

More!

Graph Coordinates of Corresponding Terms

5.OA.B.3

ccss.math.content.5.OA.B.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

create coordinates from corresponding terms in two different patterns.

Video Resource: <http://learnzillion.com/lessons/3198-create-ordered-pairs-using-a-table>

Friendly Reminder!

ORDERED PAIRS

x coordinate

y coordinate

(5, 9)

Together they make an ordered pair.

Analyze the in/out tables. The rule is written as an expression.
Then create ordered pairs based on the corresponding terms.

| In | Out | Ordered Pair (x, y) |
|----|-------|---------------------|
| 2 | 10 | |
| 3 | 11 | |
| 4 | 12 | |
| 5 | 13 | |
| 6 | 14 | |
| n | n + 8 | |

Rule →

| In | Out | Ordered Pair (x, y) |
|----|-------|---------------------|
| 2 | 1 | |
| 6 | 5 | |
| 10 | 9 | |
| 14 | 13 | |
| 18 | 17 | |
| n | n - 1 | |

Rule →

| In | Out | Ordered Pair (x, y) |
|----|-------|---------------------|
| 3 | 6 | |
| 6 | 12 | |
| 9 | 18 | |
| 12 | 24 | |
| 15 | 30 | |
| n | n x 2 | |

Rule →

| In | Out | Ordered Pair (x, y) |
|----|-------|---------------------|
| 10 | 2 | |
| 15 | 3 | |
| 20 | 4 | |
| 25 | 5 | |
| 30 | 6 | |
| n | n ÷ 5 | |

Rule →

Check Point

“I can form ordered pairs (,) from the corresponding terms of two patterns.”

4

I can do it on my own. I can prove I understand. I can explain how to do it.

3

I can do it with an example in front of me. I make a few mistakes.

2

I'm starting to get it, but I need more practice.

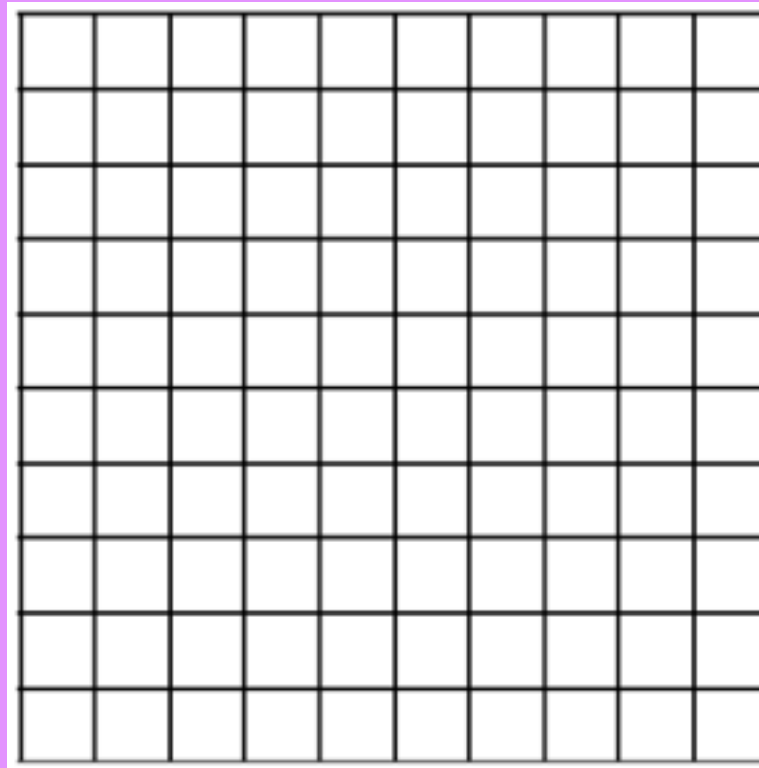
1

Even with help, I still don't know how to do it.

