Domain and Range Matching Activity

Activity Description
Students will use what they have learned about domain, range, and identifying functions to match domain and range cards with their corresponding graphs. They will then use the code to crack the mystery phrase.

South Carolina College- and Career-Ready Standards
FIF.1: Extend previous knowledge of a function to apply to general behavior and features of a function.

a. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range.

b. Represent a function using function notation and explain that $f(x)$ denotes the output of function f that corresponds to the input x. c. Understand that the graph of a function labeled as f is the set of all ordered pairs (x, y) that satisfy the equation $f(x)$.

FIF.5: Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes.

Objectives
Students will be able to…
- Identify the domain of a graph
- Identify the range of a graph
- Determine if a graph is a function

Required Time – 25 minutes

Materials
Domain and Range Cards
Student Worksheet, included at the end of this lesson

Instructions
Prior to the lesson, cut out and scramble cards. Students will work together to match the cards and write the answers on their worksheet. They will use their answers to find the "mystery phrase."

Answer Key

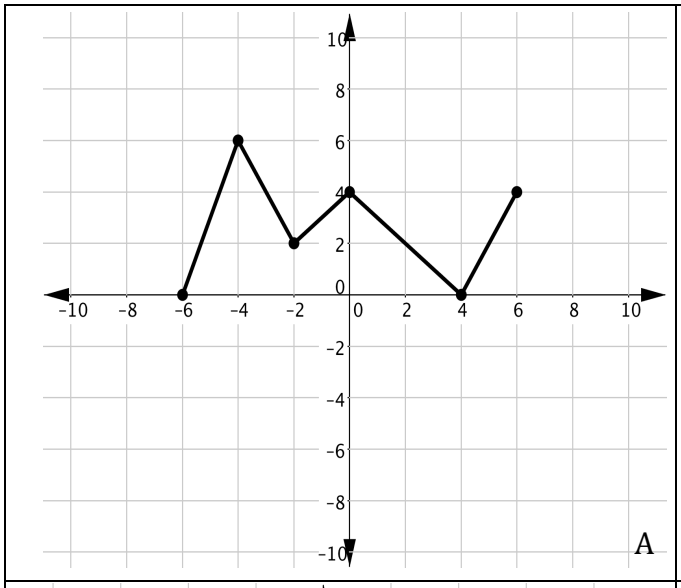
1. A	2. D	3. H	4. C
5. G	6. F	7. K	8. E
9. J	10. L	11. B	12. I
13. X	14. V	15. N	16. Q
17. O	18. U	19. P	20. M
21. R	22. W	23. S	24. T

Domain: $\{-6 \leq x \leq 6\}$ Range: $\{0 \leq y \leq 6\}$ Function: YES 1	Domain: $\{-4 \leq x \leq 4\}$ Range: $\{-4 \leq y \leq 4\}$ Function: NO 2
Domain: $\{-4 \leq x \leq 2\}$ Range: $\{-2 \leq y \leq 4\}$ Function: YES 3	Domain: $\{x = -5\}$ Range: $\{-2 < y < 6\}$ Function: NO 4
Domain: $\{-3 \leq x < 5\}$ Range: $\{y = -1\}$ Function: YES 5	Domain: $\{x > 0\}$ Range: $\{y = 4\}$ Function: YES 6

Domain: {all real numbers} Range: $\{y \geq 0\}$ Function: YES 7	Domain: $\{x \geq 0\}$ Range: {all real numbers} Function: NO 8
Domain: $\{-3 \leq x \leq 4\}$ Range: $\{-2 \leq y \leq 4\}$ Function: NO 9	Domain: {all real numbers} Range: {all real numbers} Function: YES 10
Domain: $\{-7 \leq x < 5\}$ Range: $\{-3 \leq y < 1\}$ Function: YES 11	Domain: $\{-3 < x < 4\}$ Range: $\{0 \leq y < 5\}$ Function: YES 12

Domain: $\{-6 \leq x \leq 3\}$ Range: $\{-6 \leq y \leq -1\}$ Function: YES 13	Domain: $\{-6 \leq x \leq 3\}$ Range: $\{-5 < y \leq -1\}$ Function: NO 14
Domain: $\{-5 \leq x < 0\}$ Range: $\{-5 < y \leq -2\}$ Function: YES 15	Domain: $\{0 \leq x < 2\}$ Range: $\{0 \leq y < 4\}$ Function: YES 16
Domain: $\{-4 < x < 7\}$ Range: $\{-7 < y < -2\}$ Function: YES 17	Domain: $\{0 \leq x \leq 6\}$ Range: $\{0 \leq y \leq 7\}$ Function: YES 18

