

## Sample Honors Algebra Assignment Sheet

### Learning Targets

1. Add, subtract, multiply, and factor polynomials.
2. Analyze polynomial functions using the following:
  - Synthetic division
  - Lead coefficient and end behavior
  - Graphs
  - Tables
  - Remainder theorem and factor theorem
3. Factor polynomials and solve polynomial equations and inequalities.
4. Find rational zeros.
5. Use the fundamental theorem of algebra.
6. Apply knowledge of polynomial functions to model and solve real-world problems.

### Assignments

These assignments must be completed. They will be graded for homework points.

Directions:

- Write down the original problem, show your work, and circle the answer.
- For final review sheet work, do all of your work on the review sheet.
- Check your work.

Learning Targets	Pages	Problems
<b>1. Add, subtract, and factor polynomials (learning target 1).</b>	p. 310	41, 45, 47, 50, 53, and 57
	p. 368	11, 21, and 24
	Worksheet A	1, 3, 4, and 5
<b>2. Analyze polynomials using synthetic division and basic graphs (learning target 2).</b>	p. 312	1, 5, 7, and 9
	pp. 324–326	17 and 19
	p. 360	25 and 27
	Worksheet B	1 and 2

Learning Targets	Pages	Problems
<b>3. Analyze graphs of polynomial functions (learning target 2).</b>	p. 312	4, 6, and 10
	p. 317	17, 19, 23, and 28 (identify the zeros as even or odd for each graph)
	Worksheet B	2, 3, 4, 6, and 8
<b>4. Analyze polynomial Functions—numerical perspective (learning targets 2 and 3).</b>	p. 310	39 and 49
	p. 317	21 and 25
	p. 326	8 and 9
	Worksheet A	2
<b>Quiz date:</b> November 8		
<b>5. Divide polynomials (long division)—the remainder and factor theorems (learning targets 2 and 3).</b>	pp. 324–325	5, 9, 11, 13, 21, 29, and 41
	Worksheet B	11
<b>6. Factor polynomials and solve polynomial equations (learning target 3).</b>	pp. 324–325	7, 15, 23, 39, 43, and 59
	Worksheet B	12 and 13
	Final review sheet	All of page 1
<b>7. Quiz over learning targets 1–3</b>	p. 317	7, 9, and 13
	pp. 330–331	7, 11, 12, 14, 21, 25, 27, 29, 33, 40, 43, 59, and 61
	Worksheet A	6
<b>8. Find rational zeros (learning target 4).</b>	p. 339	3, 7, 9, 11, 13, 17, 23, 25, and 33 (you may use a calculator to start 9 and 25)
	p. 319	67
	p. 331	45, 47, and 53
	Worksheet A	7 and 10
	Worksheet B	10
<b>9. Use the fundamental theorem of algebra (learning target 5).</b>	pp. 343–344	1, 13, 14, 21, 25, 29 (use calculator), 33, 34, 35, and 43
	Worksheet B	18, 19, 20, and 21
	Final review sheet	All of page 2

Learning Targets	Pages	Problems
<b>10. Model with polynomial functions (learning target 6).</b>	pp. 309–310	17 and 59
	pp. 317–318	15 and 38
	Worksheet A	9
	Worksheet B	23
	Final review sheet	All of pages 3–6
<b>Test date:</b> December 15		
<b>11. Work with polynomial inequalities (learning target 6).</b>	p. 297	17 and 19
	Worksheet A	8
	Worksheet B	14, 15, 16, 17, and 22
	Final review sheet	All of pages 7–10
<b>Final exam date:</b> January 5		