create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|-------|------------------------|
| 1 | 4 | |
| 3 | 12 | |
| 5 | 20 | |
| 7 | 28 | |
| 9 | 36 | |
| n | n x 4 | |

y-axis



0

x-axis

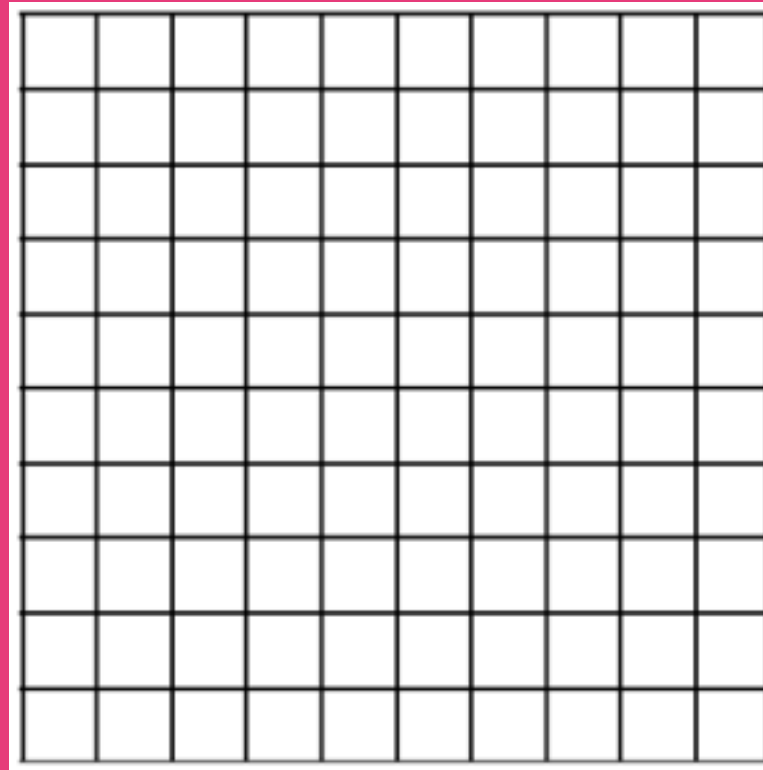
connect the points in the order they were graphed.

Discuss: What do you notice about the segment you created?

create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|-------|------------------------|
| 3 | 6 | |
| 4 | 7 | |
| 5 | 8 | |
| 6 | 9 | |
| 7 | 10 | |
| n | n + 3 | |

y-axis



0

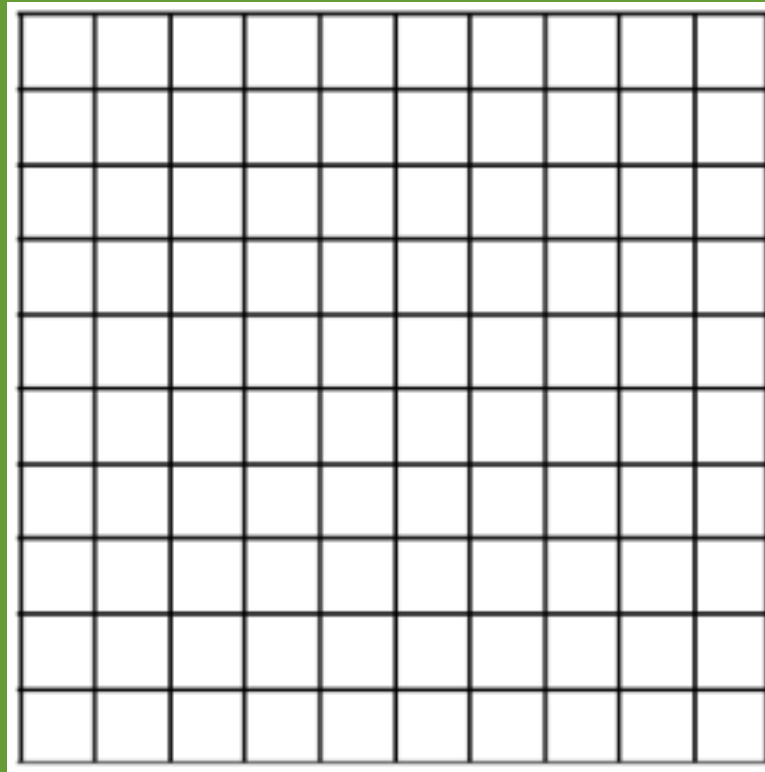
x-axis

connect the points in the order they were graphed.
discuss: What do you notice about the segment you created?