Domain: $\{x \leq 0\}$ Range: $\{y \geq 0\}$ Function: YES 19	Domain: $\{2 \leq x \leq 7\}$ Range: $\{1 \leq x \leq 6\}$ Function: NO 20
Domain: $\{0 \leq x \leq 4\}$ Range: $\{0 \leq y \leq 6\}$ Function: YES 21	Domain: $\{-4 < x < 5\}$ Range: $\{-2 \leq y < 3\}$ Function: YES 22
Domain: $\{x \leq 5\}$ Range: $\{y = 0\}$ Function: YES 23	Domain: $\{-7 \leq x \leq 0\}$ Range: $\{-3 \leq y \leq 4\}$ Function: YES 24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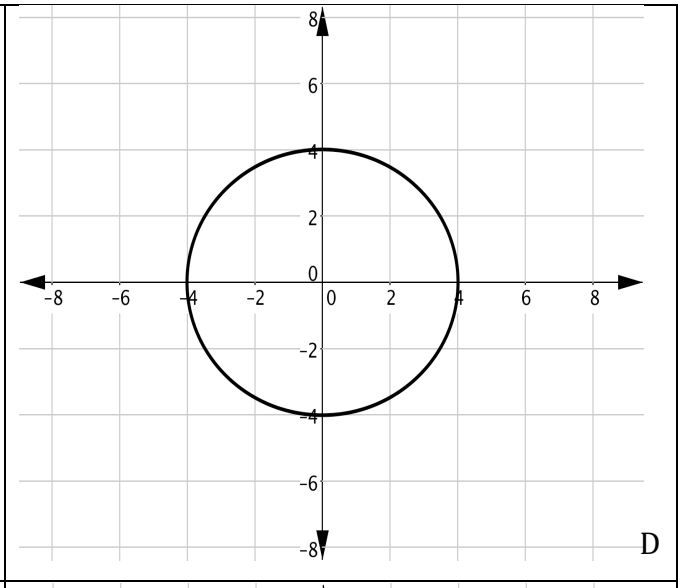
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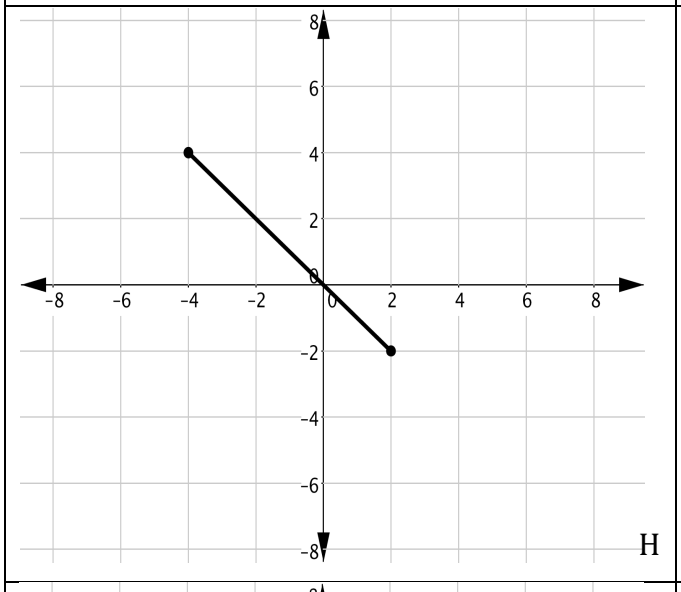
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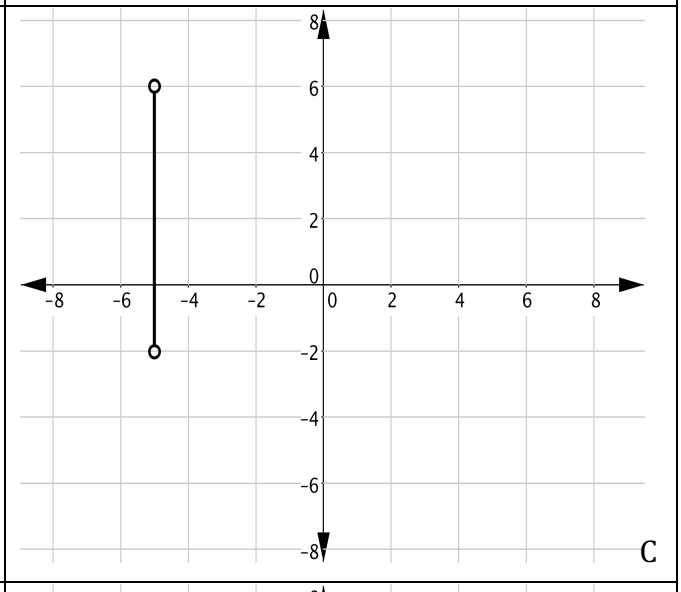
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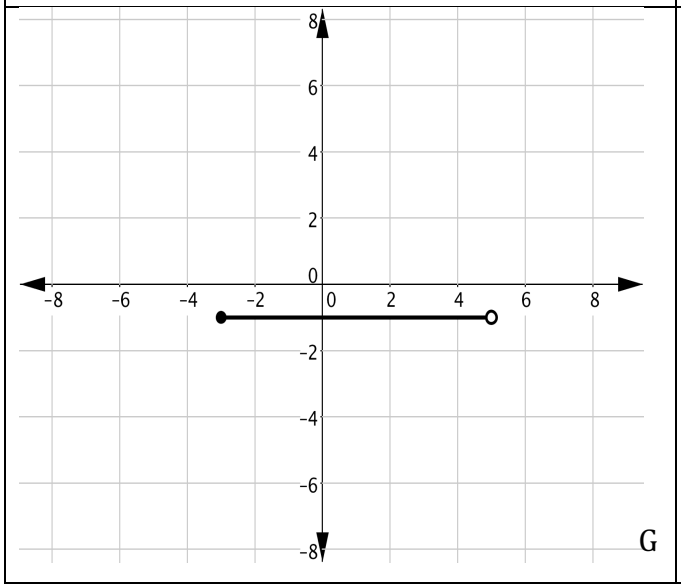
