Watch. Practice. Understand. | Lesson 206

Pre Calculus Honors Chapter 1 and 2 Lecture Part 4 Quadratic Functions Analysis

Watch the matching video: https://www.youtube.com/watch?v=2HkTKzU5g-4

Practice focus: Quadratic equations and graphs

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 Solve $x^2 - 7x + 12 = 0$.

02 Solve $x^2 + 4x - 1 = 0$ exactly.

03 Find the vertex, axis and minimum of $y = 2(x - 3)^2 - 8$.

04 A rectangle has area 60 m^2 and length 4 m more than width. Find its dimensions.

Worked answers | Lesson 206

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01 Solve $x^2 - 7x + 12 = 0$.

Factor: $(x - 3)(x - 4) = 0$. Roots: 3 and 4.

02 Solve $x^2 + 4x - 1 = 0$ exactly.

Complete the square: $(x + 2)^2 = 5$. Thus $x = -2 \pm \sqrt{5}$.

03 Find the vertex, axis and minimum of $y = 2(x - 3)^2 - 8$.

Vertex (3, -8); axis $x = 3$. Since $2 > 0$, minimum is -8.

04 A rectangle has area 60 m² and length 4 m more than width. Find its dimensions.

$w(w + 4) = 60$, so $(w + 10)(w - 6) = 0$. Reject -10: width 6 m, length 10 m.