Name: _____

F.IF.A.2: Domain and Range 3a

1 The range of the function $f(x) = x^2 + 2x - 8$ is all real numbers
   1) less than or equal to –9
   2) greater than or equal to –9
   3) less than or equal to –1
   4) greater than or equal to –1

2 What is the domain of $f(x) = 2^x$?
   1) all integers
   2) all real numbers
   3) $x \geq 0$
   4) $x \leq 0$

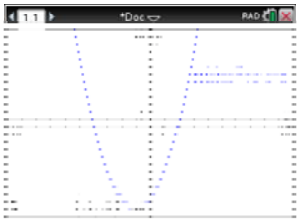
3 What is the domain of the function $g(x) = 3^x - 1$?
   1) $(-\infty, 3]$
   2) $(-\infty, 3)$
   3) $(-\infty, \infty)$
   4) $(-1, \infty)$

4 The range of the function defined as $y = 5^x$ is
   1) $y < 0$
   2) $y > 0$
   3) $y \leq 0$
   4) $y \geq 0$

5 If $f(x) = \frac{1}{3}x + 9$, which statement is always true?
   1) $f(x) < 0$
   2) $f(x) > 0$
   3) If $x < 0$, then $f(x) < 0$.
   4) If $x > 0$, then $f(x) > 0$.

F.IF.A.2: Domain and Range 3a
Answer Section

1 ANS: 2



$f(x) = x^2 + 2x - 8 = x^2 + 2x + 1 - 9 = (x+1)^2 - 9$

REF: 061611ai

2 ANS: 2 REF: 080204b

3 ANS: 3 REF: 081517a2

4 ANS: 2 REF: 011619ai

5 ANS: 4 REF: 061417ai