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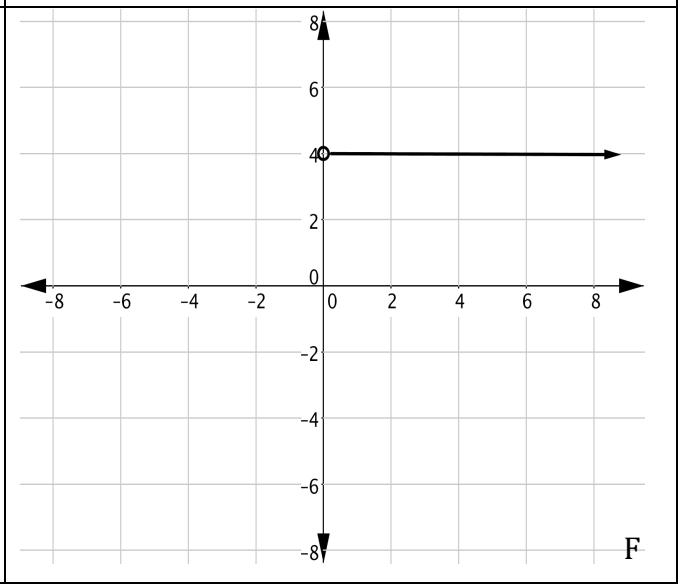
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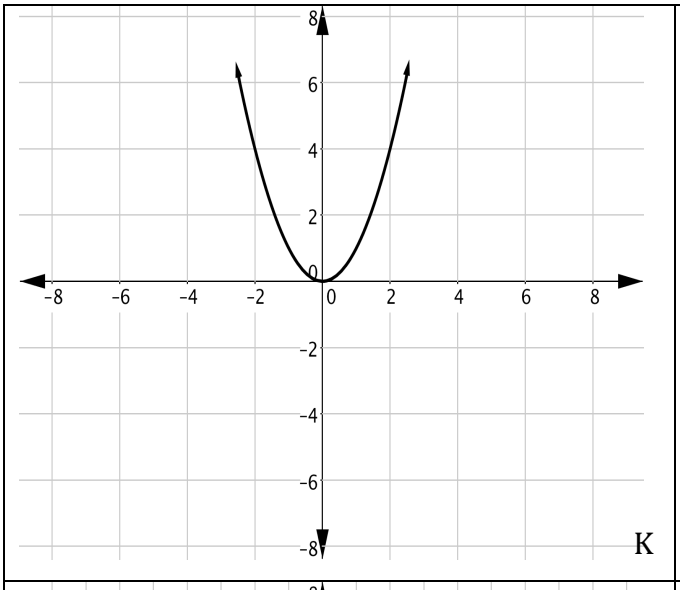
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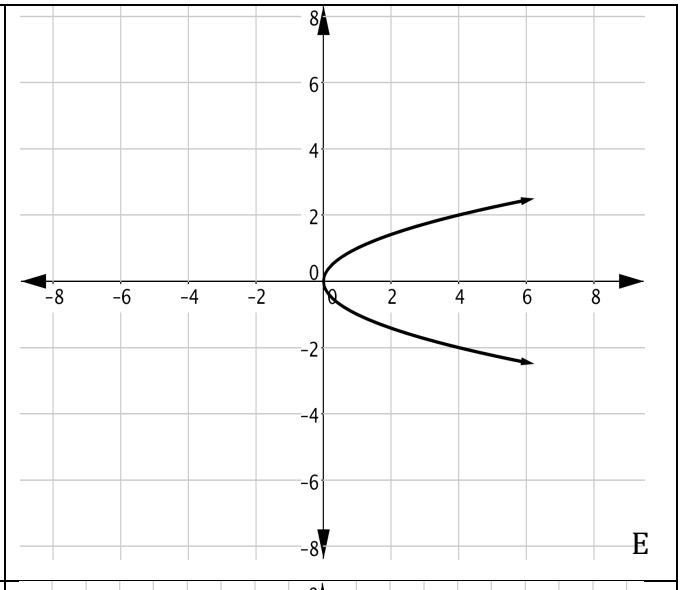
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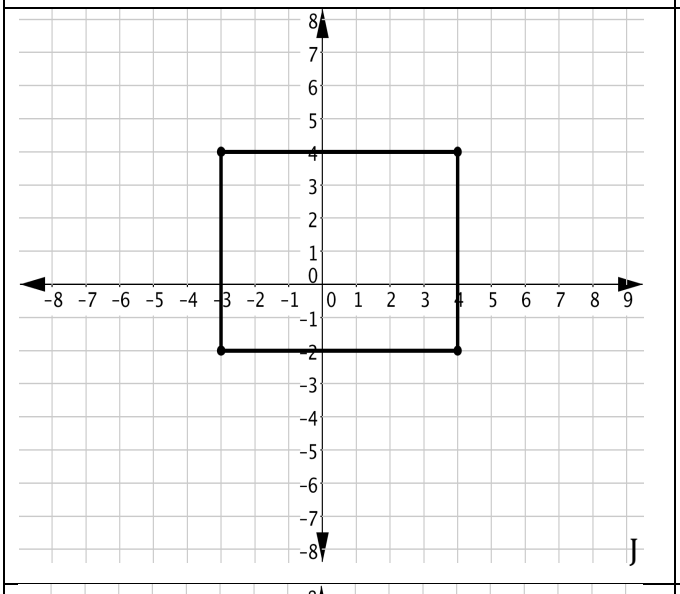