create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|-------|------------------------|
| 1 | 5 | |
| 2 | 10 | |
| 3 | 15 | |
| 4 | 20 | |
| 5 | 25 | |
| n | n x 5 | |

y-axis



x-axis

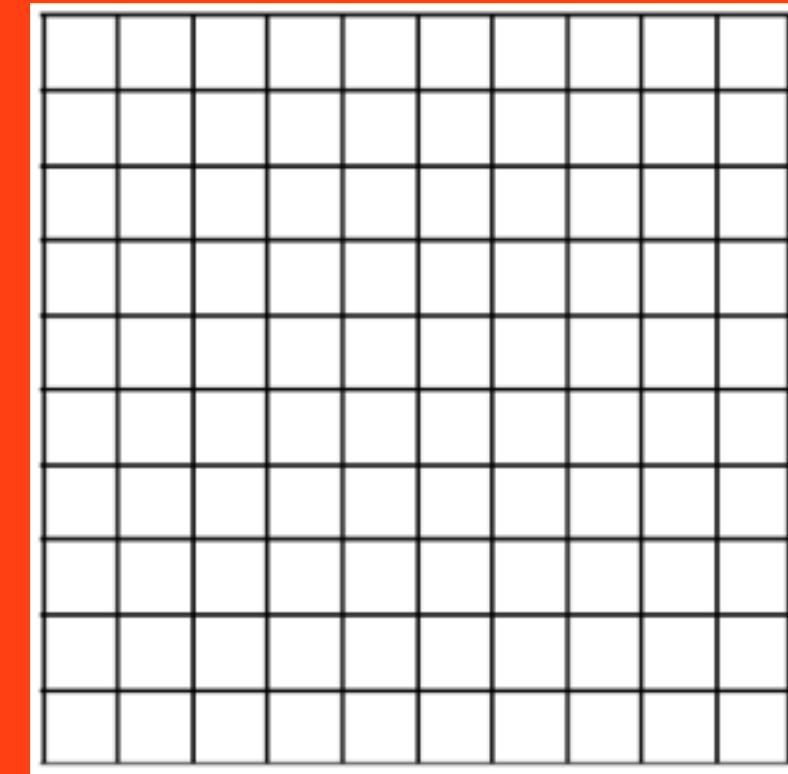
connect the points in the order they were graphed.

discuss: What do you notice about the segment you created?

create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|-------|------------------------|
| 4 | 2 | |
| 6 | 4 | |
| 8 | 6 | |
| 10 | 8 | |
| 12 | 10 | |
| n | n - 2 | |

