Lesson 3.4 Practice: Complex Solutions and the Discriminant

School Launch · Algebra II · Unit 3: Quadratic Functions and Complex Numbers · 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. Solve over the complex numbers: $x^2 - 6x + 10 = 0$. EASY

2. Find the discriminant of $x^2 + 2x + 1 = 0$ and tell how many real solutions it has. EASY

3. Solve over the complex numbers: $x^2 + 4x + 29 = 0$. EASY

4. Find the discriminant of $-2x^2 + x - 1 = 0$ and tell how many real solutions it has. MEDIUM

5. Solve over the complex numbers: $x^2 + 36 = 0$. MEDIUM

6. Find the discriminant of $-4x^2 + 4x + 5 = 0$ and tell how many real solutions it has. MEDIUM

7. Solve over the complex numbers: $3x^2 + 6x + 51 = 0$. MEDIUM

8. Find the discriminant of $4x^2 + 5x + 3 = 0$ and tell how many real solutions it has. HARD

9. Solve over the complex numbers: $3x^2 - 24x + 51 = 0$. HARD

10. Find the discriminant of $x^2 - 8x + 4 = 0$ and tell how many real solutions it has. HARD