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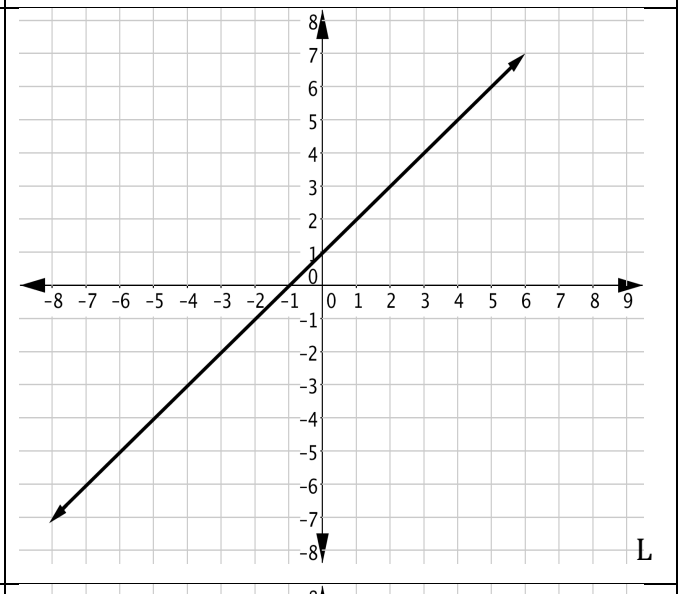
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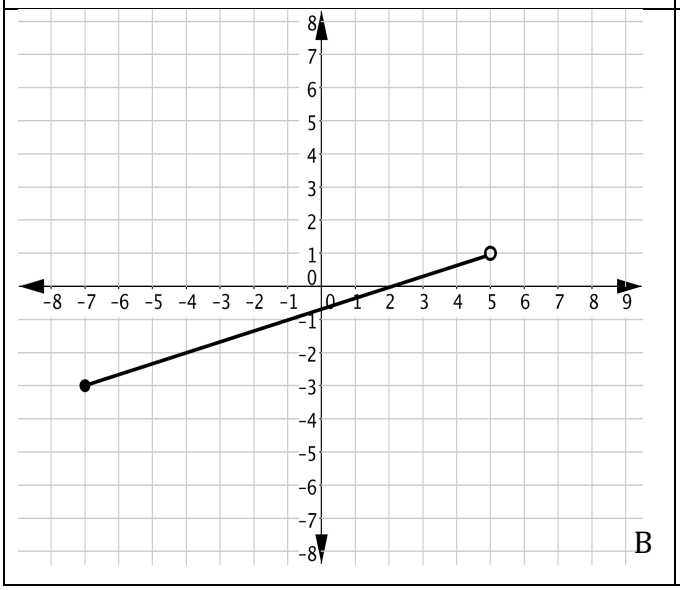
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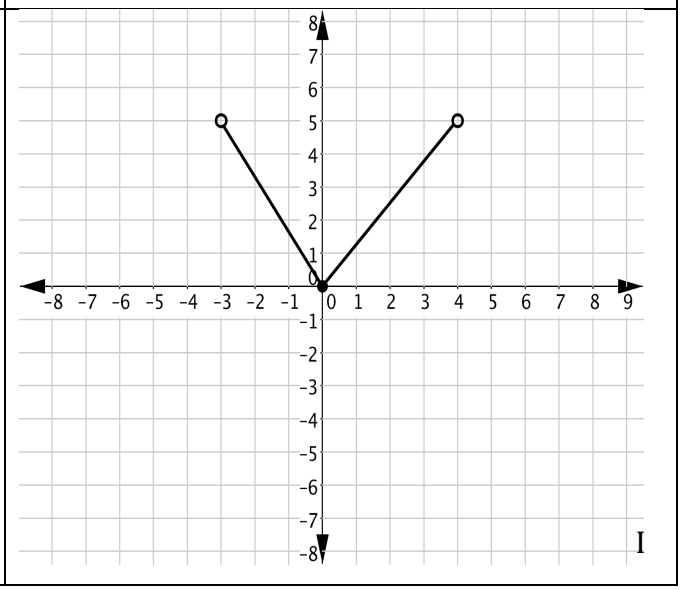
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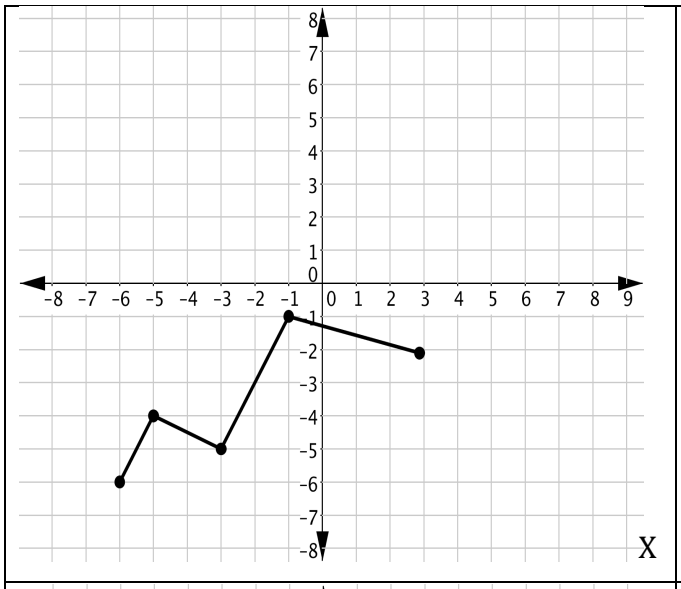
