

Function Basics Day 3 HW

Use the given functions to find each value. Do NOT use a calculator!

$$a(x) = -2x^2 + 4 \quad b(x) = |9x - 1| \quad c(x) = \frac{-3x + 1}{4}$$

1) $b(-10)$

2) $a(4)$

3) $a(-3)$

4) $c(3)$

5) $c(22)$

FOR 6-8:

Write a rule in function notation to model the situation. Describe what the input and output represent.

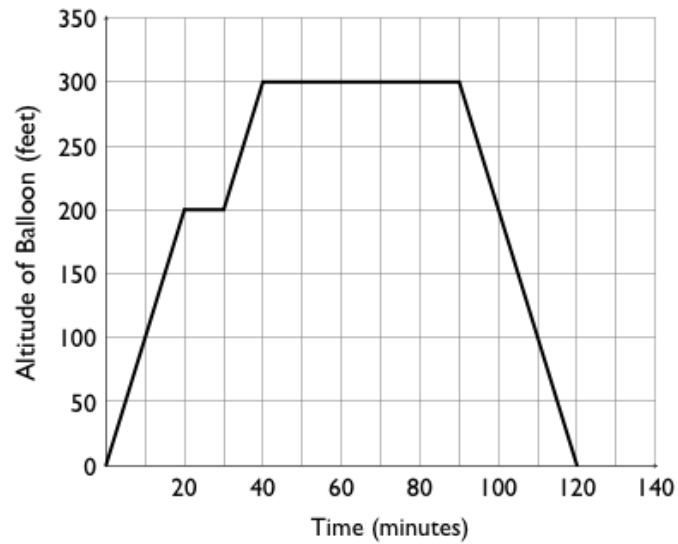
6) At a vacation resort, you can rent a personal watercraft for \$20 per hour, plus an insurance charge of \$35.

7) Pedro is making chocolate chip cookies. He has a bag of chocolate chips that contains 250 chocolate chips. He is very particular about his cookies, so he makes sure that there are exactly 7 chocolate chips in each cookie. (For this one, your rule should calculate the **number of chocolate chips left in the bag**).

8) Same situation as #7, but this time, make your rule calculate the **total number of chocolate chips used**.

There is a back!

The graph below shows the altitude during a hot air balloon ride with Berkshire Balloons. The altitude of the hot air balloon is a function of time.



- 9) When is the balloon at 200 feet?
- 10) For how long are you flying at an altitude at or above 200 feet?
- 11) Find $f(30)$ and explain what it means in the context of the problem.
- 12) If $f(x) = 100$, find all values of x and explain what they mean in the context of the problem.
- 13) For what values of x does $f(x) = 300$?