

**F.IF.A.2: Domain and Range 2b**

- 1 Let  $f$  be a function such that  $f(x) = 2x - 4$  is defined on the domain  $2 \leq x \leq 6$ . The range of this function is
- 2 What is the range of the relation  $y = 2x^2 + 3x$  if the domain is the set  $\{-2, -1, 0\}$ ?
- 3 If the domain of the function  $f(x) = 2x^2 - 8$  is  $\{-2, 3, 5\}$ , then the range is
- 4 The domain for  $f(x) = 3x + 2$  is  $-3 \leq x \leq 2$ . The greatest value in the range of  $f(x)$  is
- 5 The domain of  $f(x) = x^2 + 2x + 1$  is  $-3 \leq x \leq 3$ . The largest value in the range of  $f(x)$  is
- 6 If the domain of  $f(x) = 2x + 1$  is  $\{-2 \leq x \leq 3\}$ , which integer is *not* in the range?
  - 1)  $-4$
  - 2)  $-2$
  - 3)  $0$
  - 4)  $7$
- 7 If the domain of  $f(x) = 2x + 3$  is  $\{-3 < x \leq 0\}$ , which number is *not* in the range?
  - 1)  $-1$
  - 2)  $0$
  - 3)  $3$
  - 4)  $6$
- 8 What is the domain of the relation shown below?  
 $\{(4, 2), (1, 1), (0, 0), (1, -1), (4, -2)\}$
- 9 A function is defined by the equation  $y = 8x - 3$ . If the domain is  $2 \leq x \leq 4$ , find the minimum value in the range of the function.
- 10 If the domain of  $f(x) = x^2 + 1$  is limited to  $\{0, 1, 2, 3\}$ , what is the maximum value of the range?

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**Answer Section**

1 ANS:  
 $0 \leq y \leq 8$   
 $f(2) = 0$   
 $f(6) = 8$

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2 ANS:  
 $\{2, -1, 0\}$

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3 ANS:  
 $\{0, 10, 42\}$   
 $f(-2) = 0, f(3) = 10, f(5) = 42$

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4 ANS:  
8

REF: 088924siii

5 ANS:  
16

REF: 089927siii

6 ANS: 1                      REF: 080132siii

7 ANS: 4                      REF: 080320siii

8 ANS:  
 $\{0, 1, 4\}$

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9 ANS:  
13

REF: 019013siii

10 ANS:  
10

REF: 060209siii