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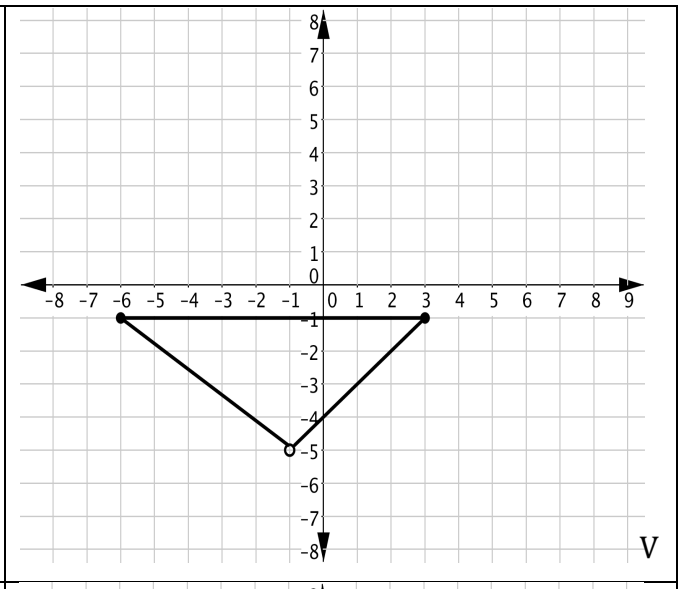
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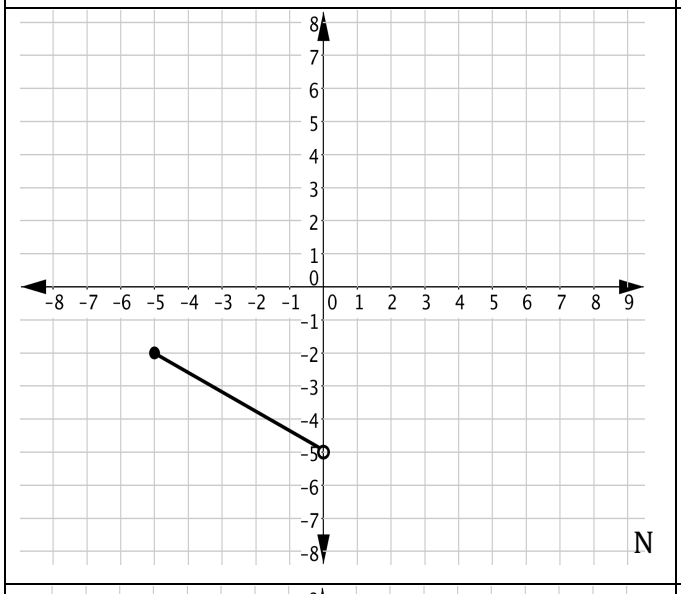
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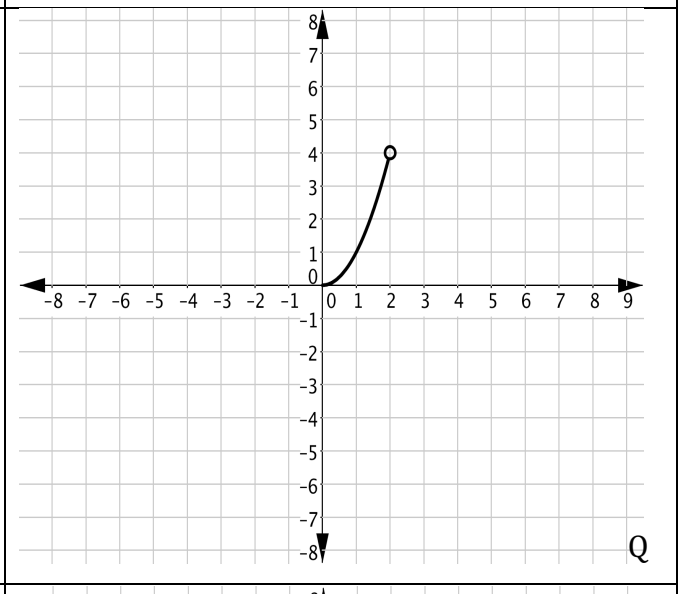
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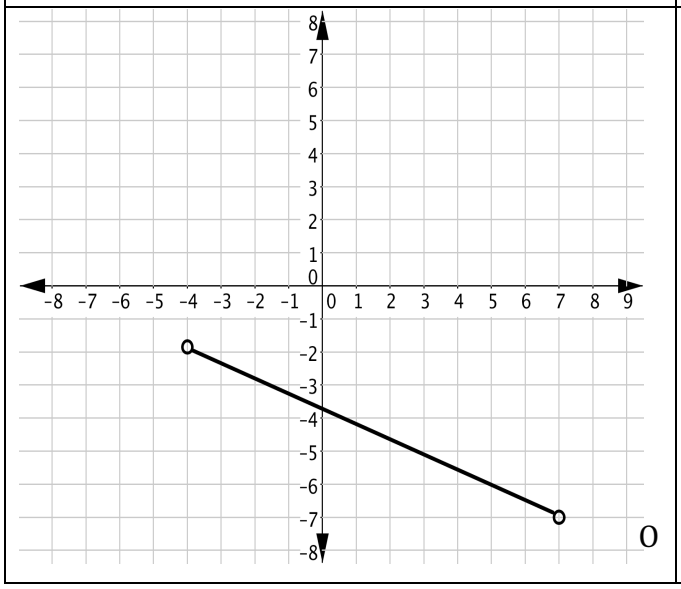