y-axis



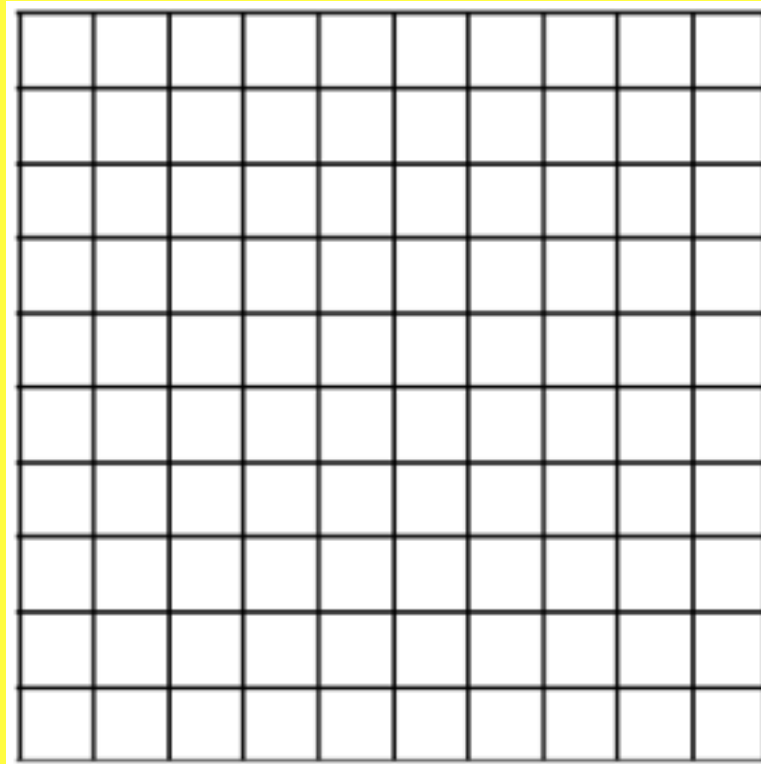
x-axis

connect the points in the order they were graphed.
discuss: What do you notice about the segment you created?

create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|------------|------------------------|
| 10 | 2 | |
| 20 | 4 | |
| 30 | 6 | |
| 40 | 8 | |
| 50 | 10 | |
| n | $n \div 5$ | |

y-axis



0

x-axis

connect the points in the order they were graphed.

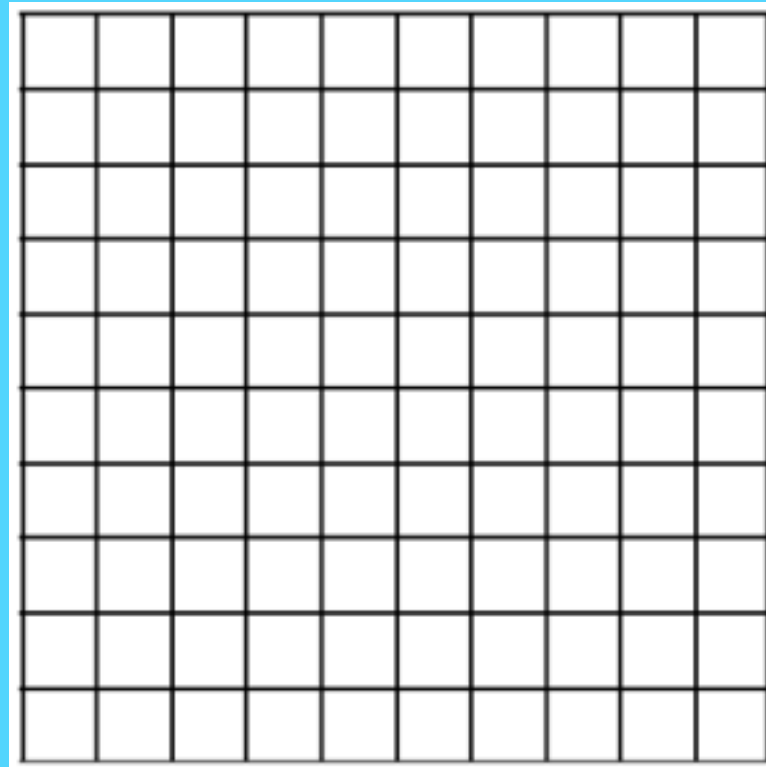
Discuss: What do you notice about the segment you created?

"Show What You Know"

Create ordered pairs based on the corresponding terms.
Then graph the ordered pairs on the coordinate plane.

| In | Out | Ordered Pair (x, y) |
|----|------------|------------------------|
| 6 | 1 | |
| 12 | 2 | |
| 18 | 3 | |
| 24 | 4 | |
| 30 | 5 | |
| n | $n \div 6$ | |

y-axis



0

X-axis

Explain: What do you notice about the segment you created?

Check Point

“I can graph ordered pairs on a coordinate plane.”

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2

I'm starting to get it, but I need more practice.

1

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Check Point

“I can explain patterns in corresponding terms.”

4

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Additional Resources to Help Understand How to Create Ordered Pairs (Coordinates) and Graphing

Video Resource: <http://learnzillion.com/lessons/3567-graph-ordered-pairs>

Video Resource: <http://learnzillion.com/lessons/3466-create-a-line-graph-on-a-coordinate-plane>

Video Resource: <http://learnzillion.com/lessons/3602-identify-numerical-patterns-by-forming-and-graphing-ordered-pairs>