

Just In Time Quick Check
Standard of Learning (SOL) 8.15b

Strand: Patterns, Functions, and Algebra

Standard of Learning (SOL) 8.15b

The student will determine the domain and range of a function.

Grade Level Skills:

- Identify the domain and range of a function represented as a set of ordered pairs, a table, or a graph of discrete points.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [8.15 - Relations and Functions; Domain and Range](#) (Word) / [PDF Version](#)
- VDOE Algebra Readiness Formative Assessments
 - [SOL 8.15a,b](#) (Word) / [\(PDF\)](#)
- VDOE Algebra Readiness Remediation Plans
 - [Relations, Functions, Tables and Graphs](#) (Word) / [\(PDF\)](#)
- VDOE Word Wall Cards: Grade 8 [\(Word\)](#) | [\(PDF\)](#)
 - Domain
 - Range

Supporting and Prerequisite SOL: [8.15a](#), [7.10b](#), [7.10d](#), [7.10e](#), [6.8b](#)

SOL 8.15b - Just in Time Quick Check

1. Sabrina's teacher asked her to list the range for the function represented in the table below.

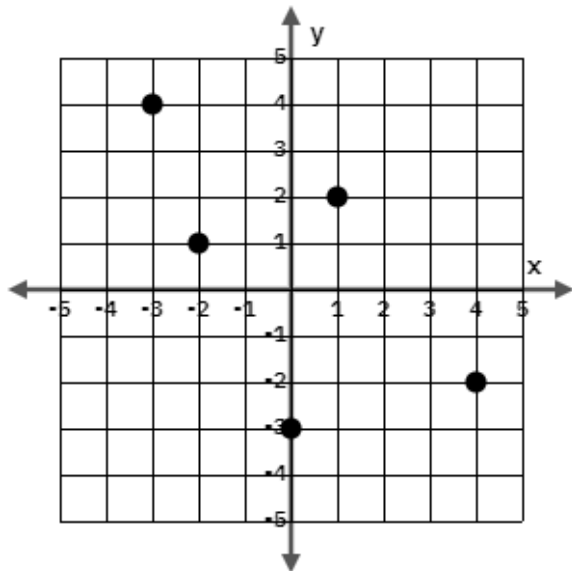
x	y
-3	-7
-1	-3
0	-1
2	3
4	7

What should Sabrina write as the range of this function? Explain.

2. What is the domain of the relation shown?

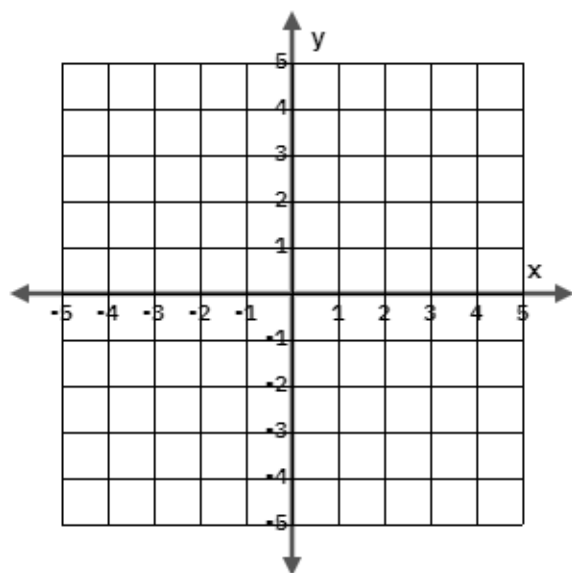
$\{(-1, 2), (-5, 3), (-1, -4), (0, -6), (4, -2)\}$

3. The following graph shows a relation.



What is the range of the relation?

4. Corey graphed a relation that has a domain of $\{-3, -2, 0, 1, 4\}$. Use the coordinate plane below to show one possible relation Corey could have graphed.