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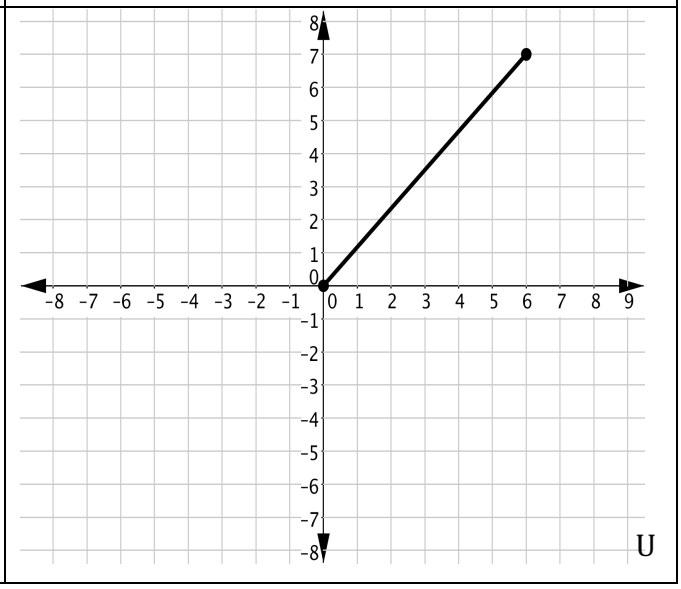
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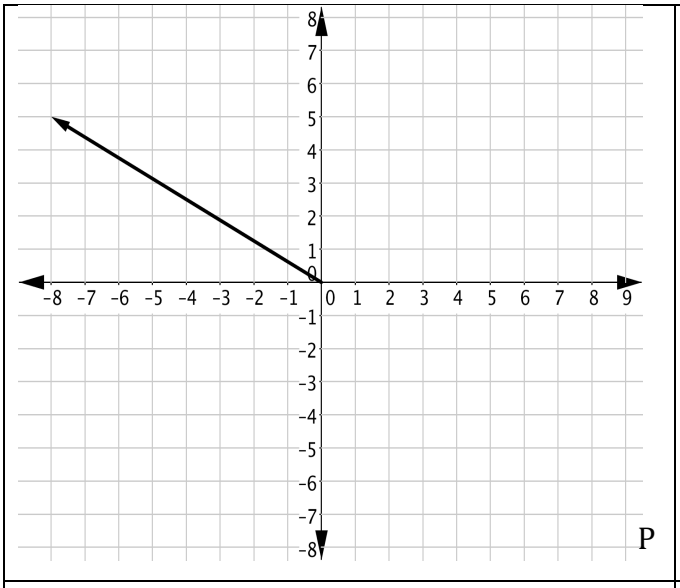
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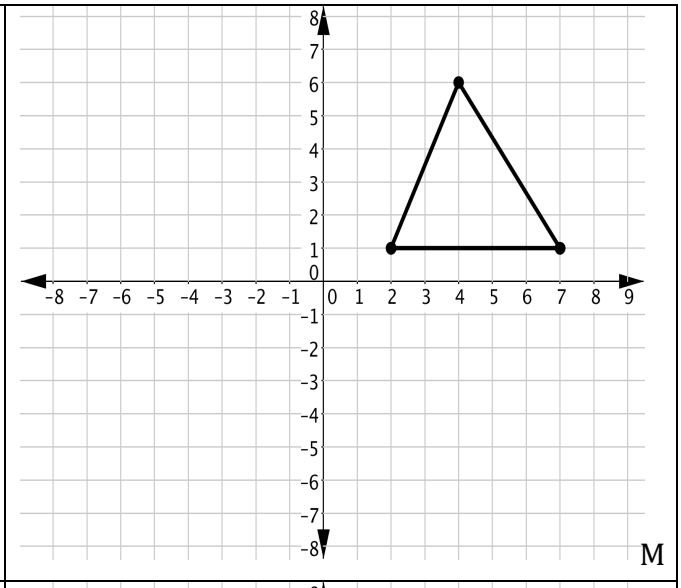
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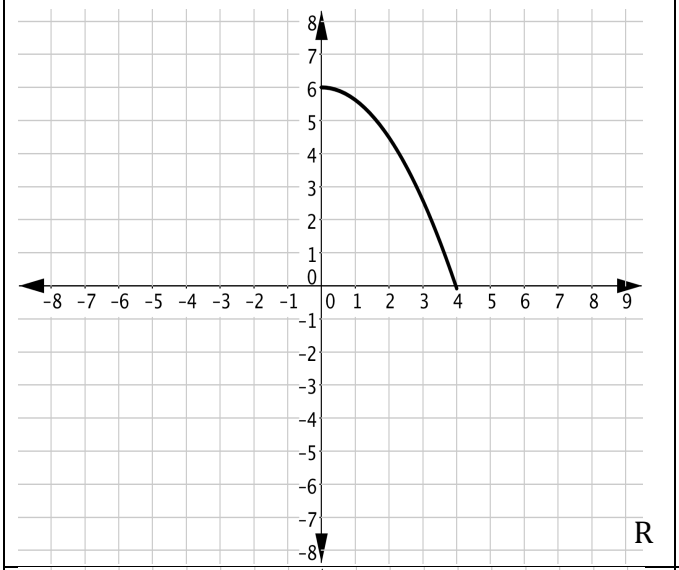
