

## 1.6 Exit Ticket

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Find a value of  $k$  that will make the following function continuous.

$$f(x) = \begin{cases} x + 7, & \text{if } x \leq 4 \\ x^2 - k, & \text{if } 4 < x \leq 10 \\ |x| + 85, & \text{if } x > 10 \end{cases}$$

Walt Disney Resort is offering a deal to Canadian Vacationers for a multi-park pass (for two adults and up to three children) with on site resort accommodation according to the following model:

- a) Guests can stay at a rate of \$350 a night for any stay up to 3 nights.
- b) Guests staying up to and including 7 nights will obtain a rate of \$250 a night after the third night.
- c) Any extended stay past 7 nights will fall to a rate of \$100 a night after the seventh night.

Write a function that describes this Walt Disney Resort offer.