of the two functions intersect, if one exists.

and

and

and

and

### 2 More Points of Intersection

#### Student Task Statement

For each pair of polynomials given, find all points of intersection of their graphs.

1. and
2. and
3. and
4. and

### 3 Graphing to Find Points of Intersection

#### Student Task Statement

Consider the functions and .

1. Use graphing technology to find a value of that makes true.
2. For the -value at the point of intersection, what can you say about the value of ?
3. What does your answer suggest is a possible factor of ?
   1. Write your own polynomial  of degree 3 or higher.
   2. Use graphing technology to estimate the values of that make  true.



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