Construct and compare linear, quadratic, and exponential models and solve problems (F.LE.3)

**Standard II.F.LE.3:** Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. Compare linear and exponential growth to quadratic growth.

### Concepts and Skills to Master

- Observe that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically using graphs and tables.

### Related Standards: Current Course

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<tr>
<th>Related Standards: Current Course</th>
<th>Related Standards: Future Courses</th>
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<tbody>
<tr>
<td>II.A.REI.7, II.F.IF.4, II.F.IF.6, II.F.IF.7, II.F.IF.9, II.F.LE.3, II.F.IF.6</td>
<td>III.A.REI.11, III.F.IF.4, III.F.IF.6, III.F.IF.7, III.F.IF.9, III.F.BF.3, III.F.LE.3, III.F.LE.5, P.F.IF.7</td>
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### Support for Teachers

**Critical Background Knowledge**

- Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly (I.F.LE.3)
- Distinguish between linear and exponential functions (I.F.LE.1 and I.F.LE.2)
- Compare properties of two functions using multiple representations (I.F.IF.9)

**Academic Vocabulary**

**Resources**

*Curriculum Resources:* [http://www.uen.org/core/core.do?courseNum=5620#71491](http://www.uen.org/core/core.do?courseNum=5620#71491)