Lesson 4.7 Practice: Graphing Polynomial Functions

School Launch · Algebra II · Unit 4: Polynomial Functions · Worksheet A

Calculator for decimals

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. For $f(x) = x\,(x-4)^{2}\,(x+1)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. EASY

2. For $f(x) = -x^{2}\,(x-3)\,(x+2)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. EASY

3. For $f(x) = -\,(x-3)\,(x-2)^{2}\,(x+3)^{2}$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. EASY

4. For $f(x) = (x-2)^{2}\,(x+3)^{2}\,(x+4)^{2}$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. MEDIUM

5. For $f(x) = -x\,(x-1)\,(x+3)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. MEDIUM

6. For $f(x) = -x^{2}\,(x+2)\,(x+4)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. MEDIUM

7. For $f(x) = x\,(x-2)\,(x+4)^{2}$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. MEDIUM

8. For $f(x) = -x\,(x-4)^{2}\,(x+4)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. HARD

9. For $f(x) = -\,(x-2)\,(x+3)^{2}\,(x+4)^{2}$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. HARD

10. For $f(x) = -\,(x-4)^{2}\,(x+3)\,(x+4)$, give each zero and whether the graph crosses or touches the x-axis there, plus the y-intercept. HARD