

Name: _____ Date: _____

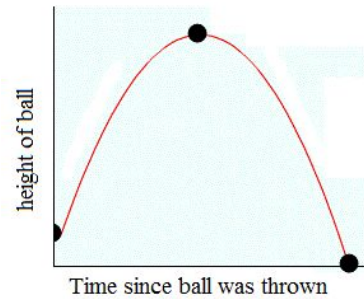
Domain and Range in Context HW

1. A ball is thrown into the air at different heights. $f(t)$ represents the height at which the ball is currently at and t represents the time since the ball was thrown. The function $f(t)$ models this below.

$$f(t) = -2t^2 + 4t + 1$$

What is a reasonable domain and range for this scenario?

- A** Domain: $0 \leq x$ Range: $-10 \leq y \leq 3$
- B** Domain: *all real numbers* Range: *all real numbers*
- C** Domain: $0 \leq x \leq 2$ Range: $0 \leq y \leq 3$
- D** Domain: $-2 \leq x \leq 3$ Range: $0 \leq y$



2. A racecar is driving up a mountain. $h(t)$ represents the height at which the car is currently at and t represents the time the car has been driving. The function $h(t)$ models this below.

$$h(t) = -10t^2 + 6t + 2$$

What is a reasonable domain and range for this scenario?

- A** Domain: $0 \leq x$ Range: $y \leq 3$
- B** Domain: *all real numbers* Range: *all real numbers*
- C** Domain: $0 \leq x \leq 1$ Range: $0 \leq y \leq 3$
- D** Domain: $-1 \leq x \leq 1$ Range: $0 \leq y$

3. Mary can run 4 laps per hour. If h is the time in hours that Mary runs and L is the total number of laps Mary has ran, what are the domain and range of $L = 4h$?

- A** The domain is 0 to h . The range is 0 to $4h$.
- B** The range is 0 to h . The domain is 0 to $4h$.
- C** The range is h , and the domain is 4.
- D** The domain is h , but the range cannot be calculated without knowing h .

4. Henry can cook 20 pizzas per hour. If t is the time in hours that Henry makes pizzas and P is the total number of pizzas Henry has made, what are the domain and range of $P = 20t$?

- A** The domain is 0 to t . The range is 0 to $20t$.
- B** The range is 0 to t . The domain is 0 to $20t$.
- C** The range is t , and the domain is 20.
- D** The domain is t , but the range cannot be calculated without knowing t .

5. Joe can box 10 rounds per day. If d is the time in days that Joe can box and B is the total number of days Joe can keep boxing, what are the domain and range of $B = 10d$?

- A** The domain is 0 to d . The range is 0 to $10d$.
- B** The range is 0 to d . The domain is 0 to $10d$.
- C** The range is d , and the domain is 10.
- D** The domain is d , but the range cannot be calculated without knowing t .