

Algebra 1 Review Packet Day 1

Lesson 025 | Algebra I | Linear equations • Systems of equations and inequalities • Quadratic equations and graphs

<https://www.youtube.com/watch?v=09MNQKETXcI>

Related review: exact coverage needs teacher confirmation.

Name: _____ Date: _____ Show your reasoning.

01

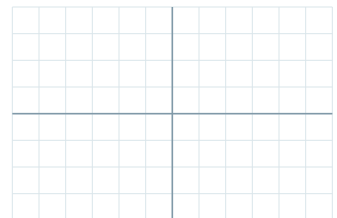
Solve $12x + 6 = 30$.

02

Solve the system $x + y = 14$, $7x - y = 58$.

03

For $y = 14x^2 - 252x + 1125$, find the vertex, axis, range, and both x-intercepts; sketch the graph.



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04

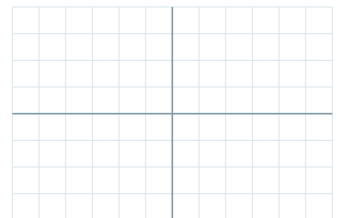
Solve $5x + 11 = 21$.

05

Solve the system $x + y = 15$, $5x - y = 21$.

06

For $y = 11x^2 - 154x + 537$, find the vertex, axis, range, and both x-intercepts; sketch the graph.



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01

Solve $12x + 6 = 30$.

Subtract 6: $12x = 24$. Divide by 12: $x = 2$.

02

Solve the system $x + y = 14$, $7x - y = 58$.

Add the equations: $8x = 72$, so $x = 9$. Substitute into $x + y = 14$: $y = 5$.

03

For $y = 14x^2 - 252x + 1125$, find the vertex, axis, range, and both x-intercepts; sketch the graph.

Complete the square: $y = 14(x - 9)^2 - 9$. Vertex $(9, -9)$; axis $x = 9$; range $y \geq -9$. Solve $(x - 9)^2 = 9/14$: $x = 9 \pm \sqrt{9/14}$.

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04

Solve $5x + 11 = 21$.

Subtract 11: $5x = 10$. Divide by 5: $x = 2$.

05

Solve the system $x + y = 15$, $5x - y = 21$.

Add the equations: $6x = 36$, so $x = 6$. Substitute into $x + y = 15$: $y = 9$.

06

For $y = 11x^2 - 154x + 537$, find the vertex, axis, range, and both x-intercepts; sketch the graph.

Complete the square: $y = 11(x - 7)^2 - 2$. Vertex $(7, -2)$; axis $x = 7$; range $y \geq -2$. Solve $(x-7)^2 = 2/11$: $x = 7 \pm \sqrt{2/11}$.