

STANDARD III: The student will be able to apply concepts related to functions.

OBJECTIVE

2. Find the range of functions when given the domain.

ELIGIBLE CONTENT

- The domain of a function may be a single value or a set of values.
- A set of ordered pairs may be used.
- Functions may be expressed using either the terminology “ $f(x) =$ ” or “ $y =$ ”.

SAMPLE ITEMS

1 What is the range of this function?

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

A $\{-2, 4\}$

B $\{-3, 3\}$

C $\{-2, 0, 2, 4\}$

D $\{-3, 0, 1, 3\}$

2 What is the range of $y = 3x^2 - 5$
if the domain is $\{-2, 0, 1\}$?

A $\{2, 0, -1\}$

B $\{2, 3, 5\}$

C $\{4, 0, 1\}$

D $\{7, -5, -2\}$

3 If $f(x) = -x^2 + 2x - 3$, what is $f(4)$?

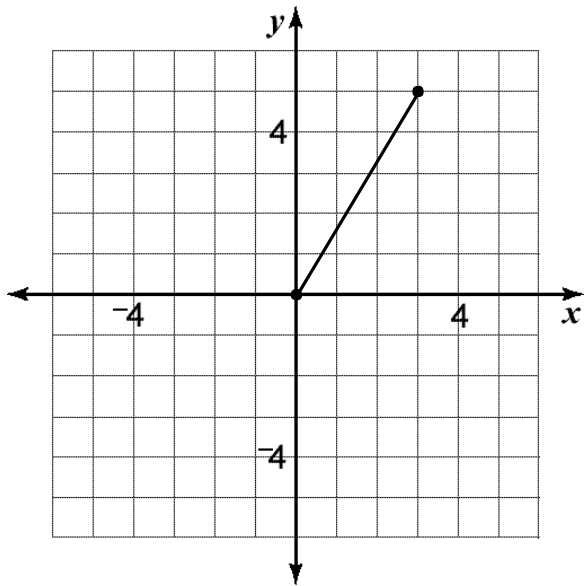
A -11

B -3

C 13

D 21

4 What is the range of the function shown on the graph?



- A $3 \leq y \leq 5$
- B $2 \leq y \leq 5$
- C $0 \leq y \leq 3$
- D $0 \leq y \leq 5$