

## SAT Math Function Examples

1. If  $f(x) = 3x - 7$ , then:

- a) What is  $f(2)$ ?
- b) What is  $3f(3)$ ?
- c) What is  $f(\text{chickpea})$ ?
- d) If  $f(a) = 14$ , then what is  $a$ ?
- e) If  $f(2b) = 23$ , then what is  $b$ ?
- f) If  $f(c) + f(2c) = 4$ , then  $c = ?$
- g) If  $f(3d - 7) = 8$ , then  $d = ?$  ☹

$x$	$f(x)$
1	1
2	3
3	5
4	7
5	9
6	11

2. For the function in the table above,

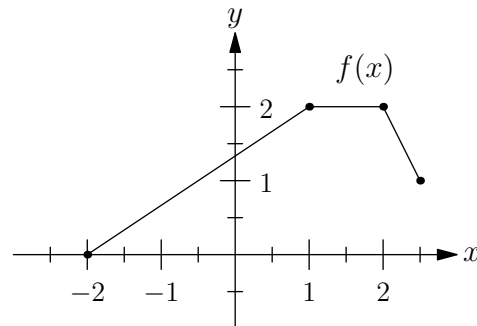
- a) What is  $f(3)$ ?
- b) If  $f(a) = 7$ , then what is  $a$ ?
- c) If  $f(2) = b$ , then what is  $f(2b)$ ? ☹

3. If  $g(x) = x^2$ , then:

- a) What is  $g(-2)$ ?
- b) If  $g(w) = 25$ , then what is  $w$ ? ☹
- c) If  $g(a) = 12$ , then what is  $g(2a)$ ? ☹

4. Define  $\Delta x = 1 - 3x$ . Then:

- a) What is  $\Delta 2$ ?
- b) If  $\Delta a = 4$ , then  $a = ?$
- c) What is  $\frac{\Delta 3}{\Delta 1}$ ?



5. For the function  $f$  graphed above,

- a) What is  $f(1.5)$ ?
- b) If  $c < 0$  and  $f(c) = 1$ , then  $c = ?$  ☹
- c) For how many values of  $x$  is  $f(x) = \frac{3}{2}$ ?

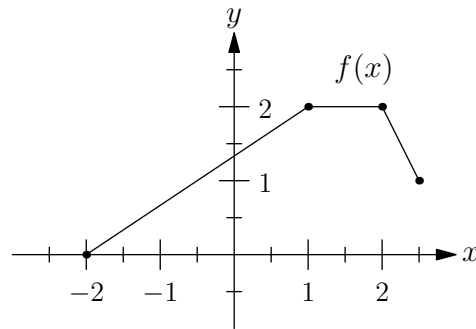
## SAT Math Function Examples Answers

1. If  $f(x) = 3x - 7$ , then:
- a) What is  $f(2)$ ? -1
  - b) What is  $3f(3)$ ? 6
  - c) What is  $f(\text{chickpea})$ ?  $3 \times \text{chickpea} - 7$
  - d) If  $f(a) = 14$ , then what is  $a$ ? 7
  - e) If  $f(2b) = 23$ , then what is  $b$ ? 5
  - f) If  $f(c) + f(2c) = 4$ , then  $c = ?$  2
  - g) If  $f(3d - 7) = 8$ , then  $d = ?$   $\ominus$  4

$x$	$f(x)$
1	1
2	3
3	5
4	7
5	9
6	11

2. For the function in the table above,
- a) What is  $f(3)$ ? 5
  - b) If  $f(a) = 7$ , then what is  $a$ ? 4
  - c) If  $f(2) = b$ , then what is  $f(2b)$ ?  $\ominus$  11

3. If  $g(x) = x^2$ , then:
- a) What is  $g(-2)$ ? 4
  - b) If  $g(w) = 25$ , then what is  $w$ ?  $\ominus$  5, -5
  - c) If  $g(a) = 12$ , then what is  $g(2a)$ ?  $\ominus$  48
4. Define  $\Delta x = 1 - 3x$ . Then:
- a) What is  $\Delta 2$ ? -5
  - b) If  $\Delta a = 4$ , then  $a = ?$  -1
  - c) What is  $\frac{\Delta 3}{\Delta 1}$ ? 4



5. For the function  $f$  graphed above,
- a) What is  $f(1.5)$ ? 2
  - b) If  $c < 0$  and  $f(c) = 1$ , then  $c = ?$   $\ominus$   $-\frac{1}{2}$
  - c) For how many values of  $x$  is  $f(x) = \frac{3}{2}$ ? Two