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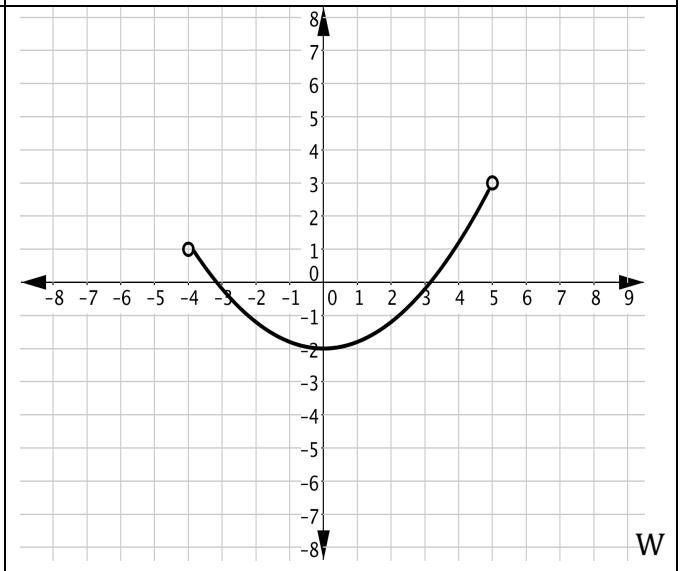
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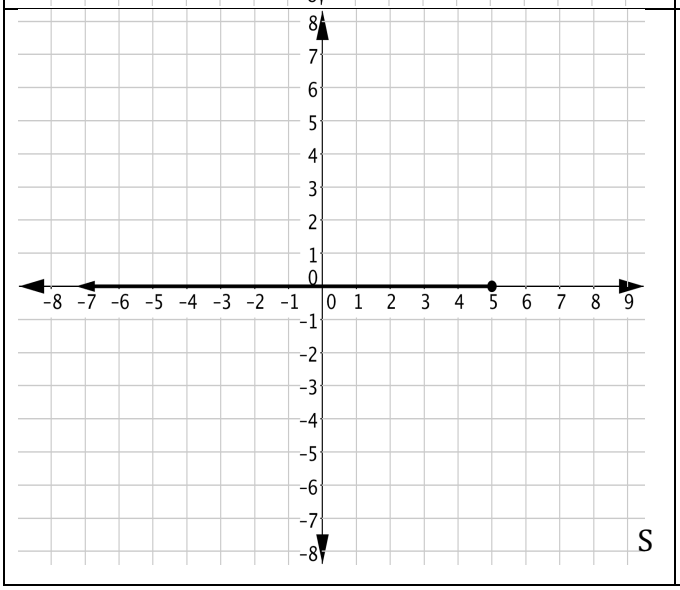
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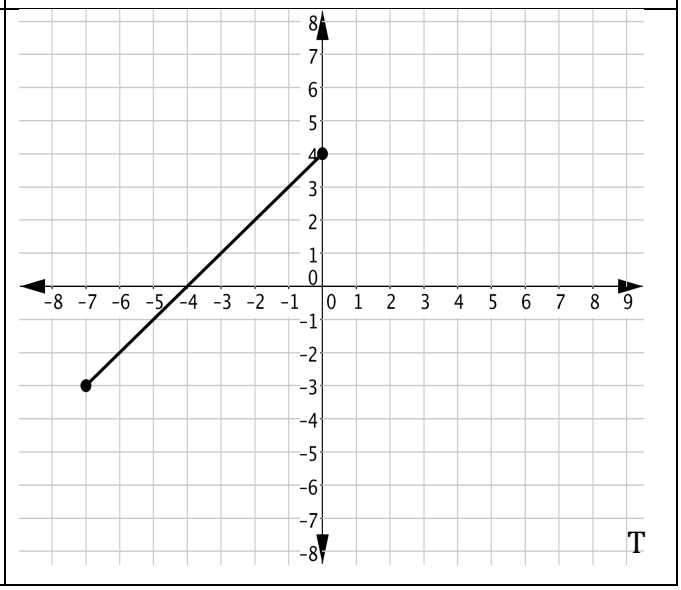
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