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Solution: Conditional Statements

Quiz Solution: Which Prize

Here's my solution for this quiz!

```
points = 174

if points <= 50:
    result = "Congratulations! You won a wooden rabbit!"
elif points <= 150:
    result = "Oh dear, no prize this time."
elif points <= 180:
    result = "Congratulations! You won a wafer-thin mint!"
else:
    result = "Congratulations! You won a penguin!"

print(result)
```

Output:

```
Congratulations! You won a wafer-thin mint!
```

We use `<=` instead of the `<` operator, since it was stated that the upper bound is inclusive. Notice that in each condition, we check if `points` is in a prize bracket by checking if `points` is less than or equal to the upper bound; we didn't have to check if it was greater than the lower bound. Let's see why this is the case.

- When `points = 174`, it first checks if `points <= 50`, which evaluates to False. We don't have to check if it is also greater than 0, since it is stated in the problem that `points` will always be a positive integer up to 200.
- Since the first condition evaluates to False, it moves on to check the next condition, `points <= 150`. **We don't need to check if it is also greater than 50 here!** We already know this is the case because the first condition has to have evaluated to False in order to get to this point. If we know `points <= 50` is False, then `points > 50` must be True!
- Finally, we check if `points <= 180`, which evaluates to True. We now know that `points` is in the 151 - 180 bracket.
- The last prize bracket, 181-200, is caught in the `else` clause, since there is no other possible value of the prize after checking the previous conditions.