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Common Errors/Misconceptions and their Possible Indications

1. Sabrina's teacher asked her to list the range for the function represented in the table below.

x	y
-3	-7
-1	-3
0	-1
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What should Sabrina write as the range of this function? Explain.

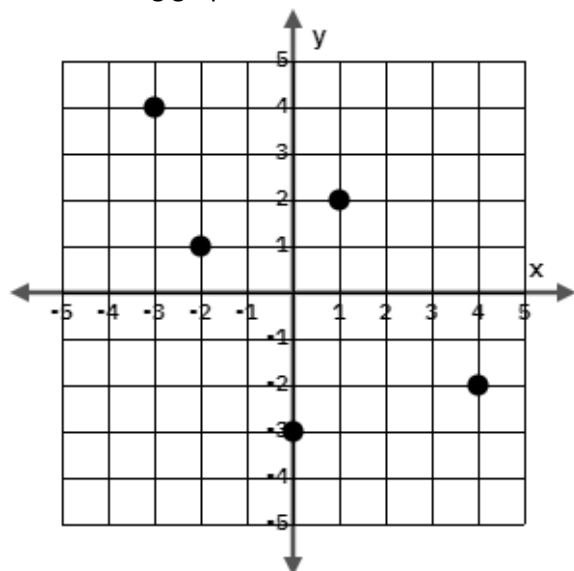
A common misconception some students make may be to confuse the definitions of domain and range. If students are listing x-values for the range, this might indicate a need to revisit the vocabulary. Refer to the Grade 8 Word Wall Cards for a visual representation of domain and range.

2. What is the domain of the relation shown?

$\{(-1, 2), (-5, 3), (-1, -4), (0, -6), (4, -2)\}$

A common error a student may make is to list the y-values for the domain instead of the x-values. If a student understands the definition of domain and range, this error may indicate the student does not understand that ordered pairs are written as (x, y) . This student may need more experience with writing and interpreting ordered pairs.

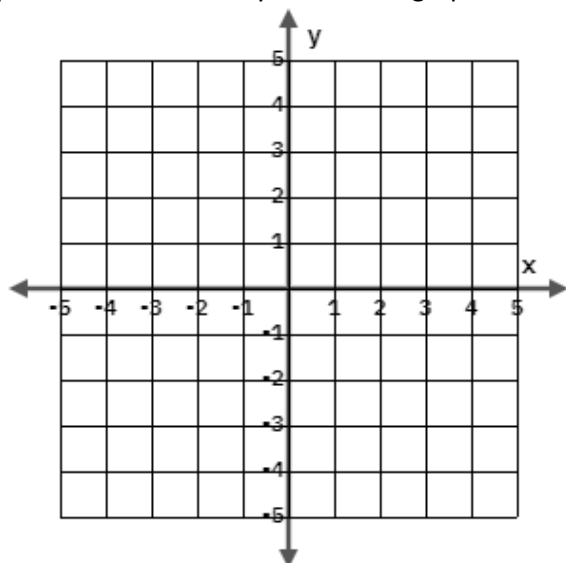
3. The following graph shows a relation.



What is the range of the relation?

A common error is a student may incorrectly list $\{-3, -2, 0, 1, 4\}$ as the range. A student may understand the definition of range, but have difficulty identifying and writing ordered pairs for the graphed points. A student may also make this error assuming that the y-axis is vertical and then look to each vertical line to determine the range values. A student may benefit from more experience identifying ordered pairs represented by points. Refer to the Grade 6 Curriculum Framework (see SOL 6.8).

4. Corey graphed a relation that has a domain of $\{-4, -1, 0, 2, 3\}$. Use the coordinate plane below to show one possible relation Corey could have graphed.



A student may incorrectly graph a relation with a range of $\{-4, -1, 0, 2, 3\}$. A student may understand the definition of domain, but have difficulty graphing ordered pairs. The student may benefit from more experience graphing ordered pairs. Refer to the Grade 6 Curriculum Framework (see SOL 6.8).