Algebra I EOC Practice #16

SPI 3102.3.7: **Determine domain and range of a relation, determine whether a relation is a function, and/or evaluate a function at a specified rational value.**

1. The height (h) of a cliff diver above the water t seconds after he jumps is modeled by the equation $h = -16t^2 + 72$. What is the height above the water of a cliff diver at 1.5 seconds after he jumps?

   A. 36
   B. 108
   C. 53
   D. 312

2. A meteorologist sends a moisture probe rocket into a cloud layer. The height (h) the rocket will reach after t seconds is modeled by the equation $h = -16t^2 + 212t + 2$. What will be the height of the rocket after 0.5 seconds?
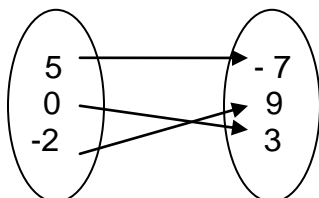
   A. 212 ft.
   B. 662
   C. 104 ft.
   D. 44

3. Which of the following relations does **NOT** represent a function?

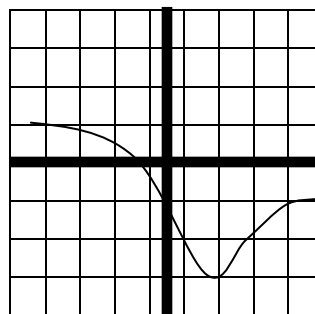   A. {(3, 2), (4, 1), (5, 2), (–7, 3)}
   B.

x	y
3	–5
5	4
3	8

   C.

   D. {(–2, 1), (–3, 2), (–4, 3), (–5, 4)}

4. What is the domain of the function?

x	y
5	–2
10	3
15	–7
20	5

   A. {–2, 3, –7, 5}
   B. {all real numbers}
   C. $5 \le d \le 20$
   D. {5, 10, 15, 20}

5. What is the range of the function?

   A. $-3 \le D \le 1$
   B. $-4 \le D \le 4$
   C. $-3 \le R \le 1$
   D. $-4 \le R \le 4$

6. What is the value of the function $f(x) = x^2 - 4x + 6$ when $x = -5$?

   A. 1
   B. 11
   C. 21
   D. 51