

## Quiz 4

Name: \_\_\_\_\_

Lucky has been gaining weight so fast that his owner believes his weight follows an exponential model. When he was 6 months old, his weight was 2kg. When he was 2 years old, his weight was 7 kg.

- (a) Find an function  $f(t)$  of exponential type describing Lucky's weight when he is  $t$  years old.

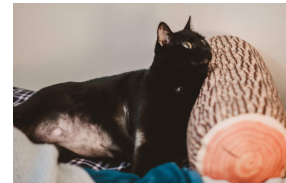


Figure 1: Lucky

- (b) According to the function you found in part a, what is Lucky's weight when he is 10 years old?
- (c) Is Lucky's owner right when she claims that Lucky's weight is following an exponential model? Why? (typically domestic cats live for 